

Rebecca Y. P. Kan
Christopher S. G. Khoo *Editors*

Signature Pedagogies for Professions in Arts and Design

Issues, Methods, Contexts, and Practices

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Rebecca Y. P. Kan · Christopher S. G. Khoo
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Foreword

Rooted in practice, rich in substance and self-reflection, this book represents something of a rarity in pedagogical discourse in Singapore and beyond. Taken together, the essays constitute a *collective* effort on the part of the artist-educators of an illustrious arts school—a veritable *community of learners*—in documenting their “signature pedagogies” (Shulman, 2005). These pedagogies are developed within and across diverse arts and design disciplines, but they emanate from a shared institutional heritage, which is in turn rejuvenated by critical engagement with contemporary challenges.

Indeed, this concerted and cohesive effort is a testimony to the deep sense of mission and culture of collegiality that are the hallmarks of the Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore—the hard-earned legacy of its pioneers. Founded in 1938, they built an arts school amid the Second World War, decolonisation, and the making of new nation states in Southeast Asia. It may suffice to highlight a few of their core ideals that have endured through the decades. Lim Hak Tai (1983–1963), NAFA’s founding principal, encouraged students to draw inspiration from the living environment, learn from diverse traditions, and bridge educational and social concerns. He emphasised the intrinsic relationship between “Art and Life”, which was the title of a radio talk he delivered in 1949. Speaking to a mass audience, he offered an expansive view of art in the service of “truth, goodness and beauty” which are “the great purposes of life” (Lim, 2009).

In other words, NAFA’s pioneers were preoccupied with artistic practice as entailing more than the exercise of specialised skills. As indispensable as these practical skills are in art making, art cannot be divorced from the pursuit of truth and the pursuit of an ethical life. In this sense, it could be said that they had developed “signature pedagogies” long before Shulman’s concept provided a fertile framework for examining the forms of teaching and learning that prepare students for professional work. The fecundity of the framework, which is amply reflected throughout this book, lies in its multilayered complexity. Professional practice is hardly mono-dimensional, reduced to only technical competence. Lee Shulman’s idea of professional work comprises the dimensions of *thinking*, *performing*, and *acting with integrity*—not of which receive due attention across a range of professions. This threefold structure

appears in his discussion on developing the habits of the *mind*, the *heart*, and the *hand*, and, again, on the inherent tensions between the *intellectual*, the *technical*, and the *moral* dimensions of practice (Shulman, 2005).

Here, I venture to suggest why the concept of signature pedagogies has continued to illuminate professional education today. In the first place, Shulman highlights the complexities that one encounters in real-life practice, as opposed to what is unambiguously spelt out in a textbook or an instruction manual. Hence, his idea of “pedagogies of *uncertainty*”, in which “learning to deal with uncertainty in the classroom, models one of the most crucial aspects of professionalism, namely the ability to make judgements under uncertainty”. He also proposes the concept of “compromised pedagogy” in which any single dimension of practice overrides the others, for example, when self-interest or profit maximisation takes precedence over the public interest or the greater good. Moreover, he recognises that such implicit tensions tend to remain unresolved: Responsible professional pedagogy must address these tensions and provide students with the capabilities to deal with them (Shulman, 2005, pp. 57–58).

To adopt a signature pedagogy, therefore, is to make a *choice* among alternative ways of teaching, emphasising certain learning objectives and outcomes. When we make art and we teach in the arts, we make choices concerning approaches, perspectives, audiences, materials, tools, mediums, techniques, and styles. Making choices involves exercising and sharpening, to repeat Shulman’s words, “the ability to make judgements under uncertainty”. This is why both artistic practice and pedagogical practice simultaneously entail habituation (or routinisation) and reflexivity. This dual process facilitates constant learning, unlearning, and re-learning, guided by accumulated tacit knowledge and yet keeping open to new ways of thinking, seeing, listening, and performing under changing conditions of practice. As demonstrated in the reflective practice of the contributors to this book, there is another affinity between artistic styles and signature pedagogies: practice involves both respect for exemplary precedents and openness to experimentation and innovation.

There is much more to say about the significance of this book, which I hope will shape contemporary pedagogical discourse and practice, not just in arts education but more generally in higher education. For the sake of brevity, I will make two concluding remarks. First, sound judgement is not only an ability valued in the professions. In a world that has been characterised by the acronym VUCA (volatile, uncertain, complex, and ambiguous), prudential judgement is needed in many domains of life and indeed, throughout a lifetime. As persons, citizens, and planetary beings, we confront the confluence of multiple crises, including climate change, widening inequality, and ideological polarisation. The age of artificial intelligence also raises new philosophical, ethical, social, and pedagogical questions. Practical wisdom, the human capability for judicious discernment and responsible action, is all the more demanded on many levels.

Finally, and in the same vein, it could be said that our mission as educators is not solely confined to professional preparation; it extends to our whole personhood as human beings. There are many words that refer to human labour: work, job, occupation, trade, profession and career. The term *profession* has now been associated

with higher education understood as professional education, involving the cultivation of higher-order skills. In contrast, the term *vocation* has over time been associated with the training and acquisition of practical—*vocational*—skills. I hope that in reading this book, we will rediscover and recover the earlier meaning of vocation as a lifelong calling, involving our formation as persons, our creativity as artists, our dedication to an art form, and our skills as specialists. In reaffirming our pedagogical vocation, let us recall the abiding advice that the celebrated pianist Fou Ts'ong (1934–2020) received and cherished from his father:

First you must be a person, secondly an artist, then a musician, and only then can you finally be a pianist.

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References

- Lim, H. T. (2009). Art and Life. In B. T. Tan, & J. Loke (Eds.), *Lim Hak Tai: The quintessential Nanyang* (pp. 72–76). Nanyang Academy of Fine Arts.
- Shulman, L.S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.

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Part I

Introduction

Chapter 1

Signature Pedagogies for Professional Arts and Design Education: The Setting, the Questions and Recurrent Themes



Christopher S. G. Khoo and Rebecca Y. P. Kan

Abstract Signature pedagogy is a multifaceted conceptual framework for analysing pedagogical methods and educational programmes that prepare students for particular professions. This introductory chapter presents salient concepts in signature pedagogy that are applied to arts and design professional education in this book. Starting with the institutional context of an Asian Kampong Bauhaus within which this inquiry takes place, it points out extensions to the framework that will be treated in the subsequent chapters, and introduces nine salient themes in professional arts and design education. As the individual chapter authors present their distinctive signature pedagogy for their particular art or design profession, this chapter provides a bird's-eye view of how the authors have significantly engaged with and extended these concepts and themes, highlighting that the insights are relevant beyond arts and design to other professional disciplines.

Signature pedagogy is a multifaceted concept developed by Shulman (2005a, 2005b) and his colleagues at the Carnegie Foundation for the Advancement of Teaching for analysing and characterising pedagogical methods and educational programmes that prepare students for particular professions. The abstract and multifaceted nature of the concept provides a rich framework for analysing pedagogical methods deeply, identifying their core characteristics and their relation to professional thinking, practice and attitudes.

This exploration of professional arts and design education is carried out in the context of a premier arts education institution in Singapore—the Nanyang Academy of Fine Arts (hereafter NAFA), one of two constituent institutions of the University of

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the Arts Singapore. The chapters in the book analyse the roots of the pedagogies that have evolved at NAFA in the first two decades of the twenty-first century and trace some of them to iconic pedagogues and pioneer arts and design professionals. The chapters also reflect the insights and creative efforts of individual artist-educators through their personal journeys as arts and design professionals as well as teachers of future professionals. The chapters reflect the heritage and historical evolution of arts and design education at NAFA, but also engagement with modern technologies and ideas to forge distinctive pedagogies for a new generation of arts and design students.

The disciplines covered in this book are music, dance, theatre, design and digital media. The book addresses the divide between academic theory and pedagogical practice in a way that honours the depth of experience and expertise encompassed by artist-educators. In this book, the term *artist-educator* refers to an accomplished arts and design professional with well-developed pedagogical strategies that elevate the profession of art making and creation. However, this is not to say that the book excludes “ordinary” teachers who are involved in the arts. Rather, some of the signature pedagogical practices may inspire teachers to think, rethink and unthink some of the previous ways of teaching and learning and delve into the artistry of professional training. It is through visual and performance art making and production that we engage emotionally and cognitively with ideas and objects. As Daichendt (2009) reports, educators who “embrace their own artistic aptitudes and value the connections between studio and classroom can create a classroom experience that utilises individual artmaking interests” (p. 37). He also argues that as artists, artist-educators see the world differently and understand educational problems aesthetically because of their artistic activity (Daichendt, 2010, p. 64).

This introductory chapter presents salient concepts in Shulman’s framework of signature pedagogy that are treated in the book. It begins with the analytical framework of signature pedagogy, followed by an outline of how artist-educators have highlighted these concepts in their pedagogical signatures, before closing with nine themes that are precious to professions in arts and design as well as in higher education in these disciplines. As each chapter examines particular educational methods, concepts and issues that reflect important characteristics of an art or design profession, it will in the process clarify and enrich the framework of signature pedagogy. Each substantive chapter is followed by a codetta that comments on or elaborates on an issue that has enriched the signature pedagogy framework. The concepts, issues and themes examined are relevant to other professions as well, but analysing them in the context of arts and design education has thrown them into sharp relief.

But first, we set out the institutional context within which this inquiry takes place.

The Academy

an arts academy ... for all seasons and for all people. (Leong, 2019)

Established in 1938, NAFA has a distinguished history in higher arts and design education in Singapore, with thirteen Singapore Cultural Medallion recipients and fourteen Young Artist Award winners among the alumni and faculty members, past and present. This attests to the quality of arts and design education delivered and also reflects deep pedagogical experience and insights accumulated over eight decades of professional arts and design education. Signature teaching methods have been developed through the virtuous cycle of training professionals in the arts, influencing the development of the regional arts community (through the work of faculty and alumni) and then enlisting experienced arts professionals to mentor a new generation of students. Much of the pedagogical insights and methods remain tacit personal knowledge of individual faculty members and reflected in the achievements of students and alumni.

The academy is also a professional platform for stimulation of the arts—a space to pursue artistic questions. In the context of higher arts education, the academy plays an essential role in representing artistic interests, monitoring professional status and standards, and facilitating connections between the art world and the broader community (Quirk, 2016). It is here that students can take advantage of the professional artistic environment: this is a place that offers instruction, interaction and cross-fertilisation of ideas, but also the opportunity to exhibit and receive critique from their peers to assist them in their participation in a chosen profession.

The learning spaces also serve as professional venues for exhibitions and performances, located within an arts belt where artistic collections and performances flourish. It is a valuable forum for critique and pursuit of artistic questions. According to Eagle and Jones (1994), this is a place to provide fodder for professional stimulation, almost like a club where “art and intellectual ideas were debated without fear or favour” (p. 83). In an arts school, the Bohemian appearance of students and diverse values are largely embraced, if not encouraged, similar to what we observe in art guilds and clubs in the nineteenth century. Issues addressed include practical considerations relating to artistic technique, important art-related issues of today, individuals considered influential in contextual studies of the arts, and doyens who influenced artistic movements across different periods—supported by workshops and studios to facilitate a closer application of theory to professional practice.

Drawing from the pioneering efforts of Nanyang artists, the NAFA Spirit is defined as qualities of adventure, being open to outside influences, constant innovation and deep connections with communities in its art making. Embodiments of creativity, exploration and resilience serve as identifiers of the guiding philosophy that underpins the pedagogical practice. NAFA engages artist-educators from a diverse range of communities. Because of the high level of expertise in each area of specialisation, there is considerable autonomy in pedagogical methods. However, it is required of colleagues to keep abreast of regional and international developments in arts and design curriculum, pedagogy, teaching and learning.

A future-oriented reform of professional arts and design education in higher education is urgently needed today. It is necessary to take a holistic view of students, to boost them to become responsible partners in the community, courageous in innovation and enterprise, passionate in pursuing mastery of practice, and lifelong

learning, committed to ethical principles, and embracing change and ambiguity in the professional landscape.

An Asian Kampong Bauhaus Recreated in the Nanyang Spirit

Historically, academics and practitioners in the arts were two contrary forces (Walker, 1955). While both could be found within the same institutional environment, the conventions of what could be taught at the university versus the conservatoire have been a subject of contention. Too often, the art historian and the studio artist were perceived as two polarities thrown together by accident into the same department. This perception appeared even in small art colleges where staff members were required to teach in both history and practice areas (Walker, 1955). This negative view is a challenge to integrating theory and practice, or academic studies and practice.

The gap is, however, slowly closing, and we begin to engage artist-educators who are well-versed in both academic and practice disciplines (Walker, 2013). Such an integration enables new ways of understanding the arts and design. The market for passionate and interested practitioners alone is diminishing (Risner & Anderson, 2012). So, we recreate the notion of the Bauhaus as a home for artist-educators in the Asian context and re-consider its contemporary value in arts and design educational theory.

The phrase *Bauhaus pedagogy* has been used to describe the pedagogical practices of avant garde artist-educators who were active at the Bauhaus in the early twentieth century (Daichendt, 2010; Wick, 2000). While the Bauhaus was a particular example of an institution holding a great number of artist-educators practising at a high level, we have today an Asian representation recreated through the formation of Singapore's first university of the arts.

We can revisit several practices in Bauhaus in an Asian context. The Bauhaus curriculum was industry-focused and based on technical, structural and conceptual instruction (Cantz, 2007). According to the artist-educator Gropius:

I saw that an architect cannot hope to realize his ideas unless he can influence the industry of his country sufficiently for a new school of design to arise. ... I saw too, that to make this possible would require a whole staff of collaborators and assistants: men who would work, not automatically as an orchestra obeys its conductor's baton, but independently, although in close cooperation, to further a common cause. (Gropius, 1965, pp. 48–51)

The diversity of teaching and learning in higher arts education defies simplification: we have artists whose primary activity is directed to the production or performance of works of the arts and design; art theorists and historians who are involved with the discovery, examination, critical evaluation, classification and theoretical consideration of artefacts; curators who assemble a rich repository of knowledge for the education of the arts; and even Third-Space professionals that support initiatives in such areas as teaching and learning, research management, student services, lifelong learning and other strategic initiatives in the third camp.

In all three camps, artist-educators are conduits in the eco-system of education (Risner, 2012). Artist-educators provide specialist knowledge essential for delivering educational programmes (Risner, 2015). In addition, they convey messages in a creative modality that would make a difference to learners and learning today (Wolf & Poulin, 2022). This is important in post-secondary and higher education, since training students for the demands of an arts and design profession requires a special set of competencies developed over time and honed through years of artistic practice.

In an era when artificial intelligence (AI) programmes and applications are rapidly advancing, and human learning, re-learning and un-learning are needed to outpace AI, new approaches to arts and design education are needed. This book presents how a group of artist-educators conceptualise and address important issues in their teaching of future arts and design professionals, and in the process transform themselves, their students and their art through pedagogical innovations and a deeper understanding of their art as well as their identity as artist-educators. Their analyses and theorising on these issues may influence the future direction of professional education in their discipline.

Signature Pedagogy as a Conceptual Framework

This book makes use of the framework of *signature pedagogy* (Shulman, 2005a, 2005b) as a lens and analytical framework to examine arts and design education issues and concepts. A signature pedagogy can be characterised at different levels of abstraction. It is more than a “teaching method”; it can be conceived of as a form, mode, style, approach or philosophy of teaching.

Shulman (2005a) indicated that a signature pedagogy is *pervasive* in the sense of being adopted in most of the professional schools educating for a profession. However, we note that there may be distinctive pedagogies associated with particular schools (e.g. the Harvard Business School case method and the Oxford tutorial). A school may deliberately develop a particular teaching style; an experienced teacher may have developed a distinctive pedagogical method that we can refer to as a *distinctive signature pedagogy*. Chapters 2 and 4 examine the signature pedagogies of an orchestra conductor and a dance choreographer as artist-educators.

A school or teacher may develop a new pedagogy to address weaknesses in an existing pedagogy or to address new challenges. This has been referred to as an *emerging signature pedagogy*: “Recent writing in the disciplines has moved towards identifying emerging and imagined ideal pedagogies alongside existing ones” (Chick et al., 2012; Golde, 2010; Gurung et al., 2009). As a consequence, writers in this newer tradition have also moved towards outlining pedagogies that “emerge in particular institutions, but which may be of interest to others” (Horn, 2013, p. 351). Many of the chapters in this book report the authors’ distinctive and emerging pedagogical methods for imparting artistic skills.

Shulman also suggested that a signature pedagogy should be *routine* in the sense of being used in many courses within the education programme. We propose to relax the *routineness* criterion, as a pedagogical method may be developed for a specialised or unique course, or for a capstone module in a programme.

Shulman conceived of signature pedagogies as having a high level of engagement and interaction between students and between students and instructor. As a result, there is a level of uncertainty about the direction of each instructional session—because it depends on what transpires in the engagements. Bryant and Milstein (2007) noted that uncertainty in the pedagogy prepares students for uncertainties in professional practice. All the pedagogical methods described in this book reflect the attributes of active and intense engagement and dialogue. They also reflect some degree of open-endedness in the direction and content of discussion, depending on the type of pedagogical activity or situation. Out-of-classroom interactions between student and teacher tend to be very open-ended (as exemplified in Chap. 2), and this is viewed as an integral part of professional education in arts and design.

Pedagogical Content Knowledge (PCK)

The content knowledge imparted in a professional education programme is not just the formal disciplinary knowledge, but knowledge tempered by the educator's experience in teaching it as well as by professional experience of applying the knowledge in practice. Shulman (1987) identified several categories of teacher knowledge including content knowledge, general pedagogical knowledge and pedagogical content knowledge. He described *content knowledge* as the knowledge, understanding, skills and dispositions that students learn. *General pedagogical knowledge* includes processes and practices or methods of teaching and learning, encompassing knowledge of educational purposes, broad classroom management approaches, lesson plan development and implementation, and strategies for evaluating student understanding.

Pedagogical content knowledge has been defined as “the body of understanding, knowledge, skills and dispositions that a teacher needs to perform effectively in a given teaching situation” (Wilson et al., 1987, p. 106). Nind (2020) outlines *pedagogical content knowledge* as “representations useful for teaching a subject and knowledge of (mis)conceptions and difficulties with the subject commonly experienced by learners” (p. 185). In essence, pedagogical content knowledge is a matter of translating subject content for learners (Depaepe et al., 2013; Fernández-Balboa & Stiehl, 1995). According to Shulman (1987), pedagogical content knowledge blends “content and pedagogy into an understanding of how particular topics, problems, or issues are organised, represented, and adapted to the diverse interests and abilities of learners, and presented for instruction” (p. 8). In essence, it is the artistry of teaching something that somebody knows to someone who knows less (Berry et al., 2008).

An artist-educator with deep pedagogical content knowledge understands how students construct knowledge and acquire skills in different ways, and how they

develop habits of the mind, heart and hand towards professional learning of the arts. As such, pedagogical content knowledge requires a good understanding of context, as well as an understanding of cognitive, social and developmental theories of learning, and how they apply to students in the classroom (Shulman, 1986). This makes pedagogical content knowledge a dynamic toolkit for the profession of teaching and one that every artist-educator is expected to embrace.

As artists begin to see themselves as competent professionals in teaching practice, their essential content knowledge, general pedagogical knowledge and knowledge about learners and learning serve as tools to support the development of students (Allison, 2013; Flint et al., 2011). In Shulman's (1986) own words, "good teachers" are able to communicate the "most powerful analogies, illustrations, examples, explanations, and demonstrations" in the disciplinary field, to make subject knowledge comprehensible (p. 9). It is this knowledge that distinguishes artist-educators from artists. In this sense, all the authors featured in this book are artist-educators. However, they can "perform" at the level of artist-educators only when the students have acquired a certain level of artistic competency and are ready for the metamorphosis into a professional. The chapters in this book reveal how experienced teachers seek to impart various types of artistic content knowledge in effective "teachable" forms, using distinctive teaching strategies that help students to absorb, apply and perform professionally.

Habits of Mind, Hand and Heart

In addition to professional content knowledge, a signature pedagogy is expected to impart habits of mind (professional ways of thinking), habits of hand (ways of performing and doing), and habits of heart (character, attitudes, values and dispositions) that are normative in the profession.

Habits of mind and *ways of thinking* suggest cognitive tendencies that are assumed to be ingrained in most professionals. In the literature, authors often identify as habits of mind what can be considered generic research skills. Bryant and Milstein (2007), for example, identify the following habits of "thinking like a lawyer":

- moving from specific to general—getting from practical questions and descriptions to identifying and developing theories;
- contextualised thinking—identifying what factors matter in applying or revising a theory;
- parallel universe thinking—identifying alternative explanations for the same phenomenon.

These thinking skills are clearly applicable to arts and design professions. Indeed, the chapters in this book grapple with different ways of thinking that are important to particular arts and design professions.

Beck and Eno (2012) identified historical literacy skills as: evaluating authenticity and value, recognising points of view and bias, and synthesising of facts.

Lucas and Hanson (2016) highlighted the following engineering habits of mind: systems-thinking, problem finding, visualising, improving, creative problem-solving and adapting. These thinking skills are clearly applicable to design professions, and some arts professions as well.

Habits of hand are of course particularly important in arts and design professions. These tend to be more physical, technical and discipline-specific. As this book seeks to identify common themes and issues in professional education across arts and design professions, the authors have not focused on the technical aspects of performance and practice, which may require separate books for each discipline. What the chapters in this book highlight is that cognitive skills and intellectual effort are intertwined with artistic practice. Thomson and Hall (2014) indicate some of the tactics and strategies artists employ in practising their art:

Students were encouraged to be artists: They were encouraged to engage in tinkering, experimenting, generating and trying out ideas. They were shown how to experiment with humour, disruptive intent, questioning and gentle mocking. They were always expected to develop and use their own “inner critics” and extend their expectations of what they could do. They were often engaged in group conversations in which they had to explain and justify the artistic decisions they had made. Practice, skills development and cognitive challenge were combined with play, invention and sheer pleasure. Students were supported by artists to become more patient, to challenge their taken for granted assumptions, to use the language and ‘stance’ appropriate to the arts practice and to communicate their ideas through a wide range of media and events. (p. 11)

Habits of heart is often taken to refer to *ethics* and *values*. Shulman (2005a) referred to it as “to act with integrity” (p. 52). However, Shulman (2005b) himself and other authors have expanded the concept to include *attitude*, *identity/being* and *disposition*. *Attitude* appears to represent the professional’s relation to objects of importance, especially the professional’s perception of the value of the object. Attitudes are sometimes described in terms of sentiment and emotion/affect. Smith (2018) discussed the environmental practitioner’s attitude and emotional connection to the land. The emotional connection to the land and appreciation of the beauty of landscapes naturally result in the *disposition* to care for the land. Beck and Eno (2012) refer to the emotional connection of historians to people of the past. What the chapter authors in this book have done is not to place explicit emphasis on ethics and values, but make them implicit in their descriptions.

In Chap. 12, Leong and Khoo note that many theatre practitioners feel that in addition to rational conceptions and body movement technique, a performance must have “soul”, which includes emotions, artistic vision, inspiration and morals/ethics—in order to give a truthful performance. This *soul* can be equated with *heart*. However, *soul* also suggests a higher-level synthesis—a connection with the divine, transcending rational thought, training, practice and physical limitations.

Shulman (2005a) pointed out that a signature pedagogy may focus on different competencies—for example, legal education focuses on habits of the mind, clinical education focuses on habits of the hand and clergy education focuses on habits of the heart. It is sometimes difficult to distinguish *habit of heart* from *habit of mind*. Lucas and Hanson (2016) refer to generic personal skills and “professional attributes” that

include habits of mind. The chapters in this book show that habits of mind, hand and heart are equally important in arts and design professional education, and indeed they have to interact seamless, naturally and consciously as well as unconsciously to produce transcendent arts and design.

Surface, Deep, Implicit and Shadow Structures

A signature pedagogy can be characterised by four dimensions of surface structure, deep structure, implicit structure and shadow structure.

The *surface structure* refers to the “concrete, operational acts of teaching and learning, of showing and demonstrating, of questioning and answering, of interacting and withholding, of approaching and withdrawing” (Shulman, 2005a, pp. 54–55). The surface structure is to a large extent determined by the teaching methods used. The same teaching method may be used in different signature pedagogies, with variations in practice details, style and philosophical approach. Description of the surface structure of a pedagogy covers the dimensions of space, time, activities (of teacher and student), participant roles, content, artefacts and technology. The chapters in this book are replete with details of teaching methods developed by experienced artist-educators in the disciplines of arts and design.

The *deep structure* refers to underlying assumptions about how to impart a competency. Characteristics of the deep structure are abstract and theoretical, and their conceptualisation depends on the understanding and insight of the teacher. Deep structure characteristics are often specified as principles—either explicit principles used deliberately in formulating the signature pedagogy or principles inferred by an observer. They can be expressed as teaching style or philosophical approach underlying the surface structure and may relate to habits of mind to be imparted and even habits of heart.

The *implicit structure* refers to beliefs about professional attitudes, values and dispositions (i.e. *habits of heart*) that are reflected in the signature pedagogy in the sense that the students are often exposed to them and are expected to absorb them. Because the implicit structure is abstract and vague, it is difficult to identify the implicit structure: what habits of heart are reflected in the pedagogy, how they are reflected and how they are imparted to students. The chapters in this book reflect the attitudes, values and passion of the chapter authors in relation to their art as well as to their teaching.

Shadow structure refers to what the signature pedagogy is not—what aspect is missing or lacking or what habits of mind/hand/heart it does not address well. The idea is that what is missing partly characterises the pedagogy. However, what is missing (the shadow) may be positive (a strength) or negative (a weakness). Though the chapters in this book do not dwell explicitly on what is missing in a pedagogical method, a lacuna is implied when the author attempts to address a challenge in teaching an artistic or design skill by developing a new teaching method or by avoiding certain ways of teaching.

Organisation of the Book

The book is organised in five parts. Aside from Part I (Introduction) and Part V (Conclusion), the other three parts (Parts II to IV) comprise pairs of substantive chapter on a particular arts and design discipline followed by a short codetta highlighting a contribution to signature pedagogy. The substantive chapters present reflective accounts, in-depth analyses or empirical research findings on educating students for a profession in arts and design. The accompanying codetta elucidates the essence of a new pedagogical signature that enlarges the signature pedagogy framework, or elaborates on an important attribute in the framework—to indicate avenues for future exploration and development in professional education in other arts and design professions as well as other professional disciplines.

Part II **Pioneering Pedagogies in the Arts** explores salient characteristics of the signature pedagogies of veteran artist-educators. This section features cultural medallion award-winning artists in Singapore who have deep-rooted links to arts communities and contributed significantly to the development of professional arts and design education in Singapore. The first two chapters highlight what can be transmitted through mentoring and apprenticeship with a master arts professional. Demonstrating what Shulman (2006) called “a deep integration” (p. 29) of knowledge and understanding, artist-educators readily and passionately articulate the principles on which their artistic practice is founded, as well as the interaction between the practice and pedagogy. Chapter 2 examines the pedagogy of one such artist-educator in the art of orchestral and choral conducting, Maestro Lim Yau. In this chapter, Kan uses the framework of pedagogical content knowledge to organise her analysis of the kinds of knowledge that Maestro Lim Yau sought to impart to students in orchestra rehearsals, in teaching conducting, and in discussions with students “beyond the podium”. The pedagogical signature that was imparted is reflected as principled practical knowledge combined with personal practical knowledge. Collectively, such knowledge is wide-ranging and multi-disciplinary, reflecting on many years of personal experience and reflection on the art form. This chapter elicits how pioneering artist-educators in their respective fields possess not just knowledge and practice skills, but embrace “personalities, dispositions, and cultures” of the discipline, going beyond what is accessible in a particular institution to meet the profession’s social contract and commitment in the service of art (Shulman, 2005b, p. 53).

Chapter 4 reframes the apprenticeship model, where shifts from teacher- to student-centred approaches of learning flips the traditional ways of defining “what counts as knowledge in a field and how things become known” (Shulman, 2005b, p. 54). In this chapter, Cariño examines the pedagogy of a well-respected dance choreographer, Lim Fei Shen, and showed that it comprised a blend of traditional and cognitive apprenticeship. Cariño explains how, in an apprenticeship context, the master has to provide feedback and advice on the fly in the context of the student’s artistic situation. Thus, the thinking scaffold provided by the teacher is customised for the student and context and depends to a large extent on the experience and understanding of the artist-educators, and their reading of the student’s understanding and

thinking process. These “off-the-cuff” thinking scaffolds are rich in variety and can take the form of metaphors, questioning, drawing attention to options and alternatives, and urging students to formulate criteria for taking decisions in their choreographic approaches.

Part III Rethinking Pedagogies with Digital Tools grapples with new ways of thinking in artistic practice and pedagogy—in the context of employing a variety of digital tools for both purposes. This part begins with a chapter that examines how students learn to analyse music at different conceptual levels, moving between surface to middle to deep levels of a music composition. Students are guided to practise meta-cognitive skills of inquiry, reflexing on their learning and theorising—so that theory and practice (i.e. music performance) can mutually inform each other. The chapter author Wong also reports on his experience in developing a small e-learning module that employs a number of digital functionalities guided by the Communities of Inquiry framework.

Likewise, the next chapter shows how signature pedagogy in storytelling requires complex thinking in order to connect social issues with personal experiences that engage the audience. The chapter author Peh explains the challenges of teaching multimodal storytelling, where a multi-threaded story is worked out with sub-plots realised on different media and distributed on multiple digital platforms. Peh’s account of her students’ artistic efforts highlights signature habits of “how knowledge is analysed, criticised, accepted, or discarded” (Shulman, 2005b, p. 54), so that taken as a whole, they are coherent and presents a richly fleshed out story.

The chapter that follows examines how knowledge graph technologies including visualisation interfaces can help students to learn from the personal archives of illustrious musicians and artists of the past, by showing relations and relationship structures in the content of the archival materials. Using case studies of the personal archives of two pioneer music composers in Singapore, Khoo and Tan explore the kinds of narratives that can be synthesised from the archive, and insights drawn about their music compositions as well as the influences of the social, political and cultural milieu in which they worked. These archives reveal the deep structure of the habits of mind, hand and heart of these pioneer artists—indicating the wellsprings of their inspirations, artistic styles, identity and being.

Part IV Narrating Tales from Artist-Educators highlights particular attitudes and dispositions that are of special importance to professions of arts and design. This part features the personal narratives of artist-educators that extend ways of approaching pedagogy from merely “concrete, operational acts of teaching and learning” to “how best to impart a certain body of knowledge and know-how” and “beliefs about professional attitudes, values, and dispositions” (Shulman, 2005b, p. 55). The first chapter in this part attests to how pedagogical efforts to develop habits of the heart and soul can enable students to engage with their deeper selves. In discussing the training of an actor’s performative body movements, Leong and Khoo argue that meaning is reflected in the body and body movements, and students can be trained to sense and express truthful emotion through the body. As a movement coach, Leong talks about listening to one’s body, which may be a new kind of habit that actors and dancers develop: “... some of my teachers kept saying ‘listen to your body’

... I came to understand what listening to your body meant—and it was literal, not figurative. ... My performance was not truthful because I was not listening to my body”. Listening to the body includes sensing whether the thoughts, emotion and body are aligned.

In the next chapter, De Silva proposes a new *habit of ear*—the subconscious ability and habit of listening, feeling and then responding appropriately when playing with other musicians. She argues that this habit of ear—a kind of active listening and sensitivity to the actions of collaborators—is an essential element of creative collaboration. While the emphasis is on aural cues in the context of music collaboration, other senses may be involved in other kinds of collaborations. She pointed out that “the inclusion of the habit of ear supports the development of communication as key for collaboration”. In this chapter, De Silva avers that, in creative collaboration, an essential habit of heart is wanting it to be—wanting the collaboration to succeed and presumably doing whatever it takes to succeed. She clarifies that “the creative collaboration that the students embark on can only be successful if all of its members want it to succeed”.

In the chapter on cultivating creativity in fashion design, Yu presents different approaches that three fashion educators use to develop their students’ creativity in fashion design. One lecturer guided her students to develop good habits of sight or ways of seeing, which involve curiosity about what they encounter in the world, reflecting on them to generate and connect ideas and then relating these to themselves to develop their artistry. Another lecturer emphasised using critical and logical thinking to generate ideas and explore their possibilities. The third lecturer relates creativity to authenticity and developing the designer’s voice and style. Thus, the chapter shows that creativity can be cultivated through habit of sight in observing things with curiosity and perceptiveness, habit of mind in reflection and generating ideas, and then making the ideas “personal”.

The final chapter in this section continues to excavate stories that help us appreciate recollections and reminiscences on teaching design thinking. In this collaborative autoethnography of a veteran design educator and an instructional designer, Tan and Koh exchange views on how students need to be guided to rationalise and justify their graphic design using graphic design theory and vocabulary. The students have to deliberately apply graphic design principles as well as “study their design closely to articulate the logic and rationale underlying the use of design principles”. Thus, theory and design are tightly coupled, and it is moot which comes first: they inform each other. This counterpoint opens the space for interesting possibilities of self-exploration and meaning-making of redesigning a design studio, through which design educators may reflect critically, re-examine their own beliefs and preconceived ideas of self, and explore larger social and cultural issues (McLaughlan & Liddicoat, 2017). By so doing, this chapter extends an invitation to practitioner educators to further engage and share in a language that students bring to the studio that is free of curriculum and pedagogical jargon (Schoone, 2020).

Part V Conclusion reviews the salient themes that have threaded through the book, raising questions for future research. The nine pedagogies introduced in the separate codetta chapters are summarised as avenues for further exploration as extensions to

the signature pedagogy framework. An Afterword chapter offers a critical counterpoint to the signature pedagogy perspective. It examines what new insights may be obtained using a critical framework, and proposes a critical pedagogy of excellence and transcendence.

Salient Themes in Arts and Design Professional Education

There are nine salient themes in professional arts and design education that are briefly explored here before they are treated in more detail in this book.

The first theme is about the artist-educator's voice, style or identity as an artist, designer or performer. Professional *identity* or *being* is important in arts and design education and is founded on professional self-awareness and self-image. It implies a sense of responsibility or loyalty to the profession (Terry, 2009). Aspiring professionals need to find out who they are in terms of beliefs, worldview and personality, to forge their professional identity. The self-awareness and self-image include a sense of the professional's place and role in society and in the world. These are exemplified in Chap. 2 in the perspectives of an artist-educator who is both an orchestra and choral conductor. Maestro Lim Yau views conducting as intrinsically teaching and communicating musical intentions to the orchestra members, and thus, teaching music becomes a natural extension of musical life. Of music, he said that "sound is our business" and further, "it's about making relevant sound to life ... if it's good enough and sincere enough, it will touch your audience and ... touching the audience is a very important part of the development of a musician". This characterises Lim's identity as a music conductor. In Chap. 16, Yu highlights the importance of developing the designer's voice and style in fashion design.

The second is about how artist-educators impart professional thinking, practice, attitudes and values to students through interpersonal interaction, collaboration and exchanges between students, teachers and peers. In Chap. 2, Kan observes that Lim's pedagogical signature arises not only from the conductor's personal artistic identity and experience, but also a deep understanding of the students' artistic development and their thinking processes. The artist-educator gains the confidence and trust of the students in open conversations outside of the formal teaching sessions. Kan characterises the interactions as focusing on "co-creation, collaboration and mutual partnership that contribute to student learning as well as artistic creation". The benefit of these conversations is mutual: "Teaching helps the artist-educators to grow and to engage in deep self-reflection on their past experiences, both individually and collaboratively ... Having conversations with students and engaging with a broader community of practice reversed the traditional approach of master-disciple apprenticeship and provided a platform to further share and aggregate his expertise and knowledge".

A time-honoured solution to the second theme is apprenticeship—an experienced professional (master artist-educator) guiding a student (apprentice) to transfer tacit knowledge and to demonstrate an approach to life, practice, routine and method, in

the hope that the student catches it. In Chap. 4, Cariño explains how a master dance choreographer offers guidance at different levels of abstraction—from philosophical perspectives to modelling alternative physical moves. Metaphors and analogies are often used. They are useful thinking scaffolds that have a dual nature: on the surface, a metaphor presents a vignette or concrete mental picture, but so far removed from the current artistic situation that the student has to abstract its features and relations to apply to the current artistic situation—for example, relating a pot of boiling water to dance moves.

The other chapters in this book reveal how experienced teachers seek to impart various types of artistic content knowledge in effective “teachable” forms, using distinctive teaching strategies that help students to absorb, apply and perform professionally. The contributing authors in this book are acutely aware that methods and concepts that they advocate for professional training and practice are also applicable to their own professional teaching efforts. For instance, in Chap. 6, Wong applies reflexivity and double-loop learning to his own teaching. For Wong, reflexivity in teaching “begins with self-awareness, where teachers consciously examine their beliefs, values and biases that may impact their teaching”. He addresses the question: “What kinds of reflexive roles should the educator take to prepare students for reflexing on theory?” In Chap. 18, Koh and Tan applied design thinking and design frames reflexively to re-design a graphic design course. Since design pedagogies are shaped and externalised through “collisions among designer identity, educator identity and contextual demands such as curriculum, students and societal trends”, these multiple identities open more questions than answers. Koh concludes with this question: “How can teachers and students be supported to engage with pedagogies for designerly formation?”

The third theme relates to the importance of reflection and reflexivity to re-examine and overturn one’s underlying assumptions, mental models and framing of a situation. While reflection is about thinking and figuring things out, reflexing is thinking about one’s own thinking, learning and practice—to consider whether they need to be changed. Both are of course important in every professional discipline. However, in the context of the arts and design, both have added immediacy in time and effect. As the assumptions underlying one’s thinking, learning and practice are multifarious and subtle, reflection and reflexion require continual and iterative mental and practical effort. In Chap. 6, Wong explains that “double-loop learning [i.e. reflexivity] oscillates between the student’s understanding of Schenkerian concepts as an analyst and the exemplification of that understanding through performance. ... In practice, reflexivity and double-loop learning is essential in building continuously relevant connections between theory and practice”. In Chap. 18, Koh and Tan developed a self-reflecting rubric for use by all the students in the class.

The fourth theme highlights technology-enhanced pedagogies. In professional arts and design education, there is a strong trend towards leveraging technology to enhance the students’ learning experience and to convey the professional’s way of thinking, practice and attitudes. This trend has been accelerated by the COVID-19 pandemic and the rise of generative AI technologies, where technology has become an embedded part and parcel of the arts and design. In Chaps. 6 and 8, the authors

grapple with this issue, and in the process learn the challenges but also the strengths of online technologies, and how to impart habits of mind, hand and heart in different ways and to varying degrees of success. In Chap. 10, Khoo and Tan make use of a knowledge graph comprising a network structure of nodes and links to organise a digital archive collection—to link and relate digitised artefacts in the collection with other resources, concepts and ideas. Taxonomies are used to represent hierarchies of concepts at different levels of abstraction—to support browsing of related resources and ideas, discovery of relational patterns and synthesising narratives on related topics that derive new understandings from a digital repository of arts and cultural artefacts.

The fifth theme is about linking, connecting, relating, synthesis and coherence. Relating things, facts and concepts is fundamental to thinking and learning in higher arts and design education. Relationships and related things are the building blocks of knowledge that are synthesised into “coherent” structures that make sense as a whole, where the whole has meaning and significance that is greater than the sum of the parts. In Chap. 6 on music theory and analysis, Wong noted that music theory and analysis are important tools to extend music performers’ musical understanding to inform their performance. He pointed out that “a useful Schenkerian graph [a music analysis technique] do not just affect the ‘reading’ and ‘hearing’ of the music but also the ‘performance’ of it”. In Chap. 8, Peh presents case studies of how pedagogies of digital storytelling “help students to realise [that] their craft can have an impact on people, situation and relationships, contributing towards a social cause and benefiting the community”. To craft a compelling digital story with a social message requires the visual artist to link personal experience with the social message. The mini-stories on different platforms are different yet linked by “using multiple sub-plots, from multiple perspectives, using different voices of different characters, with different sidekicks, different story world, environment and visual symbols”.

The sixth theme on being creative means to do something new, novel and innovative. But it does not mean doing something totally “way out” or haphazard. Rather, it relates to doing something new within artistic constraints and available resources. However, what is new, novel, creative, inspired or genius is hard to determine ahead of time (else it is not creative). Creativity evokes surprise, wonder or awe, but also needs someone to recognise the genius. Arguably, creativity cannot be taught as a procedure—else it is not creative. So how does one guide a student to be creative, or create an environment to foster creativity? In Chap. 18, Koh and Tan, when developing self-reflecting rubrics, asked themselves “how ... might the rubric be designed to bolster the expected levels of creative emergence from students while avoiding prescription?” They conceived of the rubrics as a means for stimulating productive and creative thinking, rather than used as a checklist. Thus, the thinking models offered exemplify “the process of creation in a situated environment, while also encouraging them to question those models as they develop their own ways of creating”. In Chap. 2, Kan points out that the orchestra conductor “does not simply ‘dictate’ his artistic concept but instead conveys it as a vision that the orchestral musicians experience as intellectual stimulation and inspirational motivation ... Lim’s pedagogical strategies on the podium reflect a desire to facilitate potential artists in finding

the conditions required for their own creativity, which means both flexibility and risk when creating music”. In Chap. 16, Yu examines how three artist-educators guide students to develop their creativity in fashion design through seeking authenticity and individual voice and style, through developing ways of seeing and critical thinking, and through self-reflection.

The seventh theme dives deep into existential qualities of truthfulness, authenticity and trust. An artist seeks and represents truth, but what is truth to an actor who is playing a role in a play, or musician performing some other composer’s music? In Chap. 12, Leong and Khoo examine these concepts in performative body movement in the context of theatre performance: “The training, performance preparation and body movement practice of the actors should be anchored on achieving ‘truthful manifestation of human emotion in the body’”. The paradox is that “a make-believe enactment can be perceived as truer than reality, capturing the essence or heart of a situation”. Leong and Khoo assert that “an actor cannot give a truthful performance by aiming to be truthful: the actor has to seek truth or seek the truth”.

The next theme dwells on creative collaboration with other students and professionals. Often, artists have to collaborate with other artists in the act of creation. Being creative and truthful on one’s own is difficult enough. How does one create as part of a group performance or collaborate with others to produce a creative work? How can a teacher guide students to collaborate to create something as a group or ensemble? In Chap. 14, De Silva analyses the Javanese gamelan ensemble as a prototype of creative collaboration, illustrating important attributes that are relevant to creative collaboration in arts and design as well as other disciplines. By recounting her personal learning experiences in a gamelan ensemble, De Silva shows how the collaborative aspects of musical interactions can deepen creative practice.

The final theme that runs through the chapters is the effort to analyse and understand surface structure and deep structure. The relationship between surface and deep structure is a major part of professional arts and design education. An artwork, design, music, dance or theatre performance has an overt form and manifestation, but also a deep structure. Surface structure is represented by details and observable, physical attributes, whereas deep structure is associated with conceptions, abstractions, theories and principles. The deep structure on occasion may be seen as causing the surface structure or is an underlying explanation or reason for the surface form. Alternatively, this can be viewed as a human thinking process of abstraction and finding basic structures that help to link the surface details into a coherent whole. The deep structure helps the observer to find underlying similarities between two pieces of art or performance that are superficially dissimilar. The surface and deep structure are related in some way. The arts and design professional has to grasp this relation or mapping and be able to move between surface and deep structure and trace the links. This has important implications for higher arts and design education: artist-educators have to guide students to understand deep structures and traverse from surface to deep to surface levels. Likewise, pedagogical methods will also have this surface and deep structure. In Chap. 18, Koh and Tan reflect on the design thinking process to find underlying explanations and structures that will help the future design professionals to link and grasp the surface details as a coherent whole. For these design educators,

learning the procedure or steps for accomplishing something relates to the surface structure, while understanding underlying principles or explanations and applying them relate to the deep structure.

These nine themes are like the weft that is threaded through the warp of the main topics of the chapters. Some themes such as creativity, voice/style/identity, truthfulness/authenticity/trust and creative collaboration are of particular relevance to arts and design practice, performance and education. The other themes—linking/synthesis/coherence, interaction/collaboration/exchange, reflection/reflexivity, surface/deep structure and technology—seem to be generic themes that are important for all professions and professional education. A theme may be given particular prominence in a chapter—for example, creativity in Chap. 16, creative collaboration in Chap. 14 and truthfulness/authenticity/trust in Chap. 12. Even if they are not explicitly mentioned in a chapter, they may have an implicit quiescent presence that may be foregrounded and interrogated in future work. The nine themes thus point to issues that may be productively investigated in future studies on signature pedagogies.

References

- Allison, A. (2013). No art teacher left behind: Professional development that really matters in an age of accountability. *Arts Education Policy Review*, 114(4), 178–190.
- Beck, D., & Eno, J. (2012). Signature pedagogy: A literature review of social studies and technology research. *Computers in the Schools*, 29, 70–94.
- Berry, A., Loughran, J., & van Driel, J. H. (2008). Revisiting the roots of pedagogical content knowledge. *International Journal of Science Education*, 30, 1271–1279.
- Bryant, S., & Milstein, E. S. (2007). Rounds: A “signature pedagogy”—For clinical education? *Clinical Law Review*, 195–251.
- Cantz, H. (2007). *Teaching at the Bauhaus*. Hatje Cantz Verlag.
- Chick, N. L., Haynie, A., & Gurung, R. A. R. (Eds.). (2012). *More signature pedagogies: Approaches to teaching disciplinary habits of mind*. Stylus.
- Daichendt, G. J. (2009). Redefining the artist-teacher. *Art Education*, 62(5), 33–38.
- Daichendt, G. J. (2010). The Bauhaus artist-teacher: Walter Gropius’s philosophy of art education. *Teaching Artist Journal*, 8(3), 157–164.
- Depaepe, F., Verschaffel, L., & Kelchtermans, G. (2013). Pedagogical content knowledge: A systematic review of the way in which the concept has pervaded mathematics educational research. *Teaching and Teacher Education*, 34, 12–25.
- Eagle, M., & Jones, J. (1994). *A story of Australian painting*. Macmillan.
- Fernández-Balboa, J.-M., & Stiehl, J. (1995). The generic nature of pedagogical content knowledge among college professors. *Teaching and Teacher Education*, 11, 293–306.
- Flint, A. S., Zisook, K., & Fisher, T. R. (2011). Not a one-shot deal: Generative professional development among experienced teachers. *Teaching and Teacher Education*, 27(8), 1163–1169.
- Golde, C. M. (2010). Adapting signature pedagogies in doctoral education: The case of teaching how to work with the literature. In M. Walker & P. Thomson (Eds.), *The Routledge doctoral supervisor’s companion* (pp. 106–120). Routledge.
- Gropius, W. (1965). *The new architecture and the Bauhaus*. MIT Press.
- Gurung, R. A. R., Chick, N. L., & Haynie, A. (Eds.). (2009). *Exploring signature pedagogies: Approaches to teaching disciplinary habits of mind*. Stylus.

- Horn, J. (2013). Signature pedagogy/powerful pedagogy: The Oxford tutorial system in the humanities. *Arts & Humanities in Higher Education*, 12(4), 350–366.
- Leong, W. K. (2019). *Art and soul: 80 years of the Nanyang Academy of Fine Arts*. Epigram Books.
- Lucas, B., & Hanson, J. (2016). Thinking like an engineer: Using engineering habits of mind and signature pedagogies to redesign engineering education. *International Journal of Engineering Pedagogy*, 6(2).
- McLaughlan, R., & Liddicoat, S. (2017). Boler's pedagogy of discomfort. Examining a turn of the century idea for contemporary architectural education. In *Proceedings of the 51st Conference of the Architectural Science Association* (pp. 231–240), Wellington.
- Nind, M. (2020). A new application for the concept of pedagogical content knowledge: Teaching advanced social science research methods. *Oxford Review of Education*, 46(2), 185–201.
- Quirk, M. (2016). Stitching professionalism: Female-run embroidery agencies and the provision of artistic work for women, 1870–1900. *Journal of Victorian Culture*, 21(2), 184–204.
- Risner, D. (2012). Hybrid lives of teaching and artistry: A study of teaching artists in dance in the USA. *Research in Dance Education*, 13(2), 175–193.
- Risner, D. (2015). Interdisciplinary teaching artists: Moving dialogue. *Journal of Dance Education*, 15(1), 33–38.
- Risner, D., & Anderson, M. E. (2012). The “highly satisfied” teaching artist in dance: A case study. *Teaching Artist Journal*, 10(2), 94–101.
- Schoone, A. (2020). Returning to the heart of teaching: Social pedagogy as phenomenological pedagogy. *International Journal of Social Pedagogy*, 9(1). <https://doi.org/10.14324/111.444.ijsp.2020.v9.x.013>
- Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 15(2), 4–14.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1–22.
- Shulman, L. S. (2005a). Pedagogies of uncertainty. *Liberal Education*, 91(2), 18–25.
- Shulman, L. S. (2005b). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Shulman, L. S. (2006, March/April). From hermeneutic to homiletic. The professional formation of clergy. *Change*, 28–31.
- Smith, K. (2018). Reading the land: On the ethical foundations of environmental studies' signature pedagogy. *Journal of Environmental Studies and Sciences*, 8(3), 351–356.
- Terry, K. S. (2009). Externships: A signature pedagogy for the apprenticeship of professional identity and purpose. *Journal of Legal Education*, 59(2), 240–268.
- Thomson, P., & Hall, C. (2014). The signature pedagogies of creative practitioners. In K. Westphal, U. Stadler-Altmann, S. Schittler, & W. Lohfield (Eds.), *Räume kultureller bildung: Nationale und transnationale perspektiven* (pp. 76–91). Beltz Juventa.
- Walker, L. C. (1955). The studio artist and the art historian. *College Art Journal*, 15(2), 119–123.
- Walker, L. N. (2013). The long shadow of peer review on the preparation of artist educators. *Arts Education Policy Review*, 114(4), 205–214.
- Wick, R. K. (2000). *Teaching at the Bauhaus*. Hatje Cantz.
- Wilson, S. M., Shulman, L. S., & Richert, A. (1987). ‘150 different ways’ of knowing: Representations of knowledge in teaching. In J. Calderhead (Ed.), *Exploring teacher thinking*. Holt, Rinehart & Winston.
- Wolf, D. P., & Poulin, J. M. (2022). When questions are our best answers: Responding to the impact of COVID-19 on community-based arts education organizations: A special issue of Arts Education Policy Review. *Arts Education Policy Review*, 123(1), 1–5.

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Part II
Pioneering Pedagogies in the Arts

Chapter 2

“It’s Not About Making Beautiful Sound. It’s About Making Relevant Sound to Life”: Insights from a Veteran Artist-Educator in Music, Lim Yau



Rebecca Y. P. Kan

Abstract This study revisits the term “artist-educator”, which was first conceived in the nineteenth century to describe the professionally distinct roles of artist and pedagogue. Since then, this double-barrelled identity has become a default notion among performers in the field of education, which embraces personal philosophy, professional practice, educational experience and teaching methods. As research rarely articulates the distinctive pedagogical approaches among veteran conductors, this study highlights characteristics of professional knowledge of one artist-educator in the field of conducting and orchestral music-making, Maestro Lim Yau. In the being as a Cultural Medallion recipient in Singapore, Lim Yau embodies traits of a veteran artist-educator. Data collected through qualitative methods of semi-structured interviews and observations with the Maestro and his students at NAFA were analysed thematically to present dimensions that extend Shulman’s perspectives of pedagogical content knowledge, including principled practical knowledge and personal practical knowledge. The insights shed light on idiosyncratic tenets that define a conductor’s pedagogical signature, manifested through cumulative musical and life experiences, philosophical principles underpinning his musical beliefs and skilled approaches to relational listening, aural visualisation, risk-taking, reflection and an awareness of the aesthetic potential of sound. Examining the hallmarks of a pioneering artist-educator in Singapore, this chapter celebrates a dynamic relationship between a conductor and his students, revealing an in-between identity that bridges the chasm between a traditional professor of the arts and a practitioner who teaches in the conservatoire.

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Re-defining the Artist-Educator in Higher Education

The term *artist-educator* was first conceived in the nineteenth century to describe a collocation of two professionally distinct roles—the artist and the pedagogue—in one persona (Daichendt, 2009; Lanier, 1959; Logan, 1955; McCracken, 1959). Since then, this double-barrelled identity has become a default notion among performers in the field of education, embracing personal philosophy, professional practice, educational experience and teaching methods of educators who exhibit exceptional skill in a profession that requires knowledge of design, making or creating to produce works of art. Since both the professional artist and professional educator co-exist as one, an interdisciplinary combustion of both the artistic field and education can bring about powerful outcomes (Anderson, 1981; Daichendt, 2009; McCracken, 1959).

To celebrate the dynamic relationship between teaching and learning the arts, this study focuses on one artist-educator in the field of conducting and orchestral music-making, Maestro Lim Yau. As a Cultural Medallion awardee in Singapore, Lim Yau embodies traits of a veteran artist-educator. Situated within a formal educational system to facilitate or instruct students in professions of the arts, artist-educators foreground the importance of creative activity within the learning experience (McNamara & Risner, 2022; Thornton, 2012). As practitioner artistes, they are commissioned to hone the skills, curiosities and habits of mind of their students through a range of pedagogical strategies specific to the art form. Since extant research has rarely articulated the distinctive pedagogical approaches among veteran conductors, this study highlights characteristics of professional knowledge of one such artist-educator who has influenced a generation of learners and future professionals.

Moving Beyond the Role of a Teaching Artist

To better understand the value and pertinence of the twenty-first-century artist-educator in higher education, we must first distinguish this role of *artist-educator* from the *teaching artist*. The term *teaching artist* suggests that teaching, as a prefix to characterise the role, is prioritised (Parkes, 2022, p. 221). Lee (2013) considered a teaching artist as one who “practices a pedagogy of possibility and positive change through meaningful, educative arts experiences” (p. 26). The teaching artist usually works autonomously, often in a portmanteau of positions that include teaching (Stanley, 2013). In the field of music, they are usually protean portfolio musicians who stitch together a profession both as an artist and as faculty members who are engaged in masterclasses and ad hoc musical activities within the institution. Hence, a music teaching artist could be active as both a performer or an educator, without being a fixed-contract classroom teacher nor a certified teaching specialist. Musician teaching artists have a range of interests from classical to popular genres and can be contracted as educators anywhere from pre-schools to private schools (Steele, 2018).

Teaching artists assume the mantle of a broad experience, offering opportunities for learners to engage in the creative, artistic, historical and aesthetic experience of the arts (Richard Burrows, as cited in Booth, 2003). They leverage the power of the arts to actively encourage and motivate students in learning, addressing students’ multiple intelligences and diverse learning styles. Teaching artists also experience the arts as worthy areas of study that all students, not just the gifted or talented, can learn (Duma & Silverstein, 2008). According to Arnold Aprill, artists actively engage students in consciously developing their own aesthetic style (Booth, 2003).

Unlike the teaching artist who teaches through the arts, an artist-educator tends to establish and maintain a distinctive professional value system regarding artistic praxis. They value art that demonstrates evidence of creativity, originality, technical skill, self-expression, function and aesthetic quality. Their educational practice is grounded not on pedagogical knowledge or content knowledge (like the teaching artist) but on their professional knowledge, thus evincing unique artistic approaches in their teaching. As professionals, they engage not just in creation and music-making within the studio, but also in re-creating the actual performance space within an institutional context. These artist-educators have identities and pedagogical models worth investigating, and the potential impact of these individuals on future artists and arts education is important to examine.

Foregrounding the Learner and Learning

A broad sweep of literature suggests that the artist-educator is not simply an artist competent in teaching, or an educationalist skilled in some form of the arts. As an artist-educator, learning is experiential (Saraniero, 2009, as cited in Huddy & Stevens, 2011). The teaching often goes beyond the art form to encompass language, history and the identification of synergies with other art forms. This breadth of practice values diverse cultural and intellectual experiences, authenticity, reflection and creativity. The diversity of experiences promotes lifelong learning recognised as an educational imperative in today’s socially and culturally diverse classrooms (Milbrandt, 2006). Artist-educators treasure the learning process and consider learning to be an ongoing, lifelong learning process (Anderson, 1981).

Since education is not about controlling but engaging, a substantial amount of attention is paid on issues of engagement in learning (Graham, 2009). The artist-educator is recognised by students as the doyen of the art form. Thus, the engagement with students focuses on co-creation, collaboration and mutual partnership that contribute to student learning as well as artistic creation. This kind of educational activity is familiar to artists who are deeply committed in exploring an artistic language and knowledge to create new imaginative possibilities.

The educator who is first an artist can transform the way that learners interact with the teacher, with the subject, to cultivate complex learning environments that disrupt predictable approaches to education (Graham, 2009; Graham & Zwirn, 2010). Graham (2009) described the personal artistic activities of these pedagogues as ones

that could have “a profound influence on how they interact with students, how they shape the learning environment, and how they interpret their field of knowledge” (p. 93). Personal conversations are a vital part of their pedagogy and are greatly influenced by their artistic identities (Graham & Zwirn, 2010). These conversational spaces of teaching and artistry are hospitable to both student interests and the artistic interests of the pedagogue.

Distinctiveness of an Artist—In the Hood of an Educator

In the persona of the artist-educator, the artist feeds the educator, and the educator feeds the future artist. The two are not isolated processes or autonomous personas (Kerr-Berry, 2007, as cited in Moffett et al., 2015; Wilson, 2016). Research has shown that artist-educators with professional content knowledge are able to nurture further personal artistic identities that emerge from pedagogical encounters (Lummis et al., 2014; Probine, 2021). Teaching helps the artist-educators to grow and to engage in deep self-reflection on their past experiences, both individually and collaboratively (Probine, 2021).

Artist-educators “encourage spontaneity and divergence rather than prescriptive approaches to learning” (Graham, 2009, p. 93). A sufficient dose of openness allows for a “diversity of interests and experience among students” (Graham, 2009, p. 91). Artist-educators desire to awaken in students a self-realisation to explore ideas and to understand, solidify and even question truths (Allison, 2013). They raise provocations on taken-for-granted assumptions about power, privilege, culture, habit, history, manners and rules. As Greene (1978) said, “We make possible a pluralism of visions, a multiplicity of realities. We may enable those we teach to rebel” (p. 182).

Many of the attributes of artists enable this inquiry: the ability to take risks and be comfortable with ambiguity (Klein, 2008), allowing for open-endedness (Evans-Palmer, 2010) and divergent thinking (Eisner, 1991; Graham, 2009; Hickman, 2010). Their experience as artists leads them to create occasions for exploration and experimentation for their students. Because of their ongoing artistic experiences, these educators are open to divergent and unexpected outcomes (Graham, 2009). Artist-educators are inclined towards experimentation and deep engagements with big-idea exploration of ideas that transcend disciplines. Having experienced failures, they can model perseverance in the face of risks and failures.

The Conductor as an Artist-Educator

Literature about musician or conductor artist-educators remains sporadic with intermittent accounts about pedagogical approaches in conducting. Bennett (2013) noted that the roles in which musician artist-educators engage are not well understood. He flagged the need to discover how artist-educators engage with students. In the

same field of music, Carrick et al. (2012) looked at how the New York Philharmonic orchestra’s outreach partnership programme impacted students’ relationship with classical music. Bucura (2020) recounted how one artist-musician toggled between teaching and performance at the Eastman School of Music. Presenting a narrative inquiry of the experiences of a teaching artist-musician, the author investigated one music teaching artist’s sense of self-navigating multiple roles as a teaching musician, specific to her professional pursuit.

There are possible reasons why there are few studies on the conductor as an artist-educator. The first is that there are few specialist courses in music conducting. The enrolment in such courses is confined to an exclusive few who qualify for entry into a specialist post-diploma programme. What is unique in this study is that the artist-educator is not just involved in coaching student conductors, but also overseeing orchestral musicians in the School of Music. This places the signature pedagogue in the position of a performing artist-educator dedicated to building professional orchestral musicians.

For the purpose of this chapter, the term *conductor artist-educator* refers to that person whose first profession is directed at the creation, production or performance, and whose second profession is in teaching within a higher education context (Daichendt, 2009). This means that an artist-educator is an artiste first, where the competencies and dispositions of the artist are foregrounded when they engage others in learning activities towards the professionalism of an art form. The ignored study of cross-fertilisation between practice and theory must be brought to light to induce interesting findings (Walker, 1955). This chapter thus draws insights from an artist-educator’s professional practice, educational experience and teaching methods, and personal philosophy to frame a signature pedagogy in a profession of the arts.

Professional Knowledge of an Artist-Educator in Music

There are several domains in a veteran artist-educator’s frame of knowing. Holgerson (2010) argued for professional “musicianship” as the most important, if not the only, kind of knowledge necessary in an educational context. Continuing in this train of thought, Angelo (2015) noted that mainstream music educators “follow the thinking that good instrumental music teachers first and foremost need to be specialists, and to take on only a limited variety of tasks” (p. 281).

Other constructs help us characterise the professional knowledge of an artist-educator, in addition to the professional skills of an artist or an educator (Holgerson, 2010; Popovych, 2014). According to Jaramillo (2008), a music educator’s professional knowledge is comprised of “subject matter, music learning theories, curricular hypothesis, and relations among educational and social systems” (p. 354). Theoretical knowledge is a corpus of knowledge that can be attained by reading and research. This knowledge tends to be abstract and context-free. Ballantyne (2012) included other aspects of knowledge within the classroom such as “music teaching techniques, engaging students with music in a meaningful way, implementing the

music curriculum effectively, assessing students' abilities in the various aspects of music, and explaining and demonstrating musical concepts" (p. 41). In her view, musical knowledge and skills would include such areas as "performance skills, conducting skills, aural perception skills, composition skills and music history knowledge" (p. 45). It was pointed out by Popovych (2014) that other benchmarks must be developed in order to ensure that future professionals are highly qualified specialists.

Yet, to date, there is no clear understanding of what professional knowledge means to artist-educators. Professional knowledge remains under-researched, and there remains a high degree of variability on what professional knowledge means within the profession of the arts. An exploration into the artist-educator's professional knowledge sheds light on practical knowledge, and knowledge of arts-based pedagogical practices that are largely built from personal experience.

Practical Knowledge

An expert's practical knowledge is tacit, highly experiential and personal. It is the knowledge applied to doing and the action taken under specific circumstances. Such knowledge is invaluable as it is the outcome of switching a problem situation into a problem-solved situation. Practical knowledge is not pre-existent but results from conscious "doing" or behaviours over time. In the scholarship of music education, there are two ways in which practical knowledge has been classified. First, as pedagogical knowledge (Holgerson, 2010); and second, as theoretical knowledge applied to actual practice and context (Jank & Meyer, 2002; Kvernbekk, 1999).

In addition to these two classifications, Bereiter (2015) introduced the concept of principled practical knowledge. This type of knowledge combines the characteristics of both practical know-how and theoretical knowledge. It is an attractive notion for artist-educators, since it not only encompasses practical knowledge but also reinforces the attributes of educators who integrate their practical experience with other aspects of the profession. Principled practical knowledge can manifest in various professional behaviours that may not be directly related to core content knowledge or instructional pedagogy (Overland, 2017). It goes beyond the explicit skills required for teaching music and encompasses tacit knowledge. While practical knowledge is embodied, it needs to be highlighted as an invaluable way of knowing that illuminates the world of an artist-educator (Farrell, 2012). It is therefore important to explore the practical knowledge of experts, in particular master artist-educators who are experts in their field.

Personal (Practical) Knowledge

Personal knowledge is another dimension that clarifies what professional knowledge means to the artist-educator. *Personal knowledge* is defined as knowledge constructed

from experience, social interaction and reflection, skills developed through practice, and even self-knowledge, attitudes, values and emotions (Eraut, 2014). In fact, much of the professional knowledge in the music teaching is based on personal knowledge (Ball et al., 2008; Campbell & Brummett, 2007; Holgerson, 2010; Jaramillo, 2008). Jaramillo (2008) further recommended a personal didactic model as a tool to augment professional knowledge, comprising of a mixed array of research, classroom practices and events relating to cultural and musical experiences.

Clandinin (1985) introduced the concept of *personal practical knowledge* to describe teacher knowledge that embraces “all the experiences that make up a person’s being” (p. 362). Meaning is drawn from, and understood in terms of, “a person’s experiential history, both professional and personal” (Clandinin, 1985, p. 362), and “narratively embodied in how a person stands in the world” (Clandinin & Connelly, 1998, p. 157). Recently, Sindberg (2016) and Shaw (2018) acknowledged personal practical knowledge as an important component in music education. Here, knowledge is embedded in the artist-educators’ past experiences, present work situations and future ambitions and plans. The effects of context on the artist-educators’ knowing are equally important—how their knowledge becomes formed and expressed as they engage in their daily work; and how teachers’ practice is situated within a professional backdrop. This draws from a musician’s past personal history and past professional experiences to plan and enact teaching, taking into account “personalised concrete accounts of people knowing” (Connelly & Clandinin, 1986, pp. 296–297).

Both personal knowledge and practical knowledge mutually co-construct each other (Holgerson, 2010). When combined, these aspects underpin an artist-educator’s professional knowledge (Englebrecht & Ankiewicz, 2016). Since signature pedagogies have strong links to the practices of experienced artists and may be shaped by artist-educators with profound influence on an artistic community, the exploration of personal practical knowledge (as an extension of professional knowledge) is an underpinning framework in this study. This leads to the guiding research question: what characterises professional knowledge of an artist-educator?

Method

Exploring the professional knowledge of a master artist-educator yields a deeper understanding of how *signature pedagogy* can be approached in music. This involves asking questions around knowledge of the discipline, knowledge of instruction and knowledge of self. The maestro’s knowledge of the discipline of music is assumed to include content, skills, values and dispositions. Knowledge of instruction includes his students and teaching, and teacher-student relationships. Knowledge of self includes self as a resource, self in relation to others, self as an individual and self as a musician.

The data collected of Maestro Lim Yau consisted of four in-person interviews, spread over three months in 2017 and another three months in 2022. I also engaged in semi-structured interviews with four student conductors understudying Lim, who

were enrolled in a specialist conducting postgraduate course for a period of eight months, in preparation for a public performance with the Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore orchestra.

The face-to-face interviews and observations were digitally recorded and transcribed. Field notes were taken throughout the three interview sessions. I also took field notes during the observations and wrote researcher memos after each observation and interview (Bucura, 2020). At the conclusion of the write-up of this study, portions of the paper that included Lim's direct quotations, along with my analysis of the data, were sent to him to member-check the accuracy of the retelling of his accounts. Lim and I discussed themes as I drafted the findings, and he offered me his perspectives. I incorporated his views into my analysis. Here, our intention was to convey one artist-educator's perceptions and not so much to prove these ideas as right or wrong (Wilmot, 2021). Findings presented here, are not as example of best practices or as a model to follow, but to illuminate possibilities of how professional knowledge in artist-educators is cultivated and sustained. The following excerpts shared by Lim and his students encompass how he interprets teaching and learning in ways that recall the past and forge the future.



Credit: Nanyang Academy of Fine Arts, University of the Arts Singapore

Lim Yau as Artist-Educator

Lim Yau led a trail-blazing career as one of Singapore’s most prominent conductors, who is reputed to have premiered works by every major Singaporean composer. He was involved in pioneering developments from the nascent stages of Singapore’s only national orchestra, the Singapore Symphony Orchestra, first as Concert Manager in 1980, Chorus Master (1981–1997), Assistant Conductor (1985), Associate Conductor (1987–1997), and Resident Conductor and Music Director of Singapore Symphony Chorus (2000/2001–2011), and Chorus Director of Singapore Symphony Chorus (2012–2018). Lim debuted The Lyric Theatre (now known as Singapore Lyric Opera) in 1991, The Philharmonic Chamber Choir in 1994, and The Philharmonic Chamber Orchestra (now known as The Philharmonic Orchestra, Singapore) in 1998. As an accomplished conductor artist-educator, he was closely involved with children and youths in Singapore Symphony Children’s Chorus from 2006 and Music Director of the Singapore National Youth Orchestra (1990–2002). Lim received the Cultural Medallion in 1990, the Lifetime Achievement Award by COMPASS (Composers and Authors’ Society of Singapore) in 2011 for his contributions to Singapore and the international arts scene.

Lim Yau joined NAFA as a full-time faculty in 2012. The music programme was explicitly designed to prepare students for performance, and furthermore, to produce quality musicians for the creative economy. This course was novel for its goal to develop both artist-performers and future teaching artists and artist-educators. Lim served as Dean at the School of Music from 2012 to 2018, and he has remained the Artistic Director from 2018 to the present. For his local and international contributions to music, he was awarded the highest standing order of Fellow by his alma mater, the Royal College of Music London in 2022.

The shift from a resident conductor of Singapore’s only orchestra to a full-time appointment as an artist-educator meant a profound change in attitude for Lim. Education was never considered a principal responsibility of a conductor. Instead, the conductor’s primary role was that of an artist, with the ability to educate being a by-product of their musical direction to an orchestra. Therefore, throughout Lim’s trail-blazing career in the field, the role of an “educator” was never perceived as being on par with that of an “artist”. His new duality as an artist-educator placed a stronger emphasis on creative activity within the realm of education. By working within an institutional ecosystem, an artist-educator would gain a more holistic perspective on the cultural aspects of institutional learning, while fostering continuity of traditions upheld by the artistic community at large.

Key Milestones at NAFA, University of the Arts Singapore

Lim embarked on a unique identity at NAFA by placing choral training at the heart of musical awareness. Chorus developed a sense of musicianship and ensemble awareness inaccessible in any other part of the curriculum. The long hours of rehearsal brought together a consolidating point about practical musicianship, theory, aural and sight singing, where all students could put into practice what they had gleaned from academic classes. His artistry and contribution as an educator-artist brought about a subconscious confidence that illuminated Singapore's arts education landscape. This innovative approach did not go unnoticed, with professional projects such as Britten's *War Requiem*, Bach's *Passion according to St John*, Bizet's *Carmen*, Bruckner's *Mass No. 3*, Mahler's *Third Symphony*, and Arvo Pärt's *Te Deum* with Singapore Symphony Orchestra.

Through Lim Yau's pioneering efforts to build a community orchestra, The Philharmonic Orchestra, musicians were given the additional opportunity to experience out-of-school music-making in a different musical environment. The Philharmonic Orchestra became a haven for students and graduates to evaluate themselves among other music makers. There, they experienced contact with a large community of musical practice from diverse walks of life, all with the same passion and love for music. In this space, students and alumni received a wide-angled view of lived experiences and learnt to cope with the professional demands of intense rehearsals and reading sessions in preparation for a musical performance or production.

The academic environment provided fodder for intellectual growth, completing the artistic profile. Relationships built with faculty, other musicians and artists, became catalysts for new artistic creation and creative exchanges with the artistic community. In the being of an artist, Lim Yau nurtured a generation of chamber and orchestral musicians under his baton. At the same time, the responsibility of an educator aligned with an innate desire to share and communicate ideas to another generation of music makers.

A Unique Model of Personal Practical Experience

Artist-educators draw from a range of experiences for new inspiration or understanding. They "primarily teach from their experience, their own life, or their own professional process" (Richard Burrow, as cited in Booth, 2003, p. 7). Since artist-educators are artists first, much of their artistry would relate directly to their education and life pursuits (Booth, 2003). Therefore, life history and past educational experiences would have an impact on their artistic identity (Probine, 2021). Reeder (2007) accounted for the personal knowledge of artist-educators as those with a stronger sense of origins and life experience. An intimate moment or personally significant involvement makes a work of art unique (Kaufmann, 1960).

There is a strong Sinophile influence underpinning Lim’s personal experiences. His father was a Chinese literature lecturer at Teacher’s Training College (TTC) back in the 1950s, and the house was filled with conversations about history and Tang poetry.

There were lots of books at home and all my siblings were all Chinese educated. So, at mealtimes, it’s always history, always poems and that sort of background.

His other re-collection of Sinic impressions was during his National Service, in the Music and Drama Company, where he even made arrangements of repertoire to be sung in Mandarin, for male voices. This further led to his under-study with Leong Yoon Pin, where Lim Yau also sang in a chamber-sized Metro-Philharmonic Choir (康声合唱小组).

Education has always been in his family. As a teacher, his oldest sister, Madam Lim Siok Gee, principally supported his overseas undergraduate education in London. At the heart of his approach, Lim sought to share and extend the options for students to prepare for the profession, in such a way as to enable them to take on diverse professionally paid engagements as musicians.

So, it was always at the back of my mind that I want to teach conducting. And I felt that I have something to pass on to younger people.

For Maestro Lim Yau, his entire career in conducting as an artist was infused with teaching and pedagogy as a way of life to communicate musical intention. The conductor by profession is an artist-educator by virtue of providing musical direction to an orchestra. To excel in attaining positive outcomes from orchestral rehearsals, it was important for Lim to embrace pedagogical approaches specific to diverse fields of knowledge. For Lim, teaching was a natural extension of musical life. Describing his 30-year career with Singapore Symphony Chorus from 1981:

It’s all about teaching.

Despite low wages at the start of his career, he accepted the position, because this was “the only place where I can put what I learned into practice There’s never a reason why you are doing it. It’s just the experience”.

It was also his teachers that impressed upon Lim the value of teaching. Apart from Leong, Lim fondly recounted Professor of Piano, Ruth Gerald, at the Royal College of Music. Lim had taken piano as his joint first study (along with the voice) from 1975 to 1978. Ruth Gerald was fondly regarded as “somebody I feel that I was so fortunate to meet”. Ruth taught him to look beyond the score for another sound world. He fondly recalled the manner in which she “orchestrated” the piano sonatas of Beethoven and Mozart:

Look, this is the pair of horns, and this is where the woodwinds are playing, this is what the strings, this is what the cellos are playing.

From Ruth, Lim learnt “logical thinking” about musical composition. Her teaching artistry incorporated imaginative ways of knowing to understand practical repertoire, allowing Lim to glimpse new possibilities:

I didn't experience that sort of teaching before ... I think that sort of teaching has opened my imagination quite a lot ...

This opened a brave new world of connections in sound and space that Lim carried forward in his teaching practice:

These pointers allowed me to make association. And I think, to make a student aware of these associations is a very important aspect of teaching.

I ask them all the time, because they need to make that connection to frame their mind.

While performing with Ricciardo Muti, Norbert Ballage, it was his contact with Sergio Celibidache in 1980 that transformed Lim's musical trajectory:

That [was] the breaking point ... made me realise that music is not just that [but] its much deeper.

Lim was shortlisted into an "inner" circle of 14 conductors who were privileged to under-study with Celibidache. He described himself as being "ambiguously active":

Celibidache made it [teaching] into such a philosophical approach to sound, to life in general - I think that makes you feel that, yes, arts is actually life. And, if arts is life, you are living in it, you are breathing it.

Armed with this body of experience, Lim's teaching artistry highlights prized professional knowledge that forms a unique approach to pedagogy in the arts.

Pedagogical Content Knowledge of a Conductor as Artist-Educator

In the being of a conductor, the artist-educator is able to thrive in the creation of music, while the responsibility of an educator requires him to understand the needs and goals of each community of learners that he engages with. One of the earliest authors that acknowledged pedagogical content knowledge (PCK) in an artist-educator was Parker (1953):

The teacher distinguishes himself from the student by the authority with which he acts as a part of the art-world. He accepts the student's trust. He shows how to do art, or else he explains whatever he thinks is relevant to the art-world. (p. 27)

As an artist-educator, Lim's insights on music exemplify Shulman's categories of PCK, here expressed as content knowledge, general pedagogical knowledge, learner pedagogical knowledge, academic curricular knowledge, cultural and social contexts, as the following accounts attest.

Content Knowledge

Lim had high expectations of his conducting students to build content knowledge and discipline-specific skills.

As an artist-educator, Lim was very mindful about being prepared on the podium prior to the rehearsal:

I’m determined to make that understood by anybody who have even the slightest interest in conducting [that] it’s nothing glamorous ... Only when you are filled up with all those knowledge then when you stand on the podium, you feel you are ready to work with them.

Lim’s pedagogical leadership was directed towards enabling musicians to think and acquire a new understanding of the music. Rather than desiring to “change” the orchestra’s way of presenting their artistic understanding, the conductor focussed on enabling the (student) musicians to understand the essence of music-making as a professional:

I happen to be one of those who dislikes the word interpretation. I mean, we are really mere mortals ...

Pedagogical Knowledge

Developing artistry in music-making meant problem-solving and focussing on things that just did not work (Hammor & Littman, 2022).

... you cannot go to an orchestra standing there and play by ear, you really should have brought for every rehearsal, every week ... a broad plan, how you’re going to use these three hours ... You’re going to say these three hours will strengthen the last one in your mind, ... and then you rehearse that way. But along these lines, new things will come up ... some new problems ... But yet, you still have a very broad view of how you can use these three hours.

The following quotations by Lim’s students highlighted his rigour in preparation for the podium:

You need to start to be solid from the bottom, you need to know your craft. I think that is one of the mostly repeated statements from him in the course, especially as conductors. (Student A)

... he will still be talking about fundamentals especially when we went up the podium, which is important because we are clearly lacking ... (Student B)

... whatever he was trying to teach us with those rudiments of feeling, the number of notes within your beats, in general, that helped me a lot. (Student C)

Learner Pedagogical Knowledge

For Lim, teaching is an extension of musical life. It was “always at the back of my mind, I want to teach conducting. And I felt that I have something to pass on to

younger people”. Lim was well-aware of how learners “can switch off very easily”, and that he was taking “six hours of their time” each week for orchestral rehearsals. Therefore, Lim took on the responsibility to “provoke their minds to think”. Further to this, his desire was to equip students with the confidence and assurance that “it’s okay to have my own mind”.

This was also enacted in Lim’s direct conducting encounter with the student orchestra. As one student recounted:

... so there’s a side of him that is a bit more than again an instruction giver but is someone that is trying ... for you to be your best self. (Student A)

Like a potter who “seeks the sort of interaction with his plastic material that a skilful teacher has with his pupils” (Watson, 1960, p. 12), Lim had a deep understanding of and empathy for how students construct knowledge, acquire skills in different ways and develop habits of the mind and dispositions towards learning:

I have been working with young people. So, I know what is manageable, what is attainable, given a period of time. I know what could be done. So, I am more or less climatized to the demand of working with young people. Yeah, I know what to expect and I more or less have some possibility to help them

In order to make such theoretical knowledge and understanding meaningful to students, Lim Yau used a learning-by-re-enacting approach to gain the student’s attention and engagement in music. He illustrated how he would persuade string musicians to consider a more historically informed quality, by directing them to explore an alternative direction in their bow strokes, to play and practice until this became part of their habitual disposition:

If by the next rehearsal, it all comes so naturally, ... And that’s the whole educational process ... Is it your job to tell them, why don’t you start from the tip, so that you have more bow? But that is what I try not to do, because that is just a mechanical part of it. The end result is that I want you to feel the yearning of the fourth note on the up-bow ... I work on that basis.

While learning by re-enacting confirmed how the students had learnt and registered specific musicianship skills to their performance, Lim was conscious that students themselves had to be convinced that this change made musical sense. The musical sensibilities that Lim sought to achieve were collaborative. Such a unison required a coherent interpretation by the orchestra, which could not be achieved until the group was “emotionally in unison with itself”.

Academic Curricular Knowledge

Always ruminating with history, Lim sought to understand music deeply. As three students recounted:

It made me really think about the very organic nature of music making ... (Student A)

He basically opened this window of looking at music in a slightly different way ... the kind of context that ... really matters to the piece, especially the Classical era: the background of the composer, the circumstances the composer was in, it directly influences the way the music is performed. (Student B)

... he led me to feel that composer, conductors, whoever lived, was a real person ... and that the pieces they [wrote] were part of ... very much a part of their struggle of life, even if certain pieces were written purely to make some money ... and some pieces were art pieces ... (Student D)

As an artistic director, Lim actively sought to prepare student-professionals by selecting repertoire within the musical canon that had a sense of historicism, while responding to the diverse abilities of an evolving student cohort. The concert programmes curated for the school orchestra were organically responsive to the changing times and needs of the student body. Therefore, Lim shouldered the responsibility to carefully select repertoire that looked towards the future of a professional musician:

I’m not in favour of doing some utterly unknown piece where the students five years down the line when they grow up, and they teach, not having known ...

The weekly rehearsals that he led were summative opportunities for students to experience the life of an orchestral musician in rudimentary form:

I look at the orchestra rehearsals of six hours as a weekly summary of whatever they learnt in the class.

Cultural and Social Contexts

From an educator’s perspective, this artist-educator was keen to not only meet curriculum goals, but also engage with the community and public to enrich lives through music-making:

What actually a Classical musician in Singapore has to do is to try to influence people around you to be less hostile to the orchestral sound or Classical music. And if you can open up that, then you are doing some good ... You should influence people around you. Classical music is not highbrow but you have to be less prejudiced.

The traits of Lim are not dissimilar to those of artist-educators who have what Shulman (2006) described as “a body of skilled practice without which neither theory nor character is sufficient” (p. 30). When asked to describe the impression of their mentor, the student conductors consistently mentioned Lim’s determination and strong-willed character in moments of decision-making that pertained to artistically related choices:

He’s definitely consistent in what he wants in music. (Student D)

I think the main thing is that ... he remains uncompromising in his ideals. (Student D)

In the words of one student, Lim was,

a reserved rebel ... someone who doesn't follow the norm but at the same time he is not someone who ... go against the flow or the grain of things just for the sake of doing so; he will always have a reason, a strong backing for doing so ... (Student D)

The above accounts provide some support for the broad claim of PCK as a theoretical framework to outline professional knowledge in conducting pedagogy. However, Shulman did not define the constructs very precisely to provide a common basis for discussion (Banks et al., 2004). Hence, there are varied interpretations of this conceptual framework, making it difficult to define what exactly comprises such knowledge for higher education in the arts. Here, I argue that while PCK is commonly referenced as a “classical” model to define a body of knowledge required for teaching, it is not always fit for purpose in professional and higher education.

Professional Knowledge of an Artist-Educator

While philosophical beliefs, musical-technical skills and interpersonal skills are commonly proposed as attributes in conducting pedagogy (Durrant, 2003), Lim's professional knowledge in conducting is framed by these essential tenets:

1. *Aural Visualisation*: Encouraging the formation of aural and acoustical memory of sound, through relational listening and observation (Koivunen, 2003).
2. *Empowerment*: Removing support gradually and encouraging risk-taking (Postema, 2008).
3. *Articulation*: Engaging in conversations about reasoning and knowledge through an in-between space of learning beyond the podium (Bond, 2004; Graham & Zwirn, 2010).
4. *Reflection*: Enabling students to focus on their own actions, thoughts and feelings (Anderman & Anderman, 2009; Cooper, 2017; Varvarigou, 2016).

Aural Visualisation

Lim's fascination with sound served as a powerful learning motivation for this artist-educator's continuous pursuit of a deeper understanding of different kinds of sound. In his own words, “sound is our business, acoustic is our business”. It was his “fascination with sound” and “a big thirst for knowledge about sound [and] about music that continuously keeps me inspired”. He pointed to an interpolation of a “renaissance sound and an Asian aesthetical vibration ... this ... keeps on knocking on each other. It just fascinates me”.

But more than the “thirst for sound”, Lim sought to make excellent music:

... just the sound itself, is not enough, it's not yet music. You have to find music. But music needs your awareness of harmony, your sharpness in rhythm, your wide knowledge in the time that you are living in and its association with the past and what it could be in the future.

If you allow yourself to be woven into this cone of thinking, you will develop. But if you are there only to focus on the sound and you make beautiful sound[s], then that is not yet music.

This concern with sound stemmed from the desire to communicate music to the listeners:

it’s not about making beautiful sound, it’s about making relevant sound to life. Umm ... once that is wholly aware, fully aware of the acoustic, and one’s limitation, and the journey through the 2 hours of music that you have prepared ... but I think the content of the sound, of the music that you make, if it’s good enough and sincere enough, it will touch your audience and I think touching the audience is a very important part of the development of a musician.

The artistic quality of an orchestra requires a constant process of coordination—the interplay of musicians both within a section (strings, winds, brass or percussion), and between those sections cannot be reduced to “technical” aspects, such as coming in and ending the performance together (Weeks, 1996). This is where Lim distinguished himself from novice conductors, where he sought to arrive at organicism in the artistic and aesthetic sense by preparing the orchestral musicians to be mentally and emotionally in unison. Lim strove for a symbiotic relationship in both time and space to achieve such oneness. Using Wagner’s *Parsifal* as an analogy, Lim compared these moments to a scene where he finally saw “the Holy Grail”:

When Parsifal was led by Gurnemanz through the thick of the forest, he finally saw the Holy Grail. And he didn’t even know that this was something that most people could not even encounter. You really need to make these encounters something that our students want.

To develop an accurate aural concept of a conductor score, Montemayor and Moss (2009) recommended the use of guided recordings. Listening to recorded models of a piece to be rehearsed may enable novices to behave more like experts. Morrison et al. (2009) speculated that “students may have internalised the musical ideals demonstrated by the recordings and then made their subsequent judgments in comparison to those ideals” (p. 127). For Lim, however, the actual acoustical sound of the rehearsal should be recorded in the students’ memory to generate good imagery of what could be created in another space and time. Aural visualisation supports the attainment of a superior aural imagery, which can in turn be realised in performance.

Achieving musical congruity in various acoustical contexts was a key part of the artistry under Lim’s baton:

There is an absolute tempo for every moment, in every hall. For every combination, there is such a thing called the acoustic, and your spiritual binding ... like what Parsifal would say ... ‘You see my son, this is where time and space become one’. This statement suddenly made me understand fully what Celibidache’s teaching was all about. And that is also something I try to pass on to our students In [NAFA’s] Lee Foundation Theatre, you are projecting music to a 388-seater hall, and this is what you have to do. But next week, when we go to Victoria Concert Hall, you have to judge it differently. The time and space—and you—become one. becomes a different space and time ... our students have to understand this.

This makes relational listening essential. Relational listening was considered by Csikszentmihalyi (1990) as *flow*, and what conductor Esa-Pekka Salonen described

as “an ecstatic, spiritual experience” (Köping, 2007). When relational listening is fluent and successful, it is like a short moment of happiness (Wennes, 2002). The individuals connect to the total, striving for better sound and performance. Relational listening is therefore somewhat similar to Köping’s (2007) concept of circular response, which implies a constant negotiation and connection where the self is affected. The conductor is part of the process, creating and changing together with the other musicians.

Aural visualisation of sound with skilful listening generates collective virtuosity in an orchestra (Koivunen & Wennes, 2011). As Lim’s approach shows, the artist-educator—as a facilitator—is a part of the orchestra who helps the musicians in their music-making, listening to the quality of the music before guiding them towards a musical intention.

Recognising the role of an artist-educator as a facilitator, not a dictator, Lim described himself as a facilitator of music-making:

You are there actually to facilitate the fellow musicians to actually function as part of this organic sound.

As an artist-educator in specialist conducting, he directed the students towards transforming musical knowledge into the creation of a musical space, where music is created, appreciated and understood:

The director is actually there to facilitate that realisation of that canvas of time.

With this facilitative approach, Lim does not force the orchestra to perform according to pre-existing recorded models of sound but first listens to the orchestra and then works from that. This marks a difference from previous views of a conductor who leads by autocratic instruction (Hosking, 1988).

Pedagogy of Empowerment

The conductor who practises transformational leadership does not simply “dictate” his artistic concept but instead conveys it as a vision that the orchestral musicians experience as intellectual stimulation and inspirational motivation. In an orchestra, intellectual stimulation consists mainly in approaching familiar works in a novel way. Lim resisted explanatory systems or social structures that render students and teachers as passive receptacles of pre-packaged knowledge (Greene, 1978 in Graham, 2009).

Lim’s pedagogical strategies on the podium reflect a desire to facilitate potential artists in finding the conditions required for their own creativity, which means both flexibility and risk when creating music (Bucura, 2020). Well recognising that he was commonly known to be authoritative in directive leadership, Lim clarified his philosophical beliefs:

There is a thin line between autocratic behaviour, knowing your rights, and trying to work with each other.

The desire to empower students with the confidence to take musical risks was enacted through the rehearsals, by encouraging a continuous iteration of experimentation and coaching:

actually like giving a bit of risk to them, but then at the same time allowing them some space to experiment and then they feel that with some guidance, the risk and experiment are worth it because the conductor has taken in their musical suggestion. Without that, the mind will go ... and I think that is not the direction to go.

Making room for risk-taking and mistakes was part of his pedagogical moves:

You have to just have to walk that distance, and then come back and think whether it works. But if you do so after every five seconds or 10 seconds, that is a no, no Walk it, and even walk the same mistake for three or four times, and then realise that I should have done otherwise.

As someone who has had much experience making music in the moment, Lim Yau provided similar opportunities for younger conductors to have the experience of delivering their own “moments” to experience timing, a sense of direction, and most importantly, moments of sound within a specific acoustical environment. In his own words:

These are the opportunities I think a lot of young people would need to have ... I always feel that these sorts of opportunities [are] very very important for young aspiring artist[s].

I come to the conclusion that you don’t just learn technically. You should try to encourage the student to be fully aware that is just the beginning.

Recognising that the learning process is gradual and iterative, Lim continued to creatively collaborate with the orchestra. As he recounted vividly,

I can have my own study of the piece. I go and meet you, my collaborator. In the first hour, I see what you have to put on the table to work with me. From there, I facilitate the given schedule, and the students make a presentation at the end of it. I may not have convinced 95% of them to play Stravinsky the way I have as a result of my study. If I only convinced 40% of them, I believe that the next time, I will be able to convince 60% ... it should never be a product. Once it is a product, you’re either proclaiming that you are God, or that’s the only way to deal with this piece.

In the words of Freire, “being an artist does not mean that he or she can make the profile, can shape the students. What the educator does in teaching is to make it possible for the students to become themselves” (Horton & Freire, 1990, p. 181).

Articulation Through Open Conversations

Lim built the conviction, confidence and trust of the students by cultivating open conversations beyond the podium. Personal conversations as an in-between space of learning became a vital part of his pedagogical practice, since there would naturally be a limitation of words or conversation in most rehearsal situations (Koivunen & Wennes, 2011). Hence, off-stage discussions can become the most satisfying part of

teaching, because they develop a dialogue and a working relationship, where student expertise and artistic interests meet the teacher's artistic interests (Graham, 2009; Wilson, 2016). Such exchanges operate as a cognitive apprenticeship, enabling the conductor to understand the students' thinking processes (Cooper, 2017). Building conversations that emphasise care and hospitality empowers the conductor to build engaging, rather than controlling, relationships with students.

As a professional conductor, Lim would expect younger conductors to have a high level of mastery in the theory and philosophy of music and enjoy communicating about it:

[Conducting] ... it's a lot of hard work, it's a lot of preparation, it's a lot of reading [and] you have to like that sort of activity [and] you have to like to be alone, to keep on sitting there and think what this aspect would lead to something else ... they need many hours to look at the text, look at the actual bolts and nuts of sound, the intervals, the harmony and things. Em, where possible, I try to tell them all these [is] part of a whole ...

Lim leads by inspiring others through conversation in "contact time". In Lim's own words, "I don't think I teach. I share views with them". This belief is grounded in his belief in "allowing the mind to develop but you have to point the way for them to develop". Hence, he did not think that he had "actually taught anybody", but he would "tell them how I would do".

I still believe in allowing the mind to develop, but you have to point the way forward for them to defend a belief in contact time.

Teaching conducting was more about cultivating an environment or social context where the teacher's experience and interests intersect with students' backgrounds, needs and interests:

That's why maybe my conducting classes are always too long. Because it is only when they're in front of you that you can share this thing and when that happens, you should not be thinking about the duration of the class ... in the good old days the teacher and apprentice stay under one roof.

Since there was a purposeful silence in most rehearsal situations, Lim encouraged student conductors to ask questions pertinent to rehearsal through off-stage teaching conversations:

I encourage them to ask as many questions as they can. Because when they ask questions, you know where they're coming from. Because a conductor is just like ... an actor ... I have no idea, until I see you act. Even if I see you conduct, I have only this percentage of how you are looking at the music. Because I don't know what is in your mind until you ask me ...

... simply because they don't only make the sound through the orchestra. And when you see that a certain gesture or certain set of continuous gestures got the sound, which you think that sets up harmonic rhythm and melodic nuances, is how you think it ought to be, there you have it.

Lim sought unique solutions in each context but demonstrated a "pragmatic" approach in his teaching as a conductor. The practicality of his teaching was revealed by one of the student conductors:

I think what he does that sets him apart from other teachers is that he often brings in the reality of the situation ... we can talk about art and things that are abstract in concept nature, ... but he will often at the same time bring you down to earth ... (Student A)

Reflection by “Walking that Distance”

Encouraging reflective practice was another means used to enable conductors to give close attention to their own actions, thoughts, feelings, values, identity and their effect upon others, situations and professional social structures (Anderman & Anderman, 2009). For Lim, relationships were not about managing what was going to happen but purposefully enabling the unexpected to happen by engaging students with different rehearsal language. In Lim’s own words, “reflection is a long term, self-evolving process. If you get the student to reflect every other second, this person will not get any way. I feel he has to go out there and make mistakes”. As Brown et al. (1989) affirmed, learning in an authentic context makes learning more meaningful and engaging.

In his teaching, Lim Yau demonstrated his desire to help the young conductors to find their own voice by guiding them to self-discover through reflection:

He’s not someone who would spoon-feed you. So even things like marking your scores, or developing your own interpretation of the music, he does not ... Mr Lim makes a point but like I say he directs you, he doesn’t spoon-feed you so sometimes he deliberately says things for you to figure out. (Student B)

I was quite inspired, in general, yea ... I think conducting is really a journey of self-discovery. You learn more about yourself actually trying to conduct ... (Student C)

There is no one particular way of conducting a particular passage but he would say how he would do it and leave you to think how you should do it. (Student D)

I think one of the great things about them as teachers is that they don’t give you clear answers ... I really appreciate the fact that when the question comes across they don’t say, ‘Ok, this is the answer, accept it’ ... So, broadening the mind beyond what can be found in the textbook or particular book or text. (Student D)

A Personalised Signature Pedagogy in Conducting

What is clear from Lim’s pedagogical insights is that high-quality instruction requires sophisticated professional expertise that goes beyond pedagogical content knowledge (Ball et al., 2008). A major finding of this study is that there are other constructs that help to define the professional knowledge of an artist. Lim’s insights highlight a range of other types of knowledge including principled practical knowledge and personal practical knowledge to craft a pedagogical signature (Berliner, 2001; Clandinin, 1985). In Lim’s own words, pedagogy is “organically understanding what you want out of it to motivate them to produce musical sense”.

In this reading, we recognise Shulmanian qualities through the voice of an artist-educator called to value music as a way of life more than just a vocation. Having

a deep understanding and knowledge enables Lim to effectively integrate theory and practice. Through a lifelong journey in the rhetoric of uncertainty, this “reserved rebel” had to act under conditions where resources were limited and yet actions had to be taken. Having conversations with students and engaging with a broader community of practice reversed the traditional approach of master-disciple apprenticeship and provided a platform to further share and aggregate his expertise and knowledge.

As an artist-educator, Lim Yau provides a unique perspective on pedagogy for a profession in the arts. The conductor’s teaching artistry can be described by a range of experiences that he has acquired over his life, including musical and life experiences, cultural experiences, opportunities and talents, as well as philosophical perspectives on sound and concept of relational listening. In the moniker of an artist-educator, we celebrate the diverse and dynamic nature of this artist-educator’s work. The concept of the artist-educator bridges the gap between a traditional arts professor and a practitioner who teaches in a conservatoire. It celebrates the in-between identities that emerge from this unique position, allowing for innovative and integrated approaches to teaching and learning in the arts. Encapsulating Lim’s attitude towards the arts, we close with an insight that exemplifies his curiosity and dedication to continuous learning and exploration:

that has been my approach to arts. I just want to know more.

References

- Allison, A. (2013). No art teacher left behind: Professional development that really matters in an age of accountability. *Arts Education Policy Review*, 114(4), 178–190.
- Anderman, E. M., & Anderman, L. H. (2009). Cognitive apprenticeship. In E. M. Anderman & L. H. Anderman (Eds.), *Psychology of classroom learning: An encyclopedia* (pp. 177–181). Macmillan Reference.
- Anderson, C. H. (1981). The identity crisis of the art educator: Artist? Teacher? Both? *Art Education*, 34(4), 45–48.
- Angelo, E. (2015). The music educator: Bridging performance, community and education—An instrumental teacher’s professional understanding. *International Journal of Community Music*, 8(3), 279–296.
- Ball, D. L., Thames, M. H., & Phelps, G. (2008). Content knowledge for teaching: What makes it special? *Journal for Teacher Education*, 59, 389–407.
- Ballantyne, J. (2012). Reconceptualising preservice teacher education courses for music teachers—Pedagogical content knowledge and professional knowledge and skills. *Research Studies in Music Education*, 26, 37–50.
- Banks, F., Barlex, D., Jarvinen, E., O’Sullivan, G., Owen-Jackson, G., & Rutland, M. (2004). DEPTH—Developing professional thinking for technology teachers: An international study. *International Journal of Technology and Design Education*, 14(2), 141–157.
- Bennett, D. E. (2013). *Understanding the classical music profession: The past, the present and strategies for the future*. Ashgate.
- Bereiter, C. (2015). The practicality of principled practical knowledge: A response to Janssen, Westbroek, and Doyle. *Journal of the Learning Sciences*, 24(1), 187–192.
- Berliner, D. C. (2001). Expert teachers: Their characteristics, development and accomplishments. *International Journal of Educational Research*, 35(5), 463–482.

- Bond, L. P. (2004). Using contextual instruction to make abstract learning concrete. *Techniques: Association for Career and Technical Education*, 79(1), 30–33.
- Booth, E. (2003). Seeking definition: What is a teaching artist? *Teaching Artist Journal*, 1(1), 5–12.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32–42.
- Bucura, E. (2020). Flexible music teaching and risk. *Teaching Artist Journal*, 18(3–4), 102–120.
- Campbell, M. R., & Brummett, V. M. (2007). Mentoring preservice teachers for development and growth of professional knowledge. *Music Educators Journal*, 93(3), 50–55.
- Carrick, R., Easton, H., Hong-Park, J., Langlais, R., & Mannoia, R. (2012). A personal relationship to the art of music: A research project in progress from the New York Philharmonic's school partnership program. *Teaching Artist Journal*, 10(3), 168–176.
- Clandinin, D. J. (1985). Personal practical knowledge: A study of teachers' classroom images. *Curriculum Inquiry*, 15(4), 361–385.
- Clandinin, D. J., & Connelly, F. M. (1998). Stories to live by. Narrative understandings of school reform. *Curriculum Inquiry*, 28(2), 149–164.
- Connelly, F. M., & Clandinin, D. J. (1986). On narrative method, personal philosophy, and narrative unities in the story of teaching. *Journal of Research in Science Teaching*, 23(4), 293–310.
- Cooper, N. (2017). Design-based research as an informal learning model for choral conductors. *London Review of Education*, 15(3), 358–371.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*.
- Daichendt, G. J. (2009). Redefining the artist-teacher. *Art Education*, 62(5), 33–38.
- Duma, A. L., & Silverstein, L. B. (2008). Achieving a greater impact: Developing the skills of teaching artists to lead professional development for teachers. *Teaching Artist Journal*, 5, 118–125.
- Durrant, C. (2003). *Choral conducting: Philosophy and practice*. Routledge.
- Eisner, E. (1991). *The enlightened eye: Qualitative inquiry and the enhancement of educational practice*. MacMillan.
- Englebrecht, W., & Ankiewicz, P. (2016). Criteria for continuing professional development of technology teachers' professional knowledge: A theoretical perspective. *International Journal of Technology and Design Education*, 26(2), 259–284.
- Eraut, M. (2014). Developing knowledge for qualified professionals. In M. Jones, O. McNamara, & J. Murray (Eds.), *Workplace learning in teacher education* (pp. 47–72). Springer.
- Evans-Palmer, T. (2010). The potency of humor and instructional self-efficacy on art teacher stress. *Studies in Art Education*, 52(1), 69–83.
- Farrell, P. (2012). Teacher-research and the art of the professional experiment: Reflective practice in the practical-knowledge tradition. *International Journal of Language Studies*, 9(1), 19–22.
- Graham, M. A. (2009). How the teaching artist can change the dynamics of teaching and learning. *Teaching Artist Journal*, 7(2), 85–94.
- Graham, M. A., & Zwirn, S. G. (2010). How being a teaching artist can influence K-12 art education. *Studies in Art Education*, 51(3), 219–232.
- Greene, M. (1978). *Landscapes of learning*. Teachers College Press.
- Hammor, C., & Littman, D. M. (2022). Unrehearsed moments: Interstices of policy, preparation, and reflexivity. *Arts Education Policy Review*, 1–9.
- Hickman, R. (2010). Self portrait—An account of the artist as educator. *International Journal of Education & the Arts*, 11(2), 1–15.
- Holgerson, S.-E. (2010). Appreciating different aspects of professional knowledge in music education. In *RAIME—Proceedings of the 10th International Symposium* (pp. 113–125).
- Horton, M., & Freire, P. (1990). *We make the road by walking: Conversations on education and social change*. Temple University Press.
- Hosking, D. M. (1988). Organizing, leadership and skilful process. *Journal of Management Studies*, 25(2), 147–166.
- Huddy, A., & Stevens, K. (2011). The teaching artist: A model for university dance teacher training. *Research in Dance Education*, 12(2), 157–171.

- Jank, W., & Meyer, H. (2002). *Didaktische Modelle*. Cornelsen Scriptor.
- Jaramillo, M. (2008). Music educator's professional knowledge. *Music Education Research*, 10(3), 347–359.
- Kaufmann, I. (1960). Irving Kaufman ... artist-teacher. *Art Education*, 13(2), 13–15.
- Kerr-Berry, J. (2007). Dance educator as dancer and artist. *Journal of Dance Education*, 7(1), 5–6.
- Klein, S. R. (2008). The use of dispositions in preservice art teacher evaluation. *Studies in Art Education*, 49(4), 375–380.
- Koivunen, N. (2003). *Leadership in symphony orchestras*. Tampere University Press.
- Koivunen, N., & Wennes, G. (2011). Show us the sound! Aesthetic leadership of symphony orchestra conductors. *Leadership*, 7(1), 51–71.
- Köping, A. S. (2007). The creative compost: Playing and conducting musical events. In G. P. de Monthoux, C. Gustafsson, & S. E. Sjöstrand (Eds.), *Aesthetic leadership: Managing fields of flow in art and business* (pp. 15–32). Palgrave Macmillan.
- Kvernbekk, T. (1999). Knowledge that works in practice. *Scandinavian Journal of Educational Research*, 43(2), 111–130.
- Lanier, V. (1959). Affectation and art education. *Art Education*, 12(7), 10–21.
- Lee, B. (2013). The process of developing a partnership between teaching artists and teachers. *Teaching Artist Journal*, 11(1), 26–34.
- Logan, F. M. (1955). *Growth of art in American schools*. Harper and Brothers.
- Lummis, G. W., Morris, J., & Paolino, A. (2014). An investigation of Western Australian pre-service primary teachers' experiences and self-efficacy in The Arts. *Australian Journal of Teacher Education*, 39(5), 50–64.
- McCracken, W. (1959). Artist—teacher. *Art Education*, 12(9), 4–5.
- McNamara, J., & Risner, D. (2022). Performing arts teaching artists in P-12 schools: Reconsidering preparation, policy, and professional challenges. *Arts Education Policy Review*, 124(2), 127–134.
- Milbrandt, M. (2006). A collective model for art education teacher preparation. *Arts Education Policy Review*, 107(5), 13–21.
- Moffett, A.-T., Sorensen, G. B., & Ifill, V. (2015). Transitioning from school to career: I've got my MFA ... Now what? *Journal of Dance Education*, 15(1), 39–43.
- Montemayor, M., & Moss, E. A. (2009). Effects of recorded models on novice teachers' rehearsal verbalizations, evaluations, and conducting. *Journal of Research in Music Education*, 57(3), 236–251.
- Morrison, S. J., Price, H. E., Geiger, C. G., & Cornacchio, R. A. (2009). The effect of conductor expressivity on ensemble performance evaluation. *Journal of Research in Music Education*, 57(1), 37–49.
- Overland, C. (2017). Using roleplaying simulations and alternate reality gaming to develop professional behaviors in pre-service music teachers: A qualitative case study. *Contributions to Music Education*, 42, 107–127.
- Parker, R. (1953). Student, teacher, artist. *College Art Journal*, 13(1), 27–30.
- Parkes, K. A. (2022). Teaching artist? Re-considerations. *Arts Education Policy Review*, 124(4), 221–227.
- Popovych, N. (2014). Experience as a basis for the professional development of future teacher of music. *European Journal of Contemporary Education*, 8(2), 128–136.
- Postema, D. A. (2008). *Orchestral conducting pedagogy: A case study of participants' perceptions of teaching and learning in the Symphony Australia conductor development programme* [Doctoral dissertation]. University of Tasmania.
- Probine, S. (2021). Becoming an artist/teacher: Supporting preservice teachers to develop their confidence and pedagogical knowledge to effectively and actively teach the arts in early childhood. *Journal of Early Childhood Teacher Education*, 1–21.
- Reeder, L. (2007). Teaching artistry. *Teaching Artist Journal*, 5(1), 15–21.
- Saraniero, P. (2009). Training and preparation of teaching artists. *Teaching Artist Journal*, 7(4), 236–243.

- Shaw, J. (2018). Pedagogical context knowledge: Revelations from a week in the life of itinerant urban music educators. *Music Education Research*, 20(2), 184–200.
- Shulman, L. S. (2006, March/April). From hermeneutic to homiletic. The professional formation of clergy. *Change*, 28–31.
- Sindberg, L. K. (2016). Elements of a successful professional learning community for music teachers using comprehensive musicianship through performance. *Journal of Research in Music Education*, 64(2), 202–219.
- Stanley, F. (2013). Teaching artistry: Education’s extreme sport. *Teaching Artist Journal*, 11(3), 161–167.
- Steele, J. S. (2018). The teaching artist’s journey: Professional learning in a hybrid field. *Youth Theatre Journal*, 32(1), 60–74.
- Thornton, A. (2012). What is it to be an artist teacher in England today? *World Journal of Education*, 39–44.
- Varvarigou, M. (2016). ‘I owe it to my group members ... who critically commented on my conducting’—Cooperative learning in choral conducting education. *International Journal of Music Education*, 34(1), 116–130.
- Walker, L. C. (1955). The studio artist and the art historian. *College Art Journal*, 15(2), 119–123.
- Watson, W. (1960). William Watson ... artist-teacher. *Art Education*, 13(5), 11–13.
- Weeks, P. (1996). Synchrony lost, synchrony regained: The achievement of musical co-ordination. *Human Studies*, 19, 199–228.
- Wennes, G. (2002). *Skjønnheten og udyret: Kunsten å lede kunstorganisasjonen* [Beauty and beast: The art of leading cultural organizations]. NHH, Norwegian School of Economics and Business Administration.
- Wilmot, L. R. L. (2021). The role of teaching artists in postsecondary education. *Journal of Dance Education*, 21(1), 24–33.
- Wilson, L. (2016). Dance pedagogy. *Journal of Dance Education*, 16(1), 20–26.

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Chapter 3

Codetta: Pedagogies of Pioneers in the Profession



Rebecca Y. P. Kan and Christopher S. G. Khoo

To be a professional requires understanding, character, and practical skills that can be employed with sensitivity, given the conditions and contexts within which one works. This kind of deep integration is no small challenge. (Shulman, 2006, p. 29)

Abstract Pioneering artist-educators demonstrate deep integration of personal practice with pedagogical content, reflecting habits of mind, hand and heart that are vividly conveyed to students at different stages of their development. Their teaching artistry rests in a deep understanding of student experiences and their ability to guide learners in the right direction. This codetta highlights six key attributes that characterise pedagogies of pioneers in the profession, which educators can adopt to shape their future actions and behaviours while gaining a deeper understanding of the values and constructs of their discipline.

An examination of Lim's contribution to the history of twenty-first-century arts education yields valuable and interesting insights about pedagogies of pioneers in professions of arts and design. Through sustained mentorship, courage, resourcefulness, imagination and mastery of their craft, these artist-educators have imparted invaluable lessons in technique, discipline and critical thinking (Purushothaman & Soo, 2023). Borne out of lifetime experiences, the perspectives of veteran artist-educators would therefore provide younger artist-educators, as well as those in the

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field of education, with a means of gaining valuable knowledge regarding teaching artistry.

Teaching artistry is shown in the ability to convey vision, knowledge and habits of mind, hand and heart vividly to students at different stages of their development. Because the knowledge that artist-educators possess and apply to their art is wide ranging and multidisciplinary—from practical experience in both artistic practice and teaching, as well as from their reading and interaction with other artists—they have the breadth of understanding to appreciate the students' culture, interests, personality, artistic temperament and performance characteristics, to help them to use these to inspire and fuel their art. The teaching artistry of such artist-educators also rests in their preternatural understanding of what is going on in the student's mind, body and heart, and their ability to offer comments that help direct learners in the right direction.

Acknowledging the efforts of pioneers in the field highlights the need to combine dimensions of principled practical knowledge with personal practical knowledge to craft pedagogical signatures. In the case of Lim Yau, teaching artistry encompasses philosophical principles, knowledge of the repertoire, aural visualisation ability, awareness of the aesthetic potential of sound, and beliefs about the conductor's responsibilities towards an orchestra. Although the principles, the artistic practices and the knowledge that an artist-educator considers relevant may seem personal and idiosyncratic, they are held and articulated with conviction and passion and reflect the artist-educator's artistic voice, identity and being.

While the doyens of an art form offer a past that is experienced as personal trajectories, those who are also gifted teachers recognise that their pedagogical endeavours are orientated towards future learning of the student—not just to transform the student into a competent professional in an art form, but also to plant the seed for developing them into mature, accomplished artists. In critiquing and guiding student work, the artist-educator's artistic judgements are made with conviction based on a clarity of insight and vision. While acknowledging that he was perceived to be authoritative in conducting rehearsals, Maestro Lim Yau described himself as a facilitator towards a unified organic sound in music making. He encouraged students to take musical risks in rehearsals and figure out new ways of doing things through reflection and conversation. However, he noted that although he was a conduit to the mental and artistic development of students, the teacher has “to point the way for them to develop”. By diving deeper into the pedagogical approaches of these visionary artist-educators, we can gain valuable insights into the potential impact they have on shaping the future of artistic disciplines.

The unique characteristics of professional knowledge demonstrated by Kan in Chap. 2 align with Shulman's (1998) attributes of pedagogies of the professions. These tenets represent tools of the trade that future art educators can emulate:

- First, professional educators should recognise their “calling” to serve others. This sense of purpose and dedication allows educators to approach their work

with passion and a genuine commitment to the growth and development of their students.

- Second, educators should strive to develop a deep understanding of the scholarly and pedagogical aspects of their discipline. By immersing themselves in the knowledge and research of their field, art teachers can provide students with a comprehensive and well-rounded education.
- Third, artist-educators should continuously refine their skills through practice. This ongoing commitment to honing their craft ensures that educators stay relevant and current in their teaching methods, enabling them to engage and inspire their students effectively.
- Fourth, arts educators should be prepared to exercise judgement and make informed decisions, even in situations where uncertainty is inevitable. This ability to navigate ambiguity and make sound choices is crucial in providing students with a safe and supportive learning environment.
- Fifth, educators should actively seek opportunities to learn from reflective self-stories. By reflecting on their own experiences and growth as educators, they can gain valuable insights and improve their teaching practice.
- Lastly, it is essential for educators to engage with their professional community through conversations. By actively participating in discussions and sharing of ideas with colleagues, educators can benefit from collective wisdom and contribute to the advancement of their profession.

By embracing these attributes, educators can effectively shape their future actions and behaviours, while gaining a deeper understanding of the values and constructs within their discipline. This commitment to continuous learning and growth ultimately benefits both educators and their students, fostering an environment of excellence and achievement in the field of arts and beyond.

It is therefore imperative for higher arts education institutions and art schools to embrace the pedagogies of pioneers who possess both artistic experience and pedagogical competence. These individuals go beyond being mere educators who happen to be productive artists; they possess the unique ability of artist-educators who have what Shulman (2006) would describe as “a deep integration” (p. 29) of pedagogy in their artistic practices, bridging the gap between personal practice and pedagogical content to shape the spirit and soul of future professionals. Seen in this light, the scholarship of exploring what it takes “to be a professional” (Shulman, 2006, p. 29) strengthens the transition from lived experiences in art-based teaching methods to professional practices that showcase the transformative potential of arts education.

References

- Purushothaman, V., & Soo, J. (2023, May 10). In appreciation and recognition of our arts educators. In K. W. Kwok (Convenor), *Transforming arts education. Our collective mission* [Symposium]. UAS Arts Symposium, Singapore. <https://symposium.uas.edu.sg/sae/>
- Shulman, L. S. (1998). Theory, practice, and the education of professionals. *The Elementary School Journal*, 98(5), 511–526.
- Shulman, L. S. (2006, March/April). From hermeneutic to homiletic. The professional formation of clergy. *Change*, 28–31.

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Chapter 4

The Convergence of Traditional and Cognitive Apprenticeship as a Signature Pedagogy: A Case Study of Dance Choreographer, Lim Fei Shen



Caren Cariño

Abstract Teaching and learning in the performing arts in Southeast Asia have largely been based on traditional apprenticeship or a master-apprentice approach. Even in the late twentieth century, apprenticeship was still regarded as an effective means of knowledge and skills transmission and acquisition by cognitive psychologists such as Howard Gardner and Allan Collins. Later, Collins and his colleagues proposed cognitive apprenticeship, a model based on apprenticeship but includes critical thinking strategies. Both traditional apprenticeship and cognitive apprenticeship have a dual focus on expert processes and learning in context. The convergence of the physical and explicit aspects of traditional apprenticeship with the cognitive and implicit aspects of cognitive apprenticeship in dance creation education is proposed as a signature pedagogy. This chapter is focussed on dance choreographer Lim Fei Shen, a Singapore Cultural Medallion 1988 recipient. Lim created several dance works and taught dance improvisation and creation to NAFA Diploma in Dance students for over 15 years. This chapter examines the convergence of traditional and cognitive apprenticeship in Lim's teaching via qualitative analysis of data from observations and interviews with Lim and her dance students.

Introduction

Teaching and learning in the performing arts have largely been based on an apprenticeship or a master-apprentice approach throughout Southeast Asian history. Traditionally, a master is a revered performer and teacher. An apprentice is chosen by the master, who informally teaches and shares personal knowledge. In the early twentieth century, the establishment of government performing arts schools in the region saw apprenticeship evolve into instruction by teachers who were accomplished

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performers and who taught larger groups of talented students to transfer and preserve cultural performance forms. It was in this context that the Nanyang Academy of Fine Arts (NAFA) was founded by Lim Hak Tai, a pioneer artist and art educator in Singapore, as a private formal art school in Singapore. Contemporary practice leveraging on traditions and cultural heritage was eventually articulated as one of NAFA's key educational.

In the late twentieth century, even as educational systems developed, apprenticeship was still regarded as an effective means of knowledge, skills transmission and acquisition. Howard Gardner (1991), an American cognitive psychologist, reasoned that the “judicious introduction and integration of apprenticeship methods within a scholastic setting should yield students whose potential for understanding is engaged and enhanced” (p. 181). He was interested in harnessing the attributes of apprenticeship to cultivate cognitive skills and processes that can be applied in various contexts. Allan Collins, a cognitive scientist, and his colleagues proposed *cognitive apprenticeship* as a “model of instruction that goes back to apprenticeship but incorporates elements of schooling” (Collins et al., 1991, p. 1). Today, both traditional apprenticeship (i.e. the primary teaching approach prior to the establishment of the academy's performing arts programmes in the 1990s) and cognitive apprenticeship share a double emphasis on expert processes as well as contextualised learning (Collins, 2005). The twenty-first century has seen an increased interest in cognitive and learning sciences to investigate how best to promote learning in the current knowledge economy, where information is more readily available and technology more pervasive (Sawyer, 2014).

Education theorists and researchers noted that learning is no longer just about the accumulation of knowledge and information but also about engagement (Trinidad, 2019). It is in the interest of providing students with the best professional education that the convergence of the physical and explicit aspects of traditional apprenticeship with the cognitive and implicit aspects of cognitive apprenticeship in dance creation education, as taught at NAFA, University of the Arts Singapore, is proposed as a signature pedagogy for the performing arts.

This chapter examines the pedagogy of dance choreographer Lim Fei Shen, focussing on how she combines traditional and cognitive apprenticeship. Lim Fei Shen, recognised as one of the pioneers of contemporary dance in Singapore, was awarded the Cultural Medallion by Singapore's National Arts Council in 1988 for her outstanding contributions to developing the dance scene as an independent choreographer. Lim's interest in teaching also saw her engaged at other institutions of higher learning—National University of Singapore and LaSalle College of the Arts. Eventually, in 2002, Lim was appointed senior lecturer at NAFA. For over fifteen years, she shared her wealth of knowledge and experience as a choreographer and often referenced her own work in training students in the Diploma in Dance programme. Besides imparting her creative process, she empowered students to explore and make their own creative decisions. Her pedagogical approach is valuable for artist-educators in developing their teaching practice, and is worth considering by institutions of higher learning that train dancers for a profession in the arts.

Literature Review

The literature review centres on the notion of *apprenticeship*, which will be referred to later in the chapter to investigate its application to the teaching and learning of dance creation at NAFA. The discussion begins with defining the term, and discusses the transference of the concept from the community to educational institutions. Then, the distinction between traditional apprenticeship and cognitive apprenticeship, and their application in the performing arts, specifically dance, is discussed. Finally, apprenticeship is argued for in the context of the debate on teacher-centred and student-centred learning.

Apprenticeship

Apprenticeship is broadly defined as “an arrangement in which someone learns an art, trade, or job under another” (Merriam-Webster, n.d.). Children go through a kind of apprenticeship to learn to speak, wash, cook, etc., and acquire life skills and other kinds of skills from adults in their family and community (Collins, 2005). Apprenticeship, where the teacher is referred to as a coach or tutor, has continued to be considered an effective way to learn critical skills. However, apprenticeship has been largely supplanted by other pedagogical approaches in today’s educational system (Collins, 2005). As schools accommodated an increase in the number of learners, it was not economically feasible to implement apprenticeships.

Still, cognitive psychologist Howard Gardner (1991) advocated apprenticeship as a valuable approach to education. He argued that apprenticeship provides learners with the context in which knowledge and skills are applied. His theory of multiple intelligences, which recognises that students learn in different ways, supports apprenticeship where learning takes place through demonstration, hands-on experience and interaction with others (DeFalco, 1995). According to Gardner (1991), apprenticeships that lead to products and performances of demonstrable value to society are effective because:

They permit aspiring youngsters to work directly alongside accomplished professionals, hence establishing personal bonds as well as a sense of progress toward an end. Frequently they also feature interim steps of accomplishment, with workers situated at different levels of the hierarchy, so that a learner can see where he has been and anticipate where he is headed. Peers and others of slightly differing competencies can often help and instruct one another. (p. 124)

Collins (2005) contemplated the possibility of improving schools by drawing on the benefits of apprenticeships without incurring the high costs associated with engaging a teacher for one or a small group of students.

Traditional Apprenticeship

Throughout history, the responsibility of what has come to be known as traditional apprenticeship, or teaching the skills of a profession, was assumed by someone's family, guardian or member of the community. A person learnt how to be a seamstress, farmer, or carpenter from an adult (Collins, 2005; Collins et al., 1991). From the late Middle Ages up until the beginning of the twentieth century, in what became known as the guild system, a person could be trained in a profession by being apprenticed to masters or confirmed experts in a field or craft in their workplace in exchange for food, lodging and work (Kirschner & Hendrick, 2020).

In the context of Southeast Asian performing arts, a master and apprentice approach has been discussed in historical overviews by scholars such as James Brandon (1967), professor of Asian theatre at the University of Hawaii. It is common to preserve and transmit cultural-artistic forms to succeeding generations by what Brandon described as a simple traditional teaching method as structured and informal, where students learn by rote and are expected to replicate exactly what they see and hear their elders doing (Brandon, 1967). He went on to describe the teaching of the Legong dance in Bali as "simple, direct, and very efficient: the teacher stands behind the young pupil and guides her arms and legs through the proper movements until the pupil has mastered the fundamental elements of the dance" (Brandon, 1967, p. 157). Brandon (1967) described master-disciple teaching as a teaching method practised in most Southeast Asian countries where the teacher or master of an artistic discipline is a revered person. The master-as-performer is one of the characteristics of this approach. Therefore, the better and more famous performers are the respected and preferred teachers. It is only by the kindness of the master that a student gains access to some of the teacher's profound and personal knowledge of the arts; there is no inherent right for a pupil to learn (Brandon, 1967). Hence, the student is expected to remain loyal and not alter anything that has been taught.

Collins (2005) explained that traditional apprenticeships evolved from a focus on teaching meaningful real-world tasks in discipline-specific domains, while learning is embedded within social or functional contexts, where tasks or skills are readily visible. Thus, students and teachers are able to observe, comment, refine and correct the process, and it is relatively transparent, in relation to the concrete outcomes produced.

The aspects referred to as traditional apprenticeship was described by Collins as modelling, scaffolding, fading and coaching (Collins, 2005; Collins et al., 1991):

- *Modelling*: The master makes the target processes visible, often by explicitly showing or demonstrating the task to be learned. The apprentice observes the master and performs the task per the master's instruction.
- *Scaffolding*: The master supports the apprentice in executing a task. The level of assistance can range from doing most of the task for the apprentice to providing intermittent suggestions.
- *Fading*: The master gradually removes his/her support, giving the apprentice increasing responsibility for the task.

- *Coaching*: The master oversees the apprentice's learning and is "the thread running through the entire apprenticeship experience. The master coaches the apprentice through a wide range of activities: choosing tasks, providing hints and scaffolding, evaluating the activities of apprentices, and diagnosing the kinds of problems they are having, challenging them and offering encouragement, giving feedback, structuring the ways to do things, working on particular weaknesses" (Collins et al., 1991, p. 2).

Cognitive Apprenticeship

While the standardisation of education coincided with the rapid industrialisation of modern societies, apprenticeship was still recognised by cognitive psychologists like Howard Gardner (1991) as valuable for education. However, apprenticeship illustrates a pragmatic epistemology, which is the application of knowledge to solve problems, engaging in experiential learning to gain contextualised insights, as well as the transfer of skills and knowledge to new situations (Collins et al., 1991). Gardner (1991) said, "the test of understanding involves neither repetition of information learned nor performance of practices mastered. Rather it involves the appropriate application of concepts and principles to questions or problems that are newly posed ... the 'complete understander' (sic) can think appropriately about phenomena of consequence in her society, particularly ones she has not previously encountered" (p. 117). Traditional apprenticeship subsequently evolved into a more contemporary approach. As a model of instruction that goes back to apprenticeship but incorporates elements of schooling, this is known as cognitive apprenticeship (Collins et al., 1991). Like traditional apprenticeship, cognitive apprenticeship is used in the context of an authentic situation. However, unlike traditional apprenticeship, which centres on physical and visible skills, cognitive apprenticeship focuses on cognitive skills and processes. The four critical dimensions are content, method, sequencing and sociology (Collins, 2005):

- *Content*: The expert is expected to have domain and tacit knowledge. Domain knowledge refers to a specific understanding of concepts, information and processes associated with a specialised field. Tacit knowledge refers to the embodied and embedded knowledge formed through experience to solve real-world problems.
- *Method*: The expert plays a vital role in providing students with various opportunities to observe, engage, invent or discover contextual strategies (p. 50). The first three methods, namely modelling, coaching, and scaffolding, are fundamental to traditional apprenticeship. These methods focus on enabling students to learn through observation and guided practice. Articulation and reflection are two additional methods that are crucial for fostering students' problem-solving skills. Through articulation, students observe an expert problem-solve as they work towards developing their own problem-solving strategies. Reflection, on the other hand, allows students to critically analyse their own problem-solving

processes and identify areas for improvement. The final method, exploration, is aimed at encouraging students' autonomy in the problem-solving process. It empowers students to take ownership of their learning by actively seeking out and establishing the problems they need to solve.

- *Sequencing*: The expert plans the sequencing of learning activities for the student. The strategies include *increasing complexity*, a sequence of tasks that require more skills and concepts; *increasing diversity*, a sequence of tasks that require more variety of strategies or skills and *global before local skills*, a sequencing principle that sees students develop a conceptual model of the overall activity before attending to the details of the skills involved.
- *Sociology*: The expert provides opportunities for the student to learn skills in the context of the real world. Furthermore, some aspects of apprenticeship's social organisation promote productive beliefs about what learning is, and what expertise is, which are important for learners' motivation, confidence, and most importantly, how they approach the problems that they encounter during their learning process.

While Table 4.1 shows that traditional apprenticeship is focussed on teaching skills in the context of their use, cognitive apprenticeship emphasises the development of generalised knowledge that can be applied in a variety of situations (Collins, 2005). Various aspects of both traditional and cognitive apprenticeship related to the performing arts have been examined by scholars. Most of the literature espoused the benefits of cognitive apprenticeship. In music, De Bruin (2018) advocated cognitive apprenticeship as a framework for educators to develop music improvisation pedagogy, while Weidner (2018) proposed cognitive apprenticeship to cultivate students' music independence through problem-solving and critical thinking. Gao (2021) promoted virtual reality, a digital technology, rather than an in-person master apprenticeship to transmit Chinese traditional art education.

In dance, Kane (1996) recommended cognitive apprenticeship as an approach to facilitate students' analytical thinking about choreography. Cognitive processes provide students with a glimpse into working models for the process of creation in a situated environment, while also encouraging them to question those models as they develop their own ways of creating. She proposed that teachers "think aloud" or let students know about their thought process while choreographing, to encourage analytical thinking as part of the actual process of creation (Kane, 1996, p. 134). While Kane promoted cognitive apprenticeship, she recognised the value of traditional apprenticeship where the instructor should also be a noted choreographer, if the role of an expert is to be assumed (Smith-Autard, 1994). Also, at times, it is "difficult for instructors to verbalise what led to certain choices in a piece: Some things work, or they do not; some things just feel right; and some choices are admittedly arbitrary and/or temporary, meant to be re-examined later" (Kane, 1996, p. 138). Hence, the student may learn more by listening "to the instructor's comments, perhaps taking turns watching the process instead of dancing and possibly risking an awareness of differences between the instructor's ideas and those of the students, ..." (Kane, 1996, p. 138).

Table 4.1 Main differences between traditional apprenticeship and cognitive apprenticeship

	Modelling	Scaffolding	Coaching	Articulation	Reflection	Exploration
<i>Traditional apprenticeship</i> (physical and visible skills)	Instructs by demonstration	Provides feedback	Assists learning			
<i>Cognitive apprenticeship</i> (cognitive skills and practices)	Guides by example	Challenges to diversify	Oversees learning	Develops ability to problem solve		Encourages autonomy

This chapter addresses the development of cognitive skills and processes in the context of dance creation pedagogy. In an earlier paper, I advocated practice informed by research in developing a choreographic method for contemporary Asian dance forms: “Choreographing and researching becomes a back-and-forth process. Students are questioned about the research processes they employ, what information and/or material they gather through these practices and how they propose to use this information and/or materials to inform their choreography” (Cariño, 2017, p. 267). I subsequently proposed a research and inquiry-based approach as a possible framework for teaching contemporary choreography (Cariño, 2019). Characteristic of cognitive apprenticeship, students were guided to develop their choreographies through the application of critical thinking skills (i.e. observation, documentation, investigation, and analysis) coupled with creative thinking practices (i.e. conceptualisation, exploration, experimentation, development and making).

Teacher-Centred and Learner-Centred Approaches

The advent of constructivism—“an approach to learning that holds that people actively construct or make their own knowledge and that reality is determined by the experiences of the learner” (Elliott et al., 2000, p. 256)—fuelled the advocacy of learner-centred approaches in education, such as cognitive apprenticeship, while teacher-centred approaches such as traditional apprenticeship were often criticised.

Teacher-centred instruction is considered “a style of instruction that is formal, controlled, and autocratic in which the instructor directs how, what, and when students learn” (Ahmed, 2013, p. 42). It generally refers to situations in which the teacher asserts control over what, when, where, and how students engage in learning. Hence, it is more about transmission and practice directed by the teacher. The focus is more on the teacher and teaching.

On the other hand, learner-centred, also called student-centred, learning describes learner-centred instruction as democratic, where collaboration and problem-solving are facilitated. The learner’s needs, abilities, interests and learning styles are important. Teachers design and facilitate the active engagement of students in their own learning (Trinidad, 2019). Hence, the focus is on the learner and learning.

There are several processes or models related to learner-centred teaching and learning. These approaches focus on the student’s role in curriculum, content and practice. They include active learning to encourage higher-order thinking skills through reading, writing, discussing, analysing, evaluating, and creating; collaborative learning sees students participating in cooperation and communication with their peers in content and knowledge-building; experiential learning involves students in concrete experience, reflection, abstract conceptualisation, and active experimentation; problem-based learning entails teachers helping groups of students brainstorm, formulate, and structure their ideas on complex issues leading to broader concepts and principles (Trinidad, 2019).

Personalised learning provides students more opportunities to pursue their passions and interests besides the foundational skills of reading, writing and numeracy. This is proposed as an effective way to address technological advances and, together with experiential learning, is about involving students in the application of their knowledge in real-world settings, as well as with learner-centred approaches that promote inclusiveness through sensitivity to individual and group differences (O'Neill & Schmidt, 2017).

Thus, with the rise of cognitive and learning sciences in recent years, there has been increasing interest in determining how best to teach students and promote their learning (Sawyer, 2014). Weimer (2013) described the shift from a teacher-centred to a learner-centred approach as a redistribution of power. Both Wright (2011) and Weimer (2013) concurred and outlined five aspects.

First, “there must be a balance of power with its being shared by both professor and student in terms of activities, decision-making, and assigned roles. Second, the function of content is to contribute to the learning process and acquisition of skills rather than just memorising concepts. Third, the role of the teacher shifts from being the sole knowledge source to being a guide, designer, and facilitator of learning. Fourth, there is the assumption that the responsibility for learning rests on independent and self-motivated students. Lastly, the purpose of an evaluation is not only to generate grades but also to be a means for students to learn, practice skills, and be given feedback” (Trinidad, 2019, p. 1015).

That said, Trinidad (2019) ascertained that learner-centred education “cannot be reduced to a set of techniques but should question the way both teachers and students understand their relationship and the process of learning. This is particularly important in universities where students need both independent thought and expert guidance, activities that can let them construct knowledge on their own and specialist input about the complex nuances of what is learned” (p. 1021).

Methodology

This case study of Lim Fei Shen, a pioneer in contemporary dance choreography in Singapore, investigates traditional and cognitive apprenticeship towards the possibility of developing and formalising a signature pedagogy that combines aspects of both. Qualitative data were collected through interviews as a primary research tool. Interviews provided the opportunity, albeit a structured and guided discussion, for more open and informal interaction between this author/interviewer and the respondents. The students that participated in this case study were second- and third-year diploma students, between 17 and 29 years of age. To uncover potential distinctive learning and teaching practices at NAFA through the eyes of learners, an interview with a small group of Lim's dance creation students was conducted in 2017. The session included questions that centred on Lim's discipline/domain knowledge and skills, her disposition and self-knowledge, as well as her method of instruction and

content delivery. An interview with Lim was also conducted to obtain her perspective on teaching and learning. Observation of video-recorded class sessions taught by Lim in 2017 yielded additional insights.

Background

Lim Fei Shen, born in 1945, is a well-respected choreographer and a veteran dance educator in Singapore. She attained a Degree in Dance (1969) from Folkwang Hochschule Music, Theatre and Dance, Essen, Germany. In addition to dance technique, Lim studied dance creation (also called composition and choreography). The attainment of dance creation skills and knowledge through formal tertiary education is fundamental to Lim's practice or pedagogical content knowledge. In an interview conducted in 2017, Lim commented that at the Folkwang Hochschule where she was introduced to *Tanztheatre* and modern dance, "contemporary or modern work, has grown roots since then ... into my thinking, my philosophy as well as my art and my teaching" (Lim, personal communication, September 26, 2017). At Folkwang, Lim studied under Kurt Joose, regarded as the founder of *Tanztheatre*. Lim claimed: "I may consider myself as the same period as Kurt Joose, Pina Bausch, Suzanne Linke. If I may be allowed to use the word 'expressionism', I'm the pioneer of 'expressionism' in Singapore" (Lim, personal communication, September 26, 2017).

Lim later obtained a Master of Fine Arts in Dance (1992) from Tisch School of the Arts, New York University, USA, where she studied with Phyllis Lamhut, respected as a distinguished artist-educator. Lim shared, "Phyllis Lamhut said to me when I was a student at Tisch 'People will appreciate you more if your dance comes from within'. She believed that emotion comes from motion. This is deep inside of me and influences what I do today" (Lim, personal communication, September 26, 2017).

Lim believed that "A choreographer is just like a film director. You have to have an interest and an artistic vision. To have a vision of yourself and imagine what would happen. Most of the time you are experimenting, and it isn't wrong. By experimenting, you have a sense and understanding of yourself, where you are going and where to go from here" (Lim, personal communication, September 26, 2017). Hence, Lim's professional practice sees her explore contemporary dance-making characterised by interculturalism (focussing on interfacing Asian and Western cultures), as well as interdisciplinarity (or combining two or more artistic disciplines such as dance, theatre, music and visual arts). The distinctiveness of her work is the linking of interdisciplinary with intercultural aspects, that is, integrating different disciplines and cultures to construct a new form. Her interdisciplinary/intercultural choreographies included *Ice Nymph* (2008), a blend of Western contemporary dance and Indonesian classical dance together with Western contemporary music and contemporised Indonesian costumes, as well as *Toccata* (2009), which comprised Western contemporary dance and Thai classical dance together with Western contemporary music and contemporised Thai costumes.

While the students may have perceived her instructional approach of doing it her way as traditional, Lim perceived her instruction as having a cognitive purpose or imparting concepts and principles to apply to their dance creations. This chapter reports my observations and analysis of Lim's pedagogical style, involving both traditional and cognitive apprenticeship, primarily as a teacher of dance creation.



Dance Creation

The terms choreography and composition are used interchangeably in the teaching of dance creation. For this study, the teaching of dance creation refers to composition and choreography as different processes. While composition is about learning the rudimentary tools and craft of dance-making, choreography is more about expressing an artistic voice (Kane, 1996). Furthermore, contemporary rather than classical dance creation will be the focus. Teaching contemporary dance creation in higher education often begins with dance composition. Early views on teaching contemporary dance composition include American modern dance pioneer Doris Humphrey, who claimed that the process was essentially an intuitive effort “through the ages, from the earliest pre-historic era to the present time, but it was only in the 1930s that dance composition theories were developed and taught” (Humphrey, 1959, p. 16). This included Humphrey's (1959) seminal book *The Art of Making Dances*. Utilised as a textbook by many dance teachers, students were introduced to the craft of dance composition, such as design (of bodies, the phrase, the stage space) as well as dynamics, rhythm, motivation and gesture, words, music, and form. Later, books such as *Dance*

Composition: A Practical Guide to Creative Success in Dance Making by Smith-Autard (2004) and *Dance Composition Basics* by Sofras (2019) provided compositional principles and skills to create dance works. Smith-Autard (2004) systematically led readers through the phases of the creative process, including choosing and exploring movement and meaning, various methods of constructing, as well as resource-based teaching and learning and evaluation. Sofras (2019) introduced a systematic dance creation learning process involving reading, discussing, viewing and applying concepts.

Dance Creation at NAFA aims to progressively introduce, develop and consolidate students' dance composition skills to craft movement material into short pieces. In the words of Kane (1996), dance composition is often taught to students before choreography is expected of them, just as music theory is taught before music composition (p. 130). The process begins with establishing foundational skills to enable students to convey an intent or concept(s), as well as introducing basic music concepts and elements in relation to dance. The students move on to exploring different dance composition approaches as well as music approaches and styles relevant to dance. Finally, through the process involving conceptualisation, guided exploration, and relevant research, students are expected to amalgamate the compositional information they have attained to produce a concise contemporary dance work. They are encouraged to express their individual artistic voice in their choreography.

A precursor to this study is Lim's unstructured guidance of several dance composition students to create contemporary dance works exploring the stories, issues, forms and elements of their Asian cultures. To cite an example, Tham Luo Lin Laura created *Red Bamboo* (2009), which reflected her research on the plight of the Samsui women in Singapore's history through projections, costumes and text. Another student, Charlotte Marn Qin Pei's choreography *Rumah Tangga* [*Household in Malay*] (2010) was informed by her research on her Peranakan heritage, including social relationships, traditional costumes and children's songs. A third example from Tay Shuwen Amanda's narrative for *Địa đạo Củ Chi* [*The tunnels of Củ Chi in Vietnamese*] (2011) was based on her investigation of Vietnamese villagers living in a remarkable system of underground tunnels during the Vietnam War (Cariño, 2017).

Findings

Lim's teaching approach is analysed using the concepts of traditional apprenticeship and cognitive apprenticeship, described earlier in this chapter. It was observed in the videos of two Dance Creation classes taught by Lim in 2017 that both traditional and cognitive apprenticeship approaches were used in teaching and learning. Several of the comments by students were on the externally visible or physical processes of Lim demonstrating and providing feedback and assistance. There were also remarks that focussed on cognitive skills and processes, showing how Lim gave examples and challenged students to diversify as well as reflect, articulate and feel their way towards

problem-solving autonomy. Hence, the distinction between traditional apprenticeship and cognitive apprenticeship was not as marked as suggested in most of the literature.

For example, Lim demonstrated how imagery could be expressed through movement. She led by showing how ideas are embodied. At the same time, this was an opportunity for students to observe an expert, such as Lim, do problem-solving that pointed students towards developing their own problem-solving strategies:

A bubble is like this. Just squeeze [demonstrates]. A bit more chaotic, random.

You need to use metaphor. This is metaphor [demonstrates]. This is a pot and steam is coming out from different places. Movement will be more interesting when it is a metaphor.

Lim would “share with everyone ...” her many years of experience as a choreographer and teacher. She imparted an in-depth knowledge and specific vision through examples of choreographic structures and devices from her own repertory of creations. At the same time, Lim empowered students to improve in the direction that they wanted to go through broad and open statements and questions such as “Share what you think. What is your thought?” as well as words of encouragement, such as “Better”, “You feel better?”, “This is better”, “Come on, let’s do it”, or “Try. Go, go”. Lim also guided students to think critically, articulate their intentions, and explore possibilities. She promoted students’ autonomy and encouraged them to explore and make creative decisions by questioning, providing options, recommending alternatives, encouraging students to develop criteria for making informed choices (Grasha, 1994):

When you stir to make a cake the bubbles come up at different times. Use more fantasy. There are many ways.

When you stand next to the person you are actually coordinating the shape. That’s why it works well.

Make it obvious whatever you do. Keep the shape a little longer. Don’t be shy and hidden. Bring it out. You are not doing it clear enough.

You don’t follow through what you start. There is no train of thought. You just find something new and jump into something else and never return or create a variation.

Initiate from your body to move more. I am not saying that you are using technique for technique sake. It’s just stagnant.

We learned in my first-year improvisation class: under, nearby, behind. Where is your space? Can they do cannon?

Can you be synchronised? Maybe even marching. Correct me if I am wrong. I never got your theme. Student remarks: *It shouldn’t be marching.* Mdm Lim: *It has to be the same movement and powerful walking.* Student affirms: *Powerful walking.*

Lim’s remarks often reflected her steadfast views. She was certain about choreographic outcomes and directed students’ development by affirming their actions. Although her suggestions were instructional, and her remarks direct and often personal, she sometimes provided the rationale or reasons for doing things in a certain way and referenced her own experience as well:

Relook, revisit your video and see if it is what I, Mdm Lim, says. Look into it.

Don't change. Keep it exactly the same.

You need to have them reversed in this part.

Make it like a solid form. Make sense?

Could you reverse this? Cut it shorter. Can you cut the very first part? The student directs the dancers and remarks: *I think this is better.* Mdm Lim replies: *Yes*

Don't say the text. You are not portraying the text strong enough so that we can view your movement as an expression. Because we don't have Theatre training our voice is muffled.

Diction is very important.

I remember my piece when one dancer jumped over the other, went across and around and used the space then came in and met the other dancer again. Just make use of more space. Space is so important.

I dislike your beginning, to be really honest. You can begin with the chair because it is a powerful start and then you can develop it from there. But the beginning you have now is nothing. You want the chair to be just a set or prop but it doesn't work because it becomes messy with a big group of dancers.

Good idea. This is good.

I like this part That part I like I like your movement.

I love what you have.

That's nice ... Nice idea.

As a teacher, Lim often required her students to focus on her instruction as they navigate their way through different perspectives and ways to make a short dance work. The students' reception of Lim's teaching can be considered appreciative. They respected her candidness and frankness. The students' remarks are worth quoting at length, as they reveal how Lim is regarded as an artist-educator:

Even though she's an icon, she's very simple and so humble and so down to earth. This is very important that I should master what Mdm. Lim's character is because it will help me when I go out into the industry.

She gave me her most sincere and honest comments.

She is a very critical person who sees things differently from me. She won't tell you what you want to hear, like the nice things.

She can instinctively tell what you are trying to do or what you are thinking. She has good intuition and knows what works and what doesn't.

Mdm Lim's persistent nature is frustrating and confusing but ironically it is what I value most about her. She will try to find ways get her ideas or concepts across.

She is also sometimes playful. This makes the process easier.

Thus, Lim directed her students in developing their dance creation competencies through her instruction of a particular way of thinking about dance, as well as a specific way to make dance, commonly referred to as habit of mind and habit of hand respectively.

The interviews with five selected Dance Creation students also found Lim to have aspects of both traditional and cognitive apprenticeship. There were instances when Lim aimed to direct students' learning by insisting on close adherence to her

instruction. She set the learning outcomes and instructed students to follow her lead. As the students described:

She wants you to portray a particular intention. She will receive your feedback but then she will say, "No, this is what I want. I know what I want, and we are going to continue doing it this way".

When she wants something, she'll keep telling the choreographer "I think that one is better. You should just try. Just try to make it even more perfect". She would tell me, "I want this. This is very nice, keep it, don't change it".

I told her "I want this and I want that. So, can you help me, make this happen?" She said to me "Ok, let's work on this, let's work on that". Her suggestions really helped me because if you are not clear on what you want, you'll definitely get lost.

She didn't want us to change too much. She pushed me to stick to my original idea and refine it. I learned how to observe and replicate from a previously videoed session.

Lim facilitated students to look closely, think critically and explore possibilities. This is representative of the cognitive apprenticeship approach. She presented clarifications to enlighten students' perspectives and posed questions to challenge them to make their own decisions. In their reflections, the students also seemed to recognise this cognitive approach in Lim's instruction:

She always emphasised that less is more. She sees things from different perspectives. For example, if I were to make the dancers travel diagonally, she'll ask "why diagonal? There's so many other ways". It's often something we overlook. Her approach is very simple and straight forward and sometimes works better than what we had planned.

At times she's quite subjective but she also explains why something doesn't work. She makes you think and consider another perspective. So, you question yourself more and more and you think more and more about the choreographic process.

Lim enabled students' development through support and advice, such as "She would say, 'It's fine to make a mistake. Just keep on going. After all, this is a never-ending learning process'". She also encouraged students to be independent: "I learnt to work on my own. To give myself time to understand something more and be enlightened by her guidance" and to think independently: "She taught me that if you improvise without boundaries, and it's just movement for movement sake, it doesn't give any clear focus to the performance. She made me more aware of what to show and why I want to perform".

Both traditional and cognitive apprenticeships were also evidenced in a personal interview with Lim. While Lim urged students to take her advice, she understood that ownership was important to students and offered her support if the student requested it. This stand-by/ready-to-assist, that is, gradually removing the support approach, is characteristic of traditional apprenticeship:

Young people have their own thoughts so I try to convince them.

"No harm, you don't have to follow me, but you may want to listen. Maybe it will inspire you. You don't have to follow".

Why don't you try what I provide you first and if others criticise you, I will explain. Dance creation is two ways, because we are merged, your work, your material and my knowledge.

The cognitive apprenticeship approach was manifest in Lim's interview where she articulated the cognitive aspect of her teaching. Lim provided opportunities to develop more complex and diverse dance creation skills. She urged students to play/ explore and experience the world to discover possibilities for their choreographies:

Sometimes I tell the students to imagine you are water. How many forms could you be transformed in terms of the temperature—an ice cube, muddy water, clear water. Water like a river or like a waterfall. What we should learn about creativity is the dynamic.

I really want students to see real things. I ask them to go back home and boil the water. See how water starts to boil and sense this movement in their bodies. Try to imagine that they become water. So, if you are an ice cube, you are going to melt but whether you melt evenly depends on the surrounding temperature. If it is different on one side than the other then the ice would melt in a different shape. This is what creation is about. To transform your thoughts and imagination.

I often ask students to improvise with a chair. It can be anything but it cannot be used as a chair. Activities like these are what make arts interesting even for students who have no experience. They feel that creativity is not that difficult. It's around you, it's in you.

Expression is something that all human beings have. Find a way to express yourself. We are fortunate that we have a tool which is our body and the study of our body is very important because the awareness of our body is the resource for creativity.

I like to help the students to look back and reflect. Because they are very young they are limited by time.

Finally, Lim's passion for dance creation was evident through the sharing of her own research and illustrious choreographic career. She sought to inspire and encourage students through her wealth of knowledge and experience as an artist-educator:

Green Table was one of the productions that affected my life and I'm still enjoying and watching that piece. From time to time I share it with students because there is a lot of material.

My work comes from very strong and powerful experiences. Therefore, share my life experience and information and ask them to research as well.

In summary, the traditional apprenticeship aspects, or the physical/visible elements of Lim's teaching, are primarily evidenced through modelling. The master/teacher explicitly shows or demonstrates the dance creation skills to be learned. The apprentice/student observes the master/teacher and performs the skills per the master's/teacher's instruction. The cognitive apprenticeship aspects, or the thinking processes of Lim's teaching, are evidenced mainly through articulation, reflection, and exploration. The students observe the expert/teacher articulate and model concepts, principles, and rationale of dance creation, pointing students towards developing their own strategies. The students' autonomy is also encouraged by the teacher, helping them to improve in the direction they choose for themselves through problem-solving processes and establishing the problems to be solved.

Lim Fei Shen's signature pedagogy for performing arts, particularly dance creation, merges traditional and cognitive apprenticeship facets. Teaching and learning are physical and explicit, as well as cognitive and implicit. It is also a combination of teacher-centred and student-centred learning. Teaching and learning

are about transmission, where the teacher influences what, when, where, and how students engage in learning, as well as about problem-solving, where the teacher facilitates the active engagement of students in their own learning. Lim connects traditional with cognitive apprenticeship and teacher with student-centredness.

Conclusion

This chapter examined pioneer contemporary dance choreographer Lim Fei Shen's teaching style, specifically of dance creation. The investigation challenged a clear distinction between traditional apprenticeship and cognitive apprenticeship and, in the process, highlighted the parallels and convergence of both apprenticeships. This study of a master choreographer-educator from both the teacher and student perspectives has uncovered a composite of traditional apprenticeship approaches to develop visible and physical skills, and cognitive apprenticeship approaches to develop thinking processes. Despite the current advocacy of cognitive apprenticeship associated with student-centred teaching and learning, the benefits of both traditional and cognitive apprenticeship have been defended by both Gardner (1991) and Collins (2005). Hence, developing a blended apprenticeship approach in the context of teaching performing arts is recommended for teaching dance creation and other performing arts. The aim is to bring together the physical/visual and explicit aspects of making art with the cognitive and implicit aspects of ways of thinking. Through experiential learning and contextual understanding, students will acquire and embody knowledge and skills, apply them in new situations, and possibly create new forms. In the framework of signature pedagogy, teaching the physical/visible/explicit aspects of the art represents the surface structure, and the cognitive and implicit aspects the deep structure of the teaching. The proposed apprenticeship pedagogy aims to disrupt the teacher-centred and student-centred education debate in favour of a blended approach to teaching and learning.

References

- Ahmed, K. A. (2013). Teacher-centered versus learner-centered teaching style. *The Journal of Global Business Management*, 9, 22–34.
- Brandon, J. (1967). *Theatre in Southeast Asia*. Harvard University Press.
- Cariño, C. (2017). Creating contemporary Asian dance through research-based choreography. In G. Barton & M. Baguley (Eds.), *The Palgrave handbook of global arts education* (pp. 259–273). Palgrave Macmillan.
- Cariño, C. (2019). Teaching contemporary choreography: A research and inquiry-based approach. In P. Onishi (Ed.), *Artistic thinking in the schools: Towards innovative arts /in/ education research for future ready learners* (pp. 107–122). Springer.
- Collins, A. (2005). Cognitive apprenticeship. In R. K. Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (pp. 47–60). Cambridge University Press.

- Collins, A., Brown, J. S., & Holum, A. (1991). Cognitive apprenticeship: Making thinking visible. *American Educator*, 15(3), 6–11, 38–46.
- De Bruin, L. R. (2018). Apprenticing for creativity in the improvisation lesson: A qualitative enquiry. *Teaching in Higher Education*.
- DeFalco, A. (1995). The learning process, apprenticeships, and Howard Gardner. *Journal of Cooperative Education*, 30(2), 36–57.
- Elliott, S. N., Kratochwill, T. R., Littlefield Cook, J., & Travers, J. (2000). *Educational psychology: Effective teaching, effective learning* (3rd ed.). McGraw-Hill College.
- Gao, M. (2021). XR-TECAN: A teaching model for Chinese traditional art education. *Science Insights Education Frontiers*, 10(1), 1365–1380.
- Gardner, H. (1991). *The unschooled mind. How children think and how schools should teach*. Basic Books.
- Grasha, A. (1994). A matter of style: The teacher as expert, formal authority, personal model, facilitator, and delegator. *College Teaching*, 42(4), 142–149.
- Humphrey, D. (1959). *The art of making dances*. Rinehart.
- Kane, N. J. (1996). Teaching dance composition to postsecondary students using cognitive apprenticeship and situated cognition. *Impulse*, 4(2), 130–141.
- Kirschner, P., & Hendrick, C. (2020). Cognitive apprenticeship revisited. *American Educator*, 44(3), 37–40.
- Merriam-Webster. (n.d.). *Apprenticeship*. <https://www.merriam-webster.com/dictionary/apprenticeship>
- O'Neill, S., & Schmidt, P. (2017). Arts education in Canada and the United States. In G. Barton & M. Baguley (Eds.), *The Palgrave handbook of global arts education* (pp. 187–202). Palgrave Macmillan.
- Sawyer, R. (Ed.). (2014). *The Cambridge handbook of learning sciences* (2nd ed.). Cambridge University Press.
- Smith-Autard, J. M. (1994). *The art of dance in education*. A & C Black.
- Smith-Autard, J. M. (2004). *Dance composition: A practical guide to creative success in dance making*. Routledge.
- Sofras, P. A. (2019). *Dance composition basics*. Human Kinetics Europe.
- Trinidad, J. E. (2019). Understanding student-centred learning in higher education: Students' and teachers' perceptions, challenges, and cognitive gaps. *Journal of Further and Higher Education*, 44(8), 1013–1023.
- Weidner, B. (2018). Achieving greater musical independence in ensembles through cognitive apprenticeship. *Music Educators Journal*, 104(3), 26–31.
- Weimer, M. (2013). *Learner-centered teaching: Five key changes to practice*. Wiley.
- Wright, G. B. (2011). Student-centered learning in higher education. *International Journal of Teaching and Learning in Higher Education*, 23(3), 92–97.

Caren Cariño's expertise in performance, education, and advocacy has influenced dance and interdisciplinary arts in Singapore. Holding a Doctorate in Southeast Asian Studies, a Master of Fine Arts in Performance and Choreography, and a Bachelor in Education, Cariño began her career performing internationally with the Ririe-Woodbury Dance Company (USA). As Head of Dance at LASALLE College of the Arts and later Vice-Dean at Nanyang Academy of Fine Arts, she established impactful dance courses and productions in Singapore. Since 2023, as Dean of the Faculty of Interdisciplinary Practices, she has led the School of Interdisciplinary Arts and School of Arts Management. Her internationally published research explores the intersections of education, performance, and culture. Through advisory roles with Singapore's Ministry of Education and National Arts Council, Cariño has helped to position performing arts as a cultural and educational cornerstone. Her work reflects a visionary, interdisciplinary and intercultural approach to the arts.

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Chapter 5

Codetta: Pedagogies of Generative Apprenticeship



Rebecca Y. P. Kan and Christopher S. G. Khoo

*... the apprentice does not imitate
but generate, often engaging in extrapolation and invention
rather than replication and matching. (Shulman, 2008, p. 8)*

Abstract Generative apprenticeship is a higher-order form of apprenticeship that extends beyond foundational skills and knowledge acquired through traditional apprenticeship models, creating a platform for both master and apprentice to engage in complex inquiry and generate new forms of learning. It is generative in the sense that the learning pivots towards innovation and productive change. While traditional apprenticeship focusses on a one-on-one relationship between master and apprentice in order to excel in the mimetic replication of best practice, generative apprenticeship starts with a question or trigger that challenges students to make their own decision. Pedagogies of generative apprenticeship recognise that expertise is not held solely by the master but can also emerge from the apprentice's unique experiences and insights. This model of apprenticeship fosters creativity and mutual learning exchanges, enabling students to draw from the experts' knowledge and experience while allowing space for a dialectical tension between expert and student ideas that leads to new inventions or artistic imagination.

Through a close study of a pioneer contemporary dance choreographer-educator Lim Fei Shen, Cariño (Chap. 4) uncovers a composite model of apprenticeship that challenges previous distinctions between traditional apprenticeship and cognitive apprenticeship. This chapter lights the way towards new pedagogical signatures of apprenticeship. But before we look into expanding the notion of apprenticeship,

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we unpack some of the insights that lend justification to why apprenticeship as a signature pedagogy still holds true in today's context.

Under an insightful and talented master, apprenticeship will include imparting both the physical or visible aspects of the art, as well as the cognitive aspects and way of thinking. In the framework of signature pedagogy, teaching the physical and visible aspects of the art represents the surface structure, and cognitive ways of thinking represent the deep structure of the teaching. This explicit teaching of technique and moves (surface structure) may be informed by the teacher's insights and conceptions (deep structure). In addition, the teacher may seek to pass on a way of thinking about the art, the interpretation or the performance that is difficult to articulate in words (implicit structure). Furthermore, in advanced practice, interpretation and creativity require the student to be highly-skilled in technique (the physical/explicit aspects), and also to possess a wide repertory of techniques and moves to choose from.

The hybridity that Cariño suggests leads us to revisit the efficacy of classical apprenticeship in today's contexts. In the spirit of its root word, *apprehendere*, which in Latin stands for "seize, or lay hold of" (Burwell, 2012, p. 279), this chapter argues for a blended apprenticeship approach in the context of higher dance education. This is an interesting proposition since purely traditional apprenticeship models of education are still posited as the most important dimension of art and design pedagogies (Mason, 2023). With reference to Lim's pioneering pedagogical approach, Cariño proposes a pedagogy of apprenticeship that aims to disrupt the binaries of teacher-centred and student-centred education. Drawing from theoretical principles in traditional and cognitive apprenticeship, Lim leverages on both models co-dependently and independently.

Cariño shows that the distinction between traditional apprenticeship and cognitive apprenticeship in Lim's signature pedagogy is not as clear-cut as suggested in the literature. The visibly traditional modes of apprenticeship involve learning by imitation and scaffolding of practice-led activities, as these are the essential tenets to transmit craft-based knowledge (Collins et al., 1989). This was also where the students observed Lim to perform the tasks as per the master's instruction. In this model, the expert master is at the core of a competent practitioner who is able to guide the learner to become a competent practitioner over time (Christensen, 2016; Hung et al., 2012). Simulating the expert ensures that the authenticity and heritage of extant skills, values and beliefs of the craft discipline can be preserved.

On the other hand, when aspects of apprenticeship through thinking are useful, Lim draws these out from the students. Unlike traditional master-apprenticeship that is realised through guided action and explicit demonstration of techniques to be mastered, cognitive apprenticeship emphasises the explicit teaching of thinking processes and metacognitive strategies. Cognitive apprenticeship in Lim's signature pedagogy is shown through her personalised approach to individual students in a group setting, and appreciating what the students could do that was not taught or executed previously. Skills were mastered in the context of a real-world stage. Through affirmations of the learners' reflections, Lim was able to assist the students to improve in the direction that they desired to take. Additionally, the master was able to rationalise the students' action to encourage deeper exploration. Other approaches

to deepen cognition were to ask the students to reflex on the performance making decisions, or impart concepts and principles that could be applied apply to new problems or situations. In generalising knowledge for use in different situations, extending practice to diverse settings and articulating common principles, students were able to learn how to apply their skills in varied contexts. Lim provided opportunities for students to observe the expert, and visibly articulated ways of approaching a problem in context, in order to encourage students to develop their own problem-solving strategies. She encouraged students to explore independently.

Cariño's study represents the current view that the arts institutional context cannot be expected to demonstrate a single cohesive pedagogical practice. While conservatoire-style training in particular still retains a stronghold in the features of modelling, scaffolding and coaching—an approach that makes learning of the performing arts unique (Callaghan, 1998; Jørgensen, 2000; Mason, 2023)—it has also been acknowledged that the master-centric approach does not sit comfortably with the aims and learning outcomes espoused of a neo-liberalised modern university (Burwell, 2012). Knowledge today is socially constructed, and there is a need for learners to relate to a broad scope of interdisciplinary knowledge in order to transcend existing boundaries in artistic performance (Gott, 1995).

Today, it is important to subscribe to hybrid pedagogical approaches. This is especially so in the era of generative machine learning, which privileges a multitude of possibilities for creation. Recent studies have suggested that with the advent of ChatGPT, the university would be in deficit to continue its previous models of education, since veracity of student learning cannot be completely ascertained (Ghoshal, 2023): ironically, this strengthens the case for a revisit of apprenticeship models, where students are still able to leverage on the craft-person mastery that cannot simply be replaced with an AI-powered chatbot.

Here, we revisit what Shulman (2008) had earlier proposed as “generative apprenticeship” almost two decades years ago:

These forms of learning occur in modern re-inventions of the classical apprenticeship ... The modern apprenticeship occurs within intellectual, practical, and moral communities, with instruction, demonstration, modelling, and practice moving in many directions. Moreover, it is a “generative apprenticeship” because practice is characterised by uncertainty, ambiguity, and unpredictability. The professional must frequently engage in judgment under uncertainty, not solely in the reproduction of a master's most refined techniques. Therefore, the apprentice does not imitate but generate, often engaging in extrapolation and invention rather than replication and matching. (p. 8)

Generative apprenticeship is a higher-order form of apprenticeship that extends beyond how foundational skills and knowledge are acquired through traditional apprenticeship models, creating a platform for both master and apprentice to engage in a complex inquiry process to generate new forms of learning. In the discipline of the arts, such a pedagogical approach invites new questions, approaches, interpretations and significance to the art form. It is generative in the sense that the learning pivots towards innovation and productive change. With reference to “generative dance”, this model of apprenticeship “constitutes the ability to generate new knowledge and new ways of using knowledge—which knowledge alone cannot do.

And which the organisations of the future cannot afford to neglect ...” (Cook & Brown, 1999, p. 394).

Generative apprenticeship emphasises the active construction of knowledge and understanding through personal engagement and exploration. It rejects the traditional approach of passive cloning of a particular desired behaviour, or reinforcements based on an authoritative viewpoint about an established approach. Instead, the generative aspect of this pedagogy encourages learners to generate their own meaning and insights, and emphasises the apprentices’ active engagement in constructing and creating, knowing and doing (Wittrock, 2015). By actively participating in the learning process, individuals are able to make connections to prior experiences, develop a deeper understanding of the discipline and apply it in creative ways. Filorella and Mayer (2015) further emphasise the importance of generative learning by highlighting its impact on long-term retention and transfer of knowledge. They argue that when learners are actively involved in generating their own understanding of the material, they are more likely to remember, retain and apply that knowledge later. When learners gather collectively to reflect, problem-solve and draft new values and beliefs of the art form, new ideas are foregrounded (Locke, 2023).

What makes generative apprenticeship so exciting and different from traditional apprenticeship is that traditional apprenticeship focusses on a one-on-one relationship between master and apprentice in order to excel in the mimetic replication of “best practice” (Shulman, 2008), while generative apprenticeship starts with a question—a trigger that “challenge[s] students to make their own decisions” (Cariño). Generative apprenticeship recognises that expertise is not held solely by the master but can also emerge from the apprentices’ unique experiences and insights.

There are four main elements that define generative apprenticeship. First, the apprentice (or learner) already brings to his learning a set of prior knowledge and experience. Here, students are encouraged to explore, experiment and take ownership of their learning. Second, the notion that knowledge is no longer fixed, and learning is vulnerable and uncertain. Third, that new craft or trade is wicked and problematic. And last, the connoisseur who acts not as teacher but a co-regulator of knowledge who designs learning scenarios that foster uncertainty and ambiguity. Through collective meaning-making between master and their apprentices, generative apprenticeship provides for a more inclusive learning environment.

In generative apprenticeship, a supportive and safe environment is created where learners can explore their own ideas and take ownership of their learning journey. This means that besides contextualised authentic learning environments, decontextualised and simulated learning environments are necessary in order to predict situated learning that prepare students for unknown futures. Hence, both virtual and imagined sites of learning mediate access to new workplace learning environments. Such learning preserves the spirit of traditional apprenticeship, where craft knowledge is essential and the master teacher is still an acknowledged expert. At the same time, generative apprenticeship creates a culture of expert practice, where the learner is encouraged to explore new concepts, ideas and imagination through complex, contextualised (in situ) and authentic tasks, to co-create prototypes that are hitherto

unknown. This approach values the process of learning and encourages learners to take risks and experiment.

Pedagogies of generative apprenticeship offer a promising approach to reframe apprenticeship-based learning. By combining the cognitive aspects of explicit instruction and metacognitive strategies with the experiential and contextual aspects of traditional apprenticeship, this expanded model of apprenticeship enables apprentices to develop both deep conceptual understanding and build a solid repository of craft skills that retains the craft-orientation of traditional apprenticeship, while creating a new craftsperson with mastery. As a transformative shift that is co-created by both student and master, generative apprenticeship offers a more holistic learning experience that encourages mutual learning and knowledge co-construction. The whole ethos of being generative is that this model of apprenticeship leads to new inventions or new ways of artistic imagination. As the field of apprenticeship education continues to evolve, generative apprenticeship provides a valuable pedagogical framework for enhancing learning outcomes and preparing apprentices for the challenges of the future.

References

- Burwell, K. (2012). Apprenticeship in music: A contextual study for instrumental teaching and learning. *International Journal of Music Education*, 31(3), 276–291.
- Callaghan, J. (1998). Singing teachers and voice science—An evaluation of voice teaching in Australian tertiary institutions. *Research Studies in Music Education*, 10(1), 25–41.
- Christensen, G. (2016). ‘Situated learning’—Beyond apprenticeship and social constructionism. In A. Qvortrup, M. Wiberg, G. Christensen, & M. Hansbøl (Eds.), *On the definition of learning* (pp. 125–140). University Press of Southern Denmark.
- Collins, A., Brown, J. S., & Newman, S. E. (1989). Cognitive apprenticeship: Teaching the craft of reading, writing and mathematics. In L. B. Resnick (Ed.), *Knowing, learning, and instruction: Essays in honor of Robert Glaser* (pp. 453–494). Erlbaum.
- Cook, S. D. N., & Brown, J. S. (1999). Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science*, 10, 381–400.
- Filorella, G., & Mayer, R. E. (2015). Generative learning strategies in the classroom. *Journal of Educational Psychology*, 107(3), 773–785.
- Ghoshal, P. (2023). *With generative AI tech touted to disrupt conventional education (and the veracity of learning), can apprenticeships be the answer to skills training?* FDM Group. <https://www.fdmgroup.com/blog/are-apprenticeships-the-answer-to-closing-the-skills-gap/>
- Gott, S. (1995). Rediscovering learning: Acquiring expertise in real-world problem solving tasks. *Australian and New Zealand Journal of Vocational Education Research*, 3(1), 30–68.
- Hung, D., Lee, S.-S., & Lim, K. Y. T. (2012). Authenticity in learning for the twenty-first century: Bridging the formal and the informal. *Education Technological Research Development*, 60, 1071–1091.
- Jørgensen, H. (2000). Student learning in higher instrumental education: Who is responsible? *British Journal of Music Education*, 17(1), 67–77.
- Locke, P. (2023). Elephants as persons, affective apprenticeship, and fieldwork with nonhuman informants in Nepal. *Hau: Journal of Ethnographic Theory*, 7(1), 353–376.
- Mason, R. (2023). Skilled knowledge, pedagogy, and craft. In R. Hickman, J. Baldacchino, K. Freedman, E. Hall, & N. Meager (Eds.), *The international encyclopedia of art and design education*. <https://doi.org/10.1002/9781118978061.ead022>

- Shulman, L. S. (2008). Pedagogies of interpretation, argumentation, and formation: From understanding to identity in Jewish education. *Journal of Jewish Education*, 74, 5–15.
- Wittrock, M. C. (2015). Generative learning in action. *Educational Psychologist*, 50(3), 215–223.

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Part III
Rethinking Pedagogies with Digital Tools

Chapter 6

Learning to Traverse the Surface and Deep Structure in Music Analysis, via Inquiry and Reflexing on Theory



Jeremy W. K. Wong

Abstract This chapter examines student learning and understanding in applying a method of music analysis called Schenkerian analysis, which requires students to create graphic analyses starting from foreground levels that show surface musical materials, towards a middle ground and finally background level that reveals the *Klang*, the tones that govern the entire work. Students learn not just the means to derive each level but to traverse reflectively back and forth between surface and deep structures of the music, grasp their relationships, and achieve a coherent understanding of the music piece. This chapter examines reflexing, theorising and inquiry as metacognitive approaches to music theory pedagogy, in particular, Schenkerian analysis. Student-directed learning improves students' ability to develop metacognitive strategies where they posit themselves as learners, thinkers, and practitioners of music theoretical concepts. As students become aware of the organic coherence of their learning through understanding why and how they are thinking, the notion of *theorising* emerges. Theorising is an activity that Rogers (Teaching approaches in music theory: An overview of pedagogical philosophies. Southern Illinois University Press, 1984) has called on all learners to do—to “think about what they hear”, “hear about what they think” and “think about what they think”. How do we get students to “reflect on their learning” and how does this constitute student-directed learning that exemplifies reflexive skills as a characteristic habit of mind within the deep structure of music theory learning? This chapter reflects on the outcomes of a pilot study involving the use of a technological enhanced learning and teaching (TELT) approach in an online music analysis course.

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Introduction

This chapter examines the notion of *reflexing on theory*, and the difference between student and teacher-oriented perspectives exemplified through learning and teaching of a music analysis course. There are two parts to this chapter. I begin by discussing the notion of reflexivity on music theory learning and the pivotal role reflexivity takes in supporting Community of Inquiry (CoI). Subsequently, I use reflexivity as a lens to exemplify three types of double-loop learning in the learning and teaching of Schenkerian music analysis. Through reflexing on theory, I re-look at the notions of theorising and propose reflexing and inquiry as signature pedagogies in music theory teaching in a digital learning environment.

The chapter proposes the following questions: (i) What kind of reflexive role(s) should the educator undertake to prepare students for reflexing on theory? (ii) What implications do reflexing on theory have on teaching and learning of music theory and music analysis?

The Pedagogical Problem of Music Theory Learning

Music theory teachers are well aware that music theory and analytical concepts should function to explain *how music works*. Yet, due to how information is received and processed, the teacher's efforts to explain these music matters often stop at the theoretical level. Moreover, a teaching approach following an apprenticeship teaching model (Schrag, 1992) often emphasises the theory more than the practice, and the learning experience can become static and teacher dominated (Jørgensen, 2000). Over time, the theories and analytical concepts become “objects to be attained, rather than processes in which students participated and through which they might be transformed” (Gutierrez, 2019, p. 2; see also Rogers, 1984; Ross, 1995; Welch, 2001). Moreover, the few students who do try to “connect theory to practice” in my classes often feedback to me how challenging it is to translate what they understand on paper to their own professional practice. For musicians, music analysis, like music theory, is one of the fundamental tools to explain, exemplify and extend their musical understanding. The difficulty of realising this in practice has prompted this examination of the way music theory and analysis is taught and learnt, and how it can be improved.

Rogers (1984) characterised music theory learning as “theorising” and advocated that music theory inquiry should be part of a “musical experience so that concepts can be as readily perceived as the sonorous nature of musical art” (p. 110). He went further to assert that theory learners are required to “think about what they hear”, “hear about what they think” and “think about what they think” (p. 7). My discussion of reflexivity begins from this standpoint—that students’ thoughts on theory and the ways they think about it are shaped by interventions that motivate them to relate new

and old concepts, while reflecting continuously on how the connective elements can be of practical function in professional contexts.

Ferenc (2016, 2017) referred to the notion of thinking about one's thinking as *metacognitive reflection*, and a skill that is needed but largely overlooked in the study and teaching of music theory. In her research, she used reflective practices as "vehicles for students to draw on their own learning authority and to deepen learning experiences" (Ferenc, 2017, pp. 48–49). Ferenc (2017) concluded that metacognitive thinking in the process of learning music theory could reveal cognitive and learning processes that "promote motivation, deepen learning of subject matter, and provide opportunities for its transfer beyond the environment in which it was learned" (p. 50). The results from her studies supported earlier results on how self-reflecting on the learning situation could sustain continuing inquiry from "what is this", "how do I conceptualise it" to questions like "what does it mean to me", "how does this apply to what I already know", "how do I use it elsewhere" and "how do I make this easier to apply?" (Cremin et al., 2006; see also Jordan et al., 2008; Moon, 1999; Silver, 2013; Widmaier, 2004). Moreover, there is a consensus in these papers on the positive effect of metacognition and reflection on learners' ability to self-regulate their own learning. Therefore, the continuation of inquiry (asking questions) and the ability to self-regulate learning (by reflexing) are important indicators as well as goals for students' long term professional development.

What Is Reflexivity in Learning?

For a start, even though *reflexivity* is related to the notion of *reflection*, they are different. In the context of education, reflection is closely related to the seminal work of Schön (1987) who introduced the concepts of *reflection-in-action* and *reflection-on-action*. According to Bolton and Delderfield (2018), reflection involves "reliving and re-rendering" experiences, leading to "insights that might have been missed out" during an initial encounter. Conversely, reflexivity is "potentially more complex than being reflective" (Fook, 2002, p. 43). Reflexivity involves reflecting in the moment, or in-action (Schön, 1983, p. 56) as well as an aftermath "rational critique" (Beck et al., 1994, p. 113) of the theoretical and practical processes that facilitate subsequent action (Mackey, 2016). Mackey likened it to a "polyphonic conversation", a process where ideas formed through practice and theory are assessed and followed immediately by an action. According to the literature, reflexivity is often associated with examining oneself from the inside out, such as being able to "locate oneself in the picture and to appreciate how one's own self influences one's actions" (Fook, 2002, p. 43) and finding strategies to question one's own attitudes, thought processes, values, assumptions, prejudices, and habitual actions (Bolton & Delderfield, 2018, p. 13). Hamati-Ataya (2013, p. 672) considered reflexivity as "self-referential" in nature, where "self" is embedded within the notion itself, and reflexivity as both "a starting point for the development and production of empirical knowledge" (p. 681). In terms of theoretical knowledge, Neufeld (1993) suggested a "meta-theoretical

reflexive stance” that recognises both “interrelationship of the conception of facts and values and an openness to engage in reasoned dialogue to assess contending paradigms” (pp. 60–61) within teaching and learning situations.

When reflexivity is “self-centred”, it opens up a portal for “self-awareness” (Lawson, 1985) of the limits of one’s knowledge, and of how one is actively shaping one’s environment and shaping the ways one is experienced and perceived by others, in order to understand one’s complex roles in relation to others (Bolton & Delderfield, 2018, pp. 13–14). Reflexivity at an individual level in learning is “based on questioning, reviewing, evaluating, and the willingness to examine assumptions and alternatives” (Swift & West, 1998, as cited in Sankowska & Söderlund, 2015, p. 981).

In this chapter, I situate reflexivity within an epistemological perspective and Hamati-Ataya’s (2013) concept of “cognitive solution” in the teaching and learning of music theory and analysis. As a teacher and researcher, I will be moving between “in-moment” and “after-moment” reflexivity (Hammor & Littman, 2022) to discuss pedagogical issues related to reflexing on theory from a teacher’s perspective, and how reflexivity can also become an effective “cognitive solution” (Hamati-Ataya, 2013, p. 675) to address issues pertaining to learning and applying music theory and analysis from a student perspective.

Reflexivity in Teaching

Reflexivity is also an essential trait in professional work (Moon, 1999, 2004; Sankowska & Söderlund, 2015; Schön, 1987). If reflection is responsible for turning information into knowledge (Dewey, 1933, as cited in Ferenc, 2016), then reflexivity is the automated response and awareness of the need to apply this knowledge to an applicable area across one’s professional work and discipline. Therefore, reflexing encompasses an awareness of reflecting in context, thinking within experience, adopting a stance in which learners are able to locate their inquiry in a professional context and recognising themselves as constantly active in shaping their surroundings (Cunliffe, 2009). Reflexivity in teaching encompasses several key aspects. It begins with self-awareness, where teachers consciously examine their beliefs, values, and biases that may impact their teaching. They begin to critically reflect on their practices, seeking feedback and professional growth opportunities. Reflexivity also enables teachers to understand the contextual influences on education, considering the social, cultural, and institutional factors that shape their teaching and student learning. Additionally, teachers are responsive to the diverse needs of their students by adjusting their approaches and adapting continuously to new instructional strategies, assessments and classroom environments to create an inclusive and supportive learning environment for students.

Reflexivity and Constructivism

Both reflection and reflexivity can be subsumed under the constructivist teaching approach. Constructivism as a theory for learning posits that knowledge is constructed within a sociocultural context (Dewey, 1938; Vygotsky, 1978), and that learning is an active process that continuously challenges and agrees with prior knowledge in the learner's mind (Arends, 1998; Bruner, 1966; Phillips, 1995). This active process encompasses a notion of inquiry and reflexivity, which is also "determined by the experience of the learner" (Elliott et al., 2000, p. 256). Thus, the perspective of constructivism taken here incorporates both inquiry and reflexivity elements so that learners' understanding of their knowledge is constantly being modified and challenged through interaction within oneself and within a sociocultural context.

Reflexivity plays an important role in extending the constructivist approach of teaching and learning to its application in a wider professional context. It functions as an "inner reflection" and "deeper metacognitive process that can lead to changes" (Reid, 2016, p. 244) in the way the learner or teacher communicates with knowledge and subsequently the way this knowledge relates to the surrounding context. For the learner, reflexivity enhances the construction of knowledge with an awareness of how it can be related to the learner's professional practice. For the teacher, reflexivity works retrospectively. It breaks down the complexity of professional knowledge into pedagogical content knowledge that can be useful as building blocks for knowledge construction.

The building of educational blocks for learning involves teaching approaches that are often seen as teacher-directed. As such, the discussion of reflexivity will start from a teacher-oriented perspective. Reflexivity as a teacher-oriented intervention can be used as a meta-pedagogical lens for the teacher to re-consider and re-design pedagogical methods and intentions. Doing so can uncover useful implications of *reflexing on theory* on teaching and learning music analysis. The second part of this chapter examines how reflexivity in music analytical learning is practised and exemplified through three types of double-loop learning, with examples from an undergraduate Schenkerian music analysis course that I taught at the School of Music, Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore.

Reflexivity and Community of Inquiry (CoI)

The process of inquiry guides students to learn "in a way that is exploratory and responsive yet focussed on something of importance" to them (O'Neill, 2011, p. 186). In this section, I would like to examine how the teacher's reflexivity affects the process of inquiry in an online learning environment. One way to approach the implications of teacher-oriented reflexivity on students' learning in an online environment is through the lens of Community of Inquiry (CoI) (Garrison, 2017). According to Garrison (2017), CoI creates a constructive educational experience that supports students

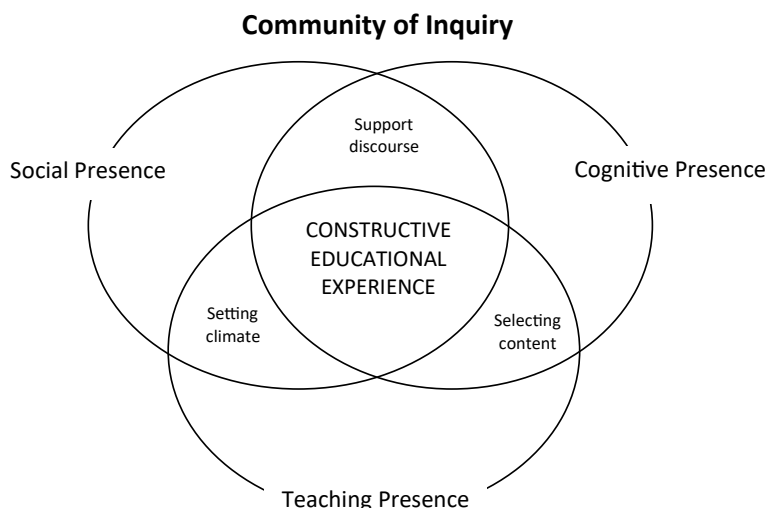


Fig. 6.1 CoI framework. Adapted from Garrison et al. (2000)

to “take responsibility and control of their learning through negotiating meaning, diagnosing misconceptions and challenging accepted beliefs” (p. 24). Three types of multidimensional and interdependent “presences” are used to establish and reinforce constructive learning and inquiry in online environments: Social, Cognitive and Teaching presences (Swan et al., 2009, p. 5). At the core of its overlapping structure is the building of a constructive educational experience, as depicted in Fig. 6.1.

Cognitive presence is defined as the “extent to which learners are able to construct and confirm meaning through sustained reflection and discourse” (Swan et al., 2009, p. 8; see also Garrison et al., 2001). The process of inquiry is carried out to “reflect both the individual’s private and reflective world” and the “community’s shared world of discourse” (Swan et al., 2009, p. 6). The underlying process that operationally supports cognitive presence is *inquiry*. In the ensuing sections, we shall discuss with several examples a case study of how reflexing on theory enabled students to improve the quality of their inquiry. Moreover, this process allows them to examine their understanding of what the inquiry process meant to them, and subsequently become more “aware metacognitively” to “mediate between reflection and action” (Akyol & Garrison, 2011, p. 186) in learning and applying analytical and theoretical concepts.

Social presence consists of the capacity for transferring vocal and non-vocal cues when communicating affective and emotional aspects of learning interactions (Short et al., 1976; as cited in Swan et al., 2009, p. 9). It represents the learner’s personal perception of the ease of communicating and consciousness of interacting with other persons in an online learning platform (Tu, 2000). Within the context of online learning, defining the sociocultural context in which the learners situate their learning can be challenging. Unlike traditional classroom settings where a formal learning

environment is distinctive, online learning environments are more ambiguous in terms of what constitutes an effective and proper “virtual learning environment” (McAllister & Alexander, 2009, p. 287). Moreover, the absence of physical presence of peers may give students a sense of isolation (Gautam, 2020) and social disconnect from a physical learning community (Kuong, 2015). On the other hand, Gillen-O’Neel (2019) asserted that a sense of belonging to a learning community motivates learners to achieve, and social presence becomes a key element for establishing the quality for social context, online communication, and interactivity of online learning (Tu, 2000).

Teaching presence functions mainly to bring the elements of CoI together for the purpose of “realizing personally meaningful and educationally worthwhile learning outcomes” (Anderson et al., 2001; as cited in Swan et al., 2009, p. 12). In an online self-paced learning situation, teaching presence plays a key role in “encouraging active engagement” in learners (Garrison, 2017, p. 27) and is very much determined by how the teacher is presenting his or herself, the way learning content is arranged and presented, and the variety of learning modes.

Case Study—An Online Self-paced Analytical Course

In this case study, I use CoI as a framework for designing an online self-paced course. The preparatory course on Schenkerian analysis consisted of four short, pre-recorded video lectures, quizzes and survey questionnaires to be completed within a one-week period.

The expected learning outcomes of this course were for students to:

- Show basic understanding of one analytical concept of Schenkerian analysis.
- Understand how Schenkerian analysis can be applied to performance.
- Raise at least one question on Schenkerian analysis or musical analysis in general.

The course was conducted fully online with self-facilitated learning using Canvas as the main learning management system. As the instructor and course designer, I was able to select materials for the different modules or topics for self-paced learning. One useful feature of the e-learning system is that each module can be assigned specific pre-requisites so that students can access the next module only after completing all the required assignments and tasks for the previous module. This intervention by the instructor affords better scaffolding of the topic content and ensures continuity in the learning process and completion of the assignments for the following course topics:

- Brief introduction of Schenkerian analysis and musical analysis.
- The concepts and man behind Schenkerian analysis.
- Applying Schenkerian analysis to performance.
- Summary and what to expect in the full course.

Prior to the beginning of the online course, an email announcement was circulated to students and a total of 23 students responded with their interest to take the course.

A pre-course survey was conducted to understand participants' music theory background as well as elicit their agreement to take part as a research participant. Out of the 23 course participants, 14 were willing to take part as research participants. An ethical clearance process was applied, and informed consent forms were signed before the data was collected. The data collection methods included a pre- and post-course survey, asynchronously administered quizzes, an online video assignment using Flipgrid, as well as a recorded online discussion session using Zoom.

Teacher's Reflexivity in Planning, Designing, Recording, Editing and Creating Lecture Videos

The planning stage was important as the course and the coursework had to be designed to support the students' cognitive development, and interactions among the students as well as between the instructor and students (Akyol & Garrison, 2011). As the instructor, reflexivity actively guided my decisions in planning the course. Using CoI as an approach for designing the whole course structure was useful in ensuring that particular attention was paid to facilitating teaching, cognitive and social presences in the online course. During the process of planning, designing, recording and editing the course videos, I relied on the notion of reflexing—from how theory should be taught to how it would be understood by the students and subsequently applied in a social cultural context. Throughout the planning stage, I reflexed on issues that I had experienced in the previous course that I facilitated online using flipped-based learning, to try to address and improve while making this shorter online course. For example, as the actual Schenkerian Analysis course was content heavy, these lecture videos needed to be lighter in content for students to understand and relate to immediately. Moreover, it had to be very clear, focussed and interesting so that viewers would not only be motivated to complete the entire course but also remember something useful. By continuously reflexing on my previous teaching experience of Schenkerian Analysis, I found ways to simplify the course content and articulate it in ways that were more accessible to beginners. Subsequently, ideas for designing, recording and editing the videos were mediated through reflexing on students' *expectation*. I wanted to ensure that this online course would not just meet the expectations of young tech savvy students who were already familiar with online learning situations such as Massive Open Online Courses (MOOC) or YouTube tutorials, but also make space for surprises so that even experienced learners can be constantly engaged. For example, open captions, background music, video animated effects and in-video quizzes were some interventions used to surprise and engage students.

In all, the following strategies were adopted to improve the CoI "presences":

- Incorporating Vlogging techniques with CapCut software [Teaching Presence].
- Embedding interactive quiz in videos with Vizia [Cognitive Presence].
- Using Kahoot to implement a summative quiz [Cognitive Presence].
- Self-directed assignment with Flipgrid [Cognitive and Social Presences].

The notion of reflexivity for me started as soon as I began critically examining my preconceived expectations of students' learning. This led me to test various hypothetical assumptions which I ultimately validated through real-world feedback, observation and online learning analytics. Some useful interventions resulted from reflexing on students' expectations. For example, I managed to improve the teaching presence by engaging in different modes of interaction with the viewers through varying the way I was presented or appeared in the lecture video. Using a video blogging editor called CapCut, I had the option of either going into full screen mode, appearing occasionally in a small frame at the corner of the screen, or not showing at all (with only voice presence). I found it appropriate to keep running subtitles in the background as the video plays so that it would engage viewers for a longer time. Furthermore, the two quizzes served to establish knowledge check points for students to remember certain important concepts while engaging them with the videos. Subsequently, a short video clip reflection as the final assignment gave students the opportunity to critically reflect on their learning and their takeaways, and engage in meaningful and deeper conversations to explore the content. The videos included short introduction of themselves, commenting on other's videos as well as posing a question that could be discussed during the final online discussion.

Reflexing on issues that may reinforce social presence was more challenging. As much as I wanted to facilitate social connection to establish the learner's sense of belonging within a learning community, I was aware that the construction of a context for community of inquiry could not be forced (Enbuska et al., 2018; Pardales & Girod, 2006). As such, I saw the opportunity to use Flipgrid as an online tool to organise an asynchronised sharing that required students to open up on their own problems as well as to resonate with and offer advice for their peers' problems. In this case, a basic collaborative and constructive learning community could be briefly established to reinforce social presence in an online learning environment (Garrison et al., 2000).

This whole process of reflexing on theory learning has brought me into a spatial awareness that represents a shift into an objective realm of perceptual acuity where I temporarily step out of the shoes of being a teacher and take on a third-party perspective of being a student again to reassess and evaluate the teacher (me) and the whole learning process. The awareness of what teaching an analytical subject requires resonates with the students' video reflection feedback—that is, what and why theory really *matters* for my students is paramount and directly related to where and how they will integrate theoretical concepts in their everyday practice.

Double-Loop Learning in Schenkerian Analysis

Double-loop learning involves reflexing and thinking more deeply on resulting action and outcomes occurring when learners “question and test one's personal values and assumptions” (Argyris & Schön, 1978, as cited in Hase, 2009, pp. 45–46).

Whereas single-loop learning involves changing methods and improving efficiency to obtain established objectives to “do things right”, double-loop learning

concerns “doing the right things” (Cartwright, 2002, p. 68) through “alternating governing variables” (Smith, 2001) and active questioning of “the assumptions about that objective, the ways of discovering and inventing new alternatives, objectives, and perceptions, as well as ways of approaching problems” (Cartwright, 2002, p. 68).

According to Chris Argyris who introduced the concept of double-loop learning in the mid-1980s, double-loop learning is essential for “practitioners to make informed decision in rapidly changing and often uncertain contexts” (Smith, 2001, p. 5). Through the process of double-loop learning, students are more aware of their preferred learning style and better equipped in adapting new situations to their learning styles making them more capable learners (Blaschke, 2012, pp. 59–60).

The next part of this chapter dives into the implications that reflexivity has on teaching and learning music theory and analysis, through the exemplification of three types of double-loop learning within Schenkerian Analysis (SA).

Double-Loop One: Technical Process of Drawing, Reading and Analysing SA Graphs

The first double-loop encompasses a technical perspective of juxtaposing the top-down and bottom-up rigorous processes of drawing, reading and analysing Schenkerian graphs.

One of the main learning outcomes for Schenkerian Analysis is to demonstrate proficiency in creating graphic analyses. The student is expected to create these graphs from the surface (top) level with obvious musical material towards a more abstract level (down) that finally reveals only as the skeleton design of the piece which Schenker refers to as the fundamental structure (*Ursatz*). Although performing a top-down analytical process requires students to apply reductive operations, it is equally pertinent that students adapt a bottom-up strategy when deciding which notes stay or go in each level. (This will be illustrated with a real example later.) Through traversing different graphic levels, students become more attuned to prominent voice leading structures that underlie the large trajectory of the piece. These structures represent important meeting points between harmony and tones (or *Klang*) which have the propensity to govern the entire composition.

I shall use an analytical example taken from the melody of a well-known Malay folk song—*Chan Mali Chan* (Fig. 6.2), to illustrate this first concept of double-looping. The full-notation of score with melody and accompaniment is an unpublished arrangement which I made for illustrating the concepts of Schenkerian analysis in this text chapter.

At this earliest stage of the analysis, the analyst begins by re-drawing all the notes as coloured (black) noteheads (Fig. 6.3). Moreover, to prepare a “stem and slur” graphic analysis for voice leading graphs at deeper levels, it is required that all bar lines (besides the penultimate bar line), repeated notes, and time signature be



Fig. 6.2 Chan Mali Chan (full notation)

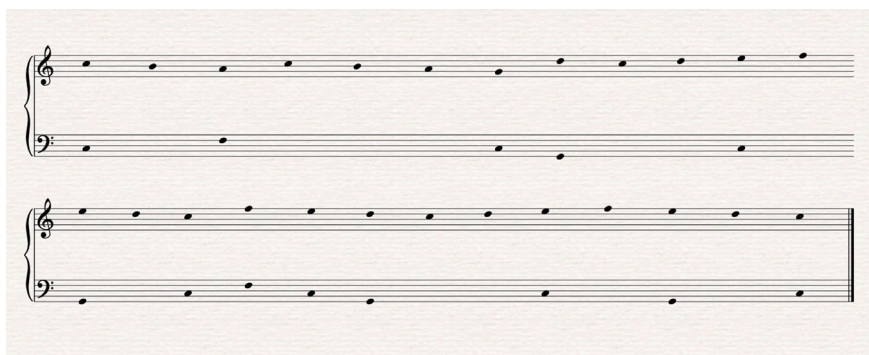


Fig. 6.3 Preparation for foreground level

removed. With the rhythmic values abolished, noteheads are drawn as unstemmed coloured noteheads representing the lowest hierarchy.

In Fig. 6.4, the so-called stem slur analysis consists of drawing stems on notes that are deemed more important and consonant to the bass. The slurs either highlight a specific type of melodic diminution, which is essentially a type of melodic decoration¹ or describes the reliance of the unstemmed (less significant) note to the stemmed note. Stem and slurs occur in both the treble and bass voices; the treble describes melodic motion while the bass provides its respective harmonic support.

¹ Passing note (P), complete or incomplete neighbour note (N), consonant skip (CS), arpeggiation (Arp).



Fig. 6.4 Foreground level

Since stemming of notes seldom occur consecutively, the unstemmed notes can be described as “prolonging” the stemmed ones. The “distance” between stemmed notes encompasses a period of prolongation where the stemmed note governs the whole passage until the next stemmed note occurs. The effect of such prolongation occurs beyond the sound level, as the notes need not be physically sounding in order to justify its significance and existence.

At the middleground level (Fig. 6.5), uncoloured notes appear alongside with more analytical details. In order to move from foreground to middleground level, the analyst is interested to focus on notes that has potential to prolong over larger distances on the score resulting in keeping notes that are more significant and removing those that are less. The discretion in making the choice of notes is well justified; since the foreground level provides the hierarchical picture and the middle-ground can fortify around a similar interpretation. The uncoloured note heads, being on a higher hierarchy in the graph, also have a longer stem than others. They belong to the fundamental line or *Urlinie*, which describes the structure of a tonal work at its most remote level. At this point, it is likely that as a reader, you would have already looked back (perhaps even more than once) at the full notation in Fig. 6.1 to see how things have developed from there. Questioning and re-questioning one’s assumption and decision becomes a common practice as the analyst refers conscientiously back to the foreground and full score (bottom-up) in order to make corrections to their earlier decisions in the foreground or just simply discern their next decisions in choosing which notes to stem as part of a significant voice leading or *Urlinie* in the respective level. Moreover, double-looping occurs when the aim of the analyst goes beyond merely correcting an “analytical error” and the action of traversing between

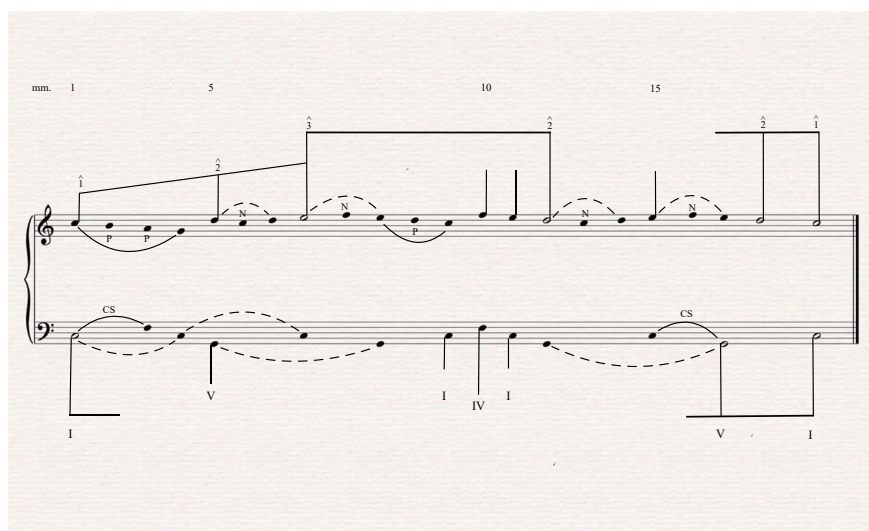


Fig. 6.5 Middleground level

levels is driven by self-questioning whether the correction attempt was “right or wrong”. This may subsequently lead to an awareness of how discovering new ways and approaches to identifying the right things is equally crucial as devising a solution for the task.

Figure 6.6 shows the background level, also the most abstract and deepest level where the graphic analysis represents the fundamental structure of the piece. The numbers governing the top treble voice represent the fundamental line (*Urlinie*) that articulates a descend from $\hat{3}$ (E5) towards $\hat{1}$ (C5). This stepwise descent from the 3rd, supported by the bass line (I–IV–V–I) is by far one of the most common types of fundamental line descend (the other being from $\hat{5}$). What is interesting perhaps is the interior voice leading details such as the initial ascent ($\hat{1} \hat{2} \hat{3}$), flagged neighbour² note at b. 10 and the coincidental fact that the whole fundamental line echoes itself as an underlying recurring melodic motif (C–D–E–F–E–D–C) in bars 14–16 of the folk melody.

By simultaneously looking at the background level while recalling the original melody, the analyst attempts to *hear* the voice leading both as serving a melodic idea as well as an organic coherence that unfolds with the original notation. At this point, the analyst needs to check how the analyses support or not support the original notation. Double-looping occurs when the analyst uses the information derived from the graphs to initiate reflexive questioning on the “governing variables” of his present and past understanding of the piece: how does going through the whole analytical

² Initial Ascent is the first rising step-wise motion in a melody, often setting the stage for further development of the musical structure in the middleground and background levels.

Flagged Neighbor are ornamental notes that embellish and prolong an important structural harmonic note, usually within a progression with a cadential function.

The image displays a musical score for a piece titled "Background level". It consists of two staves, a treble staff and a bass staff, with a grand staff bracket on the left. The time signature is 4/4, indicated by the "mm." (minutes) and the "4" over the "4". The score is divided into measures by vertical bar lines, with measure numbers 1, 5, 10, and 15 marked above the treble staff. The notes are primarily half notes and quarter notes, with some rests. Fingerings are indicated by numbers 1, 2, and 3 above the notes. The bass staff features a series of chords labeled I, IV, V, and I, with a double bar line after the first I. The treble staff has a double bar line after the first measure. The score is written on a light blue background.

Fig. 6.6 Background level

process (from foreground to background) changed or affected the way I perform or hear the piece? To what extent does having knowledge of the fundamental line in the final background graph affect my listening and performing experience? How does the new analytical information complement or challenge my previous understanding? Are there limitations of the analysis I should be aware of? What is pertinent to my original interpretation that is not highlighted or highlighted differently in the analysis? What skills have I acquired from the analytical process? How and to what extent will I be comfortable to apply these skills to my roles as a musician, performer, and educator?

In summary, double-loop learning at the technical aspect of drawing, reading, and analysing Schenkerian graphs actively requires the learner to analyse the relationships between each level; to traverse between original and multi-level graphs, and to rigorously observe, listen and reflex in order to make justified arguments and account for every written notehead on the graph.

Double-Loop Two: Exploring Pedagogical Intentions from Theory to Practice and Practice to Theory

Double-loop learning also occurs when students apply conscientious effort to use theory to change practice and practice to change theory. What are the challenges faced, and what is the role of the teacher in supporting this double-loop learning process? I argue that such challenges “disturb” assumptions and is effective in opening gaps for reflexivity to take place for both student and the teacher.

I will begin this section by reflexing on a few common challenges that students have faced in learning Schenkerian Analysis.³ Subsequently, I will raise a few examples of how student apply theory into practice, and practice to theory.

Firstly, reflexing on students’ problems in the process of evaluating their lesson performance, assignments and answers to the questions have helped to facilitate adjustments to my teaching approach. My written comments on students’ assignments consist of corrective feedback through giving right answers or prompting with questions of why, how, what, so what, etc. as well as preventive ones that explain alternate answers and why their answer is accepted. Whether they are preventive or

³ As part of my research for this chapter, the data and examples are taken from a case study of mid-semester interviews of 14 students who took the full-year Schenkerian Analysis course offered after the online self-paced preparatory course. The mid-semester interview was carried out as a semi-structured interview in the form of independent 90 s vlogging using Flipgrid. The purpose of the interview was to (1) understand the main challenges students were facing with Schenkerian Analysis and (2) find out if students were applying Schenkerian Analysis to their practice after taking the course for 6 weeks. The following three questions were asked: (i) What is the most challenging concept or issue for you in Schenkerian Analysis? (ii) Have you tried applying Schenkerian Analysis to the repertoire you are practicing now? (If yes, describe how; if no, why?) (iii) What is one suggestion or advice you would like to offer to your fellow classmates when doing Schenkerian Analysis?

corrective intentions, the feedback is based on my assumptions about their theoretical understanding based on the quality and consistency of their answers in their assignments, their participation in class activities, the questions they raised during and after class, and to a certain extent, their musical background and training. Nevertheless, there are instances when my perception of students' understanding was inadequate:

The most challenging issue for me is ironically the most basic element; I sometimes violate the stem and slur rules. So I guess a more thorough understanding and internalisation is required more than checking. [Liam]

Liam knew that his mistakes belonged to the “basic elements”, and just “checking” would not suffice to improve the situation. This prompts me to question my initial assumption, realise the limitation of my earlier feedback and think of necessary amendments to my teaching approach for this student thereafter.

Next, identifying challenges have also helped some students to reflect and reflex deeper on their learning progress:

The middleground level is definitely the most challenging for me because I feel it starts to invite more questions than answers. But these are good questions because it helps me think of why and how I want my graph to look like. [Ava]

Then, there are some students who consider prior lack of knowledge and understanding of harmony to be a major stumbling block in doing Schenkerian Analysis:

My greatest struggle with SA is that from the beginning, I think I wasn't very strong in my harmony. So it takes me a while to identify chords, you know, to understand the harmonic progression of the piece. [Alex]

To some extent, Schenkerian Analysis requires prior knowledge and understanding of harmony and counterpoint concepts. However, these are not decisive factors for excelling in Schenkerian Analysis. A student who is “stronger” in harmony might identify chords in a given music passage more quickly than others, but since a good Schenkerian Analysis graph is dependent on important harmonic moments and changes, being quick only at labelling harmonies is not an advantage to a better Schenkerian graph.

I think for Schenkerian, it's another step above analysing the piece. I feel it helps me better understand the piece, but it takes a much longer time and a lot of careful decisions for me to finalise and have a successful and useful Schenkerian graph. [Ava]

A useful Schenkerian graph does not just affect the “reading” and “hearing” of the music but also the “performance” of it. However, some students feel that their understanding of the concepts is not good enough to apply to actual practice. According to the cognitive domain model in Bloom's taxonomy, application of concepts to practice occurs in a mid-cognitive range *after* knowledge and comprehension. Therefore, where teaching of theoretical concepts is concerned, there is a common curriculum practice for teachers to reinforce the content in a theory course as a “solution” to help students apply it better to practice. This may result in a tacit assumption in students that application can take place only after they think they have *mastered* the concepts:

I've been trying to apply it to my pieces, but I feel like it's not very successful so far because it feels very complicated to me at this moment. [Ava]

I haven't applied SA to my repertoire because I'm still struggling with it. [Sophia]

No, I have not consciously applied SA to my repertoire because I don't feel that I know the concepts well enough. [Jacob]

One way to counter this thinking is for students to be aware of what they are already familiar with as a starting point when grappling with a new theoretical concept. To this end, I chose to use the students' own instrumental or vocal specialisation to make personal connection with theoretical concepts. The obvious advantage to this approach is that when students attempt to exemplify the theoretical concepts with their instrument, they are also applying theory into practice:

I'm a violin player so I find it super easy to follow the melody line. And because I play a lot of melody, I think the melodic diminution exercise makes it fun to have new ways to see and hear the same melody. [Lucas]

It (melodic diminution) has helped me to realise important direction of the notes in phrases and immediately it sounded much more alive when I played it. I tried applying Schenkerian ideas in the rehearsal with my string quartet ... to the complex melody with a lot of dissonances, I applied melodic diminution to find the main notes of certain sections which is very useful when we are able to understand the phrase better. It is also easier for us as we are working on the tuning with each other. [Emily]

SA is very intuitive to apply even in two-part playing, there are little compound melodies which you can pick up ... even in my vocal works, you can actually see very clearly the diminutions especially in slower pieces ... Very interesting considering that we are a single-lined instrument, but you can even pick up these little things. [Ben]

Finally, it is necessary to reassure students that they do have an active role in the learning of new theoretical concepts—that the conceptual knowledge they acquire is only complete if they are able to bring in personal ideas and practices into the learning process. This represents a call for students to bring practice back into theory themselves. The elements of students' personal practices are often found in group or pair tutorials where the notion of reflexivity can be practised and observed. After establishing a safe learning environment, the students are encouraged to openly pose the questions they have, share the answers they have prepared or offer advice to common problems their peers might be facing. While doing so, students become increasingly aware of their role and relationship with the new concepts they are facing, testing out the “workability” of their new connections in actual practice and opportunities to share that experience with others.

Always ask relevant questions about your graph, and make smart decisions, hear what you have written and try to look at the bigger picture. If it still doesn't work, just repeat the steps again and again. [Noah]

Look at any model answers or graphs drawn by trained SA people and try to understand the thought process behind the way they decided to take the graphs, then try to emulate that a little bit and try to understand the rules when you apply to your own graphs. [Ben]

... the most important is to acknowledge that you will at some point need to redraw graphs, not just because something has gone wrong but more of seeing the final picture when you have completed analysing a piece. By looking at the picture with your 10 to 20 pieces of

paper, you will be able to decide for yourself how best to present your final work of art.
[Liam]

In this section, I have focussed on the students' own double-loop learning process, their previous or ongoing struggles with Schenkerian Analysis, and whether or not they have tried applying Schenkerian Analysis to their own practice. As their teacher, reflexing on their feedback (against the actual teaching experience) afforded me insights into the students' learning journey. Reflexivity on these issues from a pedagogical perspective engenders greater awareness and sensitivity to different students' learning trajectory—where they come from and where they want to be.

Double-Loop Three: Analyse to Perform, Perform to Analyse

At this stage of learning and applying Schenkerian analysis, the student's identity as a performer and analyst comes into question: their intention of learning the analytical concepts is now in contest with their existing skill and training as performers. Can their performance be reinforced with analysis and their analysis be refined by their identity as performers?

The final double-loop learning oscillates between the student's understanding of Schenkerian concepts as an analyst and the exemplification of that understanding through performance. The following examples reflect students' attempt to relate analytical concepts or music analysis to performance:

When drawing Schenkerian graph, I try to think of what the music is trying to say, and this is quite similar to performance. As [a] performer, the goal is very similar. [Emily]

The student instinctively recognises a similarity between drawing a Schenkerian graph and performing. From this we can infer that the students' attempt to apply what they have understood from analysis has prompted them to critically reflect on their identity and role as musician and performer. In so doing, they are approaching both activities with deeper understanding and intention while acknowledging the reciprocal influences between themselves as individuals and the social cultural context in which they are performing or practising in.

Learning SA has improved my understanding of the music structure and confidence as a performer. I'm happy that I can describe music better and to see things in more interesting ways than before. [Ava]

When students become more confident as a result of gaining new ability to understand music with a wider perspective, they are essentially strengthening their connection with the social context they are engaged in. They are able to see their progress and development as an interconnected process between analysis and performance. This equips them to understand how and when to apply what they have learnt to their professional practice.

I find that analysing a piece which I am familiar with is still more useful because of the new perspectives that SA can bring to what I already know or hear in the piece. [Harper]

Finally, the process of applying analysis to performance also extends the students' sense of curiosity and deepen their understanding of previously acquired knowledge. They are more ready to recognise the limitation of their understanding and to re-examine their existing perspectives through the iterative process of learning and inquiry.

Reflexing on Theory and Analysis as a Signature Pedagogy in Professional Music Education

In this chapter, I have examined the concept of reflexing on theory and its role in supporting inquiry, thinking, and the teaching and learning of music theory. Based on the case studies, I have learnt that reflexing on theory does not come naturally for students since the learning curve is usually quite steep for theoretical and analytical subjects. Consequently, after students have successfully overcome the challenge of grasping new concepts, they can seamlessly transition into metacognition, reflecting on their thoughts and offering constructive criticism on their initial ideas.

It is important to observe closely and try to understand what happens when students begin to reflex on theory and how this ongoing process remains relevant to the music profession as a whole, particularly in the context of music analysis and music theory learning. At the heart of reflexing on theory lies the exploration of the “signature pedagogy” (Shulman, 2005) of music theory learning. Let us examine how these elements align with the principles of signature pedagogy. When we think about music as a profession, the activities of studying music notation, engaging in music rehearsals, and performing music immediately come to mind. Throughout this text, we have observed how these three distinct activities can form a cohesive trajectory within the framework of inquiry, reflexivity, and double-loop learning.

However, in reality, most music theory and music analysis classes have been conducted without the “sense of tension between knowing and doing” (Shulman, 2005, p. 54) and as separate activities from performance and other music practices. This approach assumes that one must acquire knowledge before applying or engaging in practice. As a result, the knowledge gained through such isolated learning may not be effectively understood or applied to professional practice. The mindset that one must wait until one “knows” something before applying it creates a mental barrier that persists even after the knowledge has been acquired. Encouraging students to reflex on their learning can help them understand and anticipate such tendencies in their learning journey. In practice, reflexivity and double-loop learning is essential in building continuously relevant connections between theory and practice.

Reflexivity connects learning, teaching and music analysis in interesting ways. The technical aspects of learning music theory pertain to activities on the *surface structure*, which according to Shulman, consists of the “concrete, operational acts of teaching and learning” (Shulman, 2005, p. 55). Each of the elements of double-loop learning I have discussed operates first from this level, and the practice of

reflexivity helps students delve deeper into the deep structure. Similarly, reflexivity helps teachers to assist students (and themselves) in building a body of “knowledge and know-how” based on the students’ existing implicit structures of “individual beliefs, values, and dispositions” (p. 55) within their profession.

Within the learning loop, reflexivity brings the learner (and teacher) back to the original position to critically assess what has been experienced, to accept and internalise the knowledge by strengthening or renewing one’s understanding, and to relate all these notions within the purpose of interacting within a larger community and social cultural context.

Advice for Aspiring Music Theory Teachers

If you are an aspiring music theory teacher who periodically practices self-awareness and critical evaluation of your personal beliefs, values, assumptions and other factors that influence your pedagogical approach, you are already practising some level of reflexivity in your teaching. Continuously develop contextual understanding in music theory teaching by considering the social, cultural, and institutional contexts in which you teach. Recognise that educational practices in music theory are influenced by broader societal factors and power dynamics within the musical community and the wider cultural context. By understanding these contextual factors, you can better guide students in their exploration of music theory concepts and help them connect theory to its real-world applications.

Always be responsive to the needs and diversity of music theory students. Adapt your instructional strategies, assessments, and classroom environment to create an inclusive and supportive learning environment. It is important to recognise that students come from diverse musical backgrounds and learning styles, and tailor your teaching to accommodate different learning preferences and provide opportunities for students to engage with music theory concepts in ways that resonate with their individual interests and goals.

When “troubleshooting” students’ mistakes, facilitate your students to ask effective questions, and based on those questions re-configure your assumption and understanding of their understanding. You can also troubleshoot preliminary questions with further questions to dig deeper into what your students are going through and where they are heading with what they have understood at that point. Finally, at the end of the day, reveal to them your pedagogical intentions behind picking their brains, and make them repeat that experience on each other.

Ideas for Future Exploration

By integrating the principles outlined in the previous section into my music theory teaching, I have experienced the “deep thinking and meaning-making which comes from having a reflexive practice” and have sought to help students develop a deeper understanding and appreciation of music theory while creating a learning space that encourages exploration, critical thinking, and meaningful connections between theory and practice in music. In my exploration of reflexivity, I have not further categorised reflexivity into social and technical reflexivity, which may be helpful to scaffold learning objectives with teaching interventions. According to Sankowska and Söderlund (2015), social reflexivity encompasses reflection upon social processes, values, assumptions, norms, identities and roles that “invite students to re-consider assumptions that frame and reframe practical problems” (p. 982). Technical reflexivity relates to reflexing on the technical aspects of the task and solving the problem as an outcome. Further examination of these issues will be useful, as hard technical knowledge and soft artistic skills are, according to Schön (1983), both important in professional practice.

As we undertake the transformative journey of music theory and music analysis teaching, we have opportunities to inspire students towards delving into the profound depths of musical knowledge. The goal is to not only cultivate their habit of thinking with music theory concepts but also foster the development of their musical perception and cognition through the active reciprocal relationship between thinking, hearing and reflexing.

References

- Akyol, Z., & Garrison, D. R. (2011). Understanding cognitive presence in an online and blended community of inquiry: Assessing outcomes and processes for deep approaches to learning. *British Journal of Educational Technology*, 42(2), 233–250.
- Anderson, T., Rourke, L., Garrison, D. R., & Archer, W. (2001). Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks*, 5(2), 1–17.
- Arends, R. I. (1998). *Learning to teach* (4th ed.). McGraw Hill.
- Argyris, C., & Schön, D. (1978). *Organizational learning: A theory of action perspective*. Addison-Wesley.
- Beck, U., Giddens, A., & Lash, S. (1994). *Reflexive modernization: Politics, tradition and aesthetics in the modern social order*. Polity.
- Blaschke, L. M. (2012). Heutagogy and lifelong learning: A review of heutagogical practice and self-determined learning. *The International Review of Research in Open and Distributed Learning*, 13(1), 56–71.
- Bolton, G., & Delderfield, R. (2018). *Reflective practice: Writing and professional development* (5th ed.). Sage.
- Bruner, J. S. (1966). *Toward a theory of instruction*. Harvard University Press.
- Cartwright, S. (2002). Double-loop learning. *Journal of Leadership Education*, 1, 68–71.
- Cremin, T., Burnard, P., & Craft, A. (2006). Pedagogy and possibility thinking in the early years. *Thinking Skills and Creativity*, 1(2), 108–119.

- Cunliffe, A. L. (2009). Reflexivity, learning and reflexive practice (Chap. 21). In S. J. Armstrong & C. V. Fukami (Eds.), *The SAGE handbook of management learning, education and development* (pp. 405–418). Sage.
- Dewey, J. (1933). *How we think* (Revised ed.). Heath.
- Dewey, J. (1938/1991). Logic: The theory of inquiry. In J. A. Boydston (Ed.), *John Dewey: The later works, 1925–1953* (Vol. 12, pp. 1–527). SIU Press.
- Elliott, S. N., Kratochwill, T. R. L., & Travers, J. F. (2000). *Educational psychology: Effective teaching, effective learning*. McGraw-Hill.
- Enbuska, J., Rimppe, A., Hietanen, L., Tuisku, V., Ruokonen, I., & Ruismäki, H. (2018). E-learning environments, opportunities, and challenges in teaching and learning to play the piano in student teacher education. *The European Journal of Social and Behavioural Sciences*, 21, 2562–2569.
- Ferenc, A. (2016). Promoting metacognitive reflection in music theory instruction. *Journal of Music Theory Pedagogy*, 30, 23–85. <https://digitalcollections.lipscomb.edu/jmtp/vol30/iss1/2>
- Ferenc, A. (2017). Metacognition: An overlooked skill in Music theory instruction. *Engaging Students: Essays in Music Pedagogy*, 5. <http://flipcamp.org/engagingstudents5/essays/ferenc.html>
- Fook, J. (2002). *Social work: Critical theory and practice*. Sage.
- Garrison, D. R. (2017). *E-learning in the 21st century. A community of inquiry framework for research and practice* (3rd ed.). Routledge.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2–3), 87–105.
- Garrison, D. R., Anderson, T., & Archer, W. (2001). Critical thinking, cognitive presence and computer conferencing in distance education. *American Journal of Distance Education*, 15(1), 7–23.
- Gautam, P. (2020). *Advantages and disadvantages of online learning*. eLearning Industry. <https://elearningindustry.com/advantages-and-disadvantages-online-learning>
- Gillen-O’Neel, C. (2019). Sense of belonging and student engagement: A daily study of first- and continuing-generation college students. *Research in Higher Education*, 62(1), 45–71.
- Gutierrez, J. (2019). *Student as theorist: Embodiment as a paradigm for music theory pedagogy*. eScholarship, University of California.
- Hamati-Ataya, I. (2013). Reflectivity, reflexivity, reflexivism: IR’s ‘reflexive turn’—And beyond. *European Journal of International Relations*, 19(4), 669–694.
- Hammor, C., & Littman, D. (2022). Unrehearsed moments: Interstices of policy, preparation, and reflexivity. *Arts Education Policy Review*, 124, 1–8.
- Hase, S. (2009). Heutagogy and e-learning in the workplace: Some challenges and opportunities. *Impact: Journal of Applied Research in Workplace E-Learning*, 1(1), 43–52.
- Jordan, A., Carlile, O., & Stack, A. (2008). *Approaches to learning: A guide for teachers*. McGraw Hill Open University Press.
- Jørgensen, H. (2000). Student learning in higher instrumental education: Who is responsible? *British Journal of Music Education*, 17(1), 67–77.
- Kuong, H. (2015). Enhancing online learning experience: From learners’ perspective. *Procedia—Social and Behavioral Sciences*, 191, 1002–1005.
- Lawson, H. (1985). *Reflexivity: The post-modern predicament*. In Problems of Modern European Thought. Hutchinson.
- Mackey, S. (2016). Applied theatre and practice as research: Polyphonic conversations. *Research in Drama Education: The Journal of Applied Theatre and Performance*, 21(4), 478–491.
- McAllister, G., & Alexander, S. (2009). Key aspects of teaching and learning in computing science. In S. Marshall, H. Fry, & S. Ketteridge (Eds.), *A handbook for teaching and learning in higher education: Enhancing academic practice* (3rd ed., pp. 282–299). Routledge.
- Moon, J. (1999). *Learning journals: A handbook for reflective practice and professional development*. Kogan Page.
- Moon, J. (2004). *A handbook of reflective and experiential learning*. Routledge Palmer.
- Neufeld, M. (1993). Reflexivity and international relations theory. *Millennium: Journal of International Studies*, 22(1), 53–76.

- O'Neill, S. A. (2011). Learning in and through music performance: Understanding cultural diversity via inquiry and dialogue. In M. S. Barrett (Ed.), *A cultural psychology of music education* (pp. 179–200). Oxford University Press.
- Pardales, M. J., & Girod, M. (2006). Community of inquiry: Its past and present future. *Educational Philosophy and Theory*, 38(3), 299–309.
- Phillips, D. C. (1995). The good, the bad, and the ugly: The many faces of constructivism. *Educational Researcher*, 24(7), 5–12.
- Reid, H. (2016). *Introduction to career counselling and coaching*. Sage.
- Rogers, M. R. (1984). *Teaching approaches in music theory: An overview of pedagogical philosophies*. Southern Illinois University Press.
- Ross, M. (1995). What is wrong with school music? *British Journal of Music Education*, 12(3), 185–202.
- Sankowska, A., & Söderlund, J. (2015). Trust, reflexivity, and knowledge integration: Toward a conceptual framework concerning mobile engineers. *Human Relations*, 68(6), 973–1000.
- Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Temple Smith.
- Schön, D. A. (1987). *Educating the reflective practitioner: How professionals think in action*. Basic Books.
- Schrag, F. (1992). Conceptions of knowledge. In P. W. Jackson (Ed.), *Handbook of research on curriculum* (pp. 268–301). MacMillan Publishing.
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. Wiley.
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Silver, N. (2013). Reflective pedagogies and the metacognitive turn in college teaching. In M. Kaplan, N. Silver, D. LaVaque-Manty, & D. Meizlish (Eds.), *Using reflection and metacognition to improve student learning* (pp. 1–17). Stylus.
- Smith, M. K. (2001). *Chris Argyris: Theories of action, double-loop learning and organizational learning*. The Encyclopedia of Informal Education. <https://infed.org/mobi/chris-argyris-theories-of-action-double-loop-learning-and-organizational-learning/>
- Swan, K., Garrison, D. R., & Richardson, J. C. (2009). A constructivist approach to online learning: The community of inquiry framework. In C. R. Payne (Ed.), *Information technology and constructivism in higher education: Progressive learning frameworks* (pp. 43–57). IGI Global.
- Swift, T. A., & West, M. A. (1998). *Reflexivity and group processes: Research and practice*. ERSC.
- Tu, C. H. (2000). On-line learning migration: From social learning theory to social presence theory in CMC environment. *Journal of Network and Computer Applications*, 23(1), 27–37.
- Vygotsky, L. S. (1978). Interaction between learning and development. In M. Cole, V. Jolm-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in society: Development of higher psychological processes* (pp. 79–91). Harvard University Press.
- Welch, G. (2001). *The misunderstanding of music*. Institute of Education, University of London.
- Widmaier, W. W. (2004). Theory as a factor and the theorist as an actor: The 'pragmatist constructivist' lessons of John Dewey and John Kenneth Galbraith. *International Studies Review*, 6, 427–445.

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Chapter 7

Codetta: Pedagogies of Reflexivity



Rebecca Y. P. Kan

*In this space, we learn to see and feel the world
in a complicated manner and then
reflexively turn that lens on ourselves. (Ellis, 2004, pp. 98–99)*

Abstract Pedagogies of reflexivity encourage educators to critically examine their own biases, dispositions and perspectives through their teaching philosophies and disciplinary practices. A reflexive relationship between teachers and students also enables educators to interrogate their own assumptions and those of their students, contributing to a more dynamic and responsive learning experience. By sensitising students to this process of self-awareness and self-questioning, such pedagogies deepen critical thinking and engagement with the subject matter. As the reflexive process requires courage, humility, adaptability, empathy, thoughtfulness and honesty, this codetta offers suggestions to shape pedagogies of reflexivity in arts education.

Pedagogies of reflexivity are centred around “explicit self-aware meta-analysis” (Finlay, 2002, p. 209). Reflexivity involves a process of critical self-reflection on one’s knowledge, perspectives, actions and experiences (Allen et al., 2001). The pedagogical aim is to sensitise students to viewpoints of others by increasing self-awareness and self-questioning that would lead students to de-centre from their own experiences and become more effective (Allen & Farnsworth, 1993; Bartell & Vespia, 2009). By turning the students’ analytic gaze on self (but not in a narcissistic way), this approach “provides opportunities for close examination, understanding, and dissemination of the inner worlds” (Hughes & Pennington, 2017, p. 26). Reflexive pedagogy is therefore focussed not only on what is learnt, but why it is learnt, and the end-goals of knowledge and knowing (Winters, 2016). This “conscious raising” approach brings to the foreground the implicit level of a reflexive practitioner in a signature pedagogy (Taaffe, 2014).

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In the previous chapter, Wong used the language of Shulman's surface and deep structure in signature pedagogy to conceptualise a pedagogy of reflexivity. Wong applied principles in Schenker's (1925) *Das Meisterwerk in der Musik* (*The Masterwork in Music*) graphic approach to musical analysis to explain how pedagogies of reflexivity are implicit within musical analysis. He demonstrated how the use of a reflexive lens encourages students to go beyond the music notes and relate analysis to their music performance. In this way, students are helped to elevate their thinking beyond theoretical concepts, and stay open to other analytical and performative perspectives of the music.

The reliance on reflexivity in pedagogical methods is not specific to music, but a characteristic form of artistic practice (Blackmore, 2014). Underpinning artistic practice is uncertainty, ambiguity and reflexive doubt (Mickel, 2021; Winters, 2016). In *Anthology of Performance*, Turner (1987) described reflexivity as a condition in which performers "turn, bend or reflect back upon themselves, ... to imaginatively explore the meaning and significance of its own creative choices and behaviour" (p. 24). Consequentially, it is through artful reflexivity that students are helped in their journey to becoming professionals and understanding how they are situated within their disciplinary practice (McDowall, 2020). Pedagogies of reflexivity explore interactions with awkward encounters and uncomfortable knowledge from the perspective of the teachers, learners and learning, including their states of being uncomfortable (Cummins & Brannon, 2022; McDowall, 2020; Singleton et al., 2022).

Recognising that reflexivity is an important dimension of artistic practice, and perhaps even a defining characteristic of the arts, makes us attentive to how we teach students to be reflexive (Singleton et al., 2022). In the study of teaching, Shulman (1996) himself cited reflexivity of social interactions (between teachers and students) as an important part of the learning journey that are "frequently illuminated by aspects of thought" (p. 8). A transformative pedagogy of reflexivity focusses first on the teacher, who explores his own biases, pre-dispositions, preferences, beliefs, values and behaviours (Johnson & Christenson, 2008; Schwandt, 2001). Questioning one's own assumptions and those of the students in the course of social exchanges is what Schön referred to as "reflection-in-action". These interpolations may give rise to new insights or states of in-betweenness, which may be described in states of playfulness, discomfort or ambiguity (Kan, 2022).

Pedagogies of reflexivity require not just the lecturer to critically self-reflect on teaching approaches, but also to "co-regulate" with the student in order to improve both learning and teaching (Hibbert, 2012; Iszatt-White et al., 2017). Such pedagogies value the agency of students and teachers in the learning process, as both learn from one another to develop individual and collective reflexivity. As the students are recast from that of consumers of expert knowledge to those of prosumers who discover and produce new knowledge, we shift the dynamics from institutionalised "power over" to personal "power to" (Iszatt-White et al., 2017; Useche et al., 2022).

Letting go of the dominant power structure through pedagogies of reflexivity helps us to recognise the complexity of social practice and the shared construction that emphasises criticality, empowerment and agency (Higgins & Keating, 2016). In an anonymous pithy saying, "exchanging knowledge capital would enable us to learn

smarter rather than harder”. Such a signature pedagogy is highly transformative in two ways: first, educators become learners and regard students as resources and co-creators for/of learning (Joseph, 2014); and second, educators (re)create their own professional narratives and theoretical foundations (Arvanitis, 2018). As Wong aptly phrases,

This whole process of reflexing ... has brought me into a spatial awareness that constituted a shift into an objective realm of perceptual acuity where I momentarily step out of the shoes of being a teacher and take on a third-party perspective of being a student again to reassess and evaluate the ‘teacher’ (me) and the whole learning process.

Strategies for reflexive pedagogies discussed in Chap. 6 are designed to facilitate musical learning as well as delineate the connection between theory and practice. In a signature pedagogy of reflexivity for music theory, students learn not only concepts and practical skills, but what questions to ask when trying to solve problems by transforming them into concepts that can be explored in performance, and to see if their solutions would bring about artistic excellence. In the words of one of the students in Wong’s analysis class, “I try to think of what the music is trying to say, and this is quite similar to performance. As [a] performer, the goal is very similar”.

Other reflexive approaches that have been explored in fields such as anthropology and indigenous education include challenging discourses to encourage uncomfortable reflexivity, where students develop “an unfamiliar, towards the uncomfortable” (Pillow, 2003, p. 192). Anthropologists Singleton et al. (2022) have wisely advised that teachers who seek to develop pedagogies of reflexivity must become “more open about their uncomfortable knowledge” (p. 81), what McGranahan (2014) calls “destabilising moments” “where two things are ostensibly not coming together” (p. 29). These correspond to Wong’s “in-moments” and “after-moments” that involve a process of shunting backwards and forwards between different kinds of learning activities or ‘knowledge processes’. This process can also be described as “a set of see-sawing episodes which move fluidly and uncomfortably between traditional and disruptive learning relationships and activities” (Iszatt-White et al., 2017, p. 591). Such discomfort is the ‘disruptive’ forerunner to ‘unlearning’ of existing knowledge and the interrogation of extant practices, exposing underlying assumptions and habits that can restrict our ability to understand our own learning (Antonacopoulou, 2008 in Iszatt-White et al., 2017; Higgins & Keating, 2016). Arriving at unlearning as an ultimate aim in reflexive practice requires one to recognise how what is already known could restrict our ability to develop new questions or to pose questions differently in relation to outcomes which are sought (Higgins & Keating, 2016).

Engaging in pedagogies of reflexivity (like Wong) would mean that the teacher needs to demonstrate an interest in listening to the students’ voice through feedback and make a concerted effort to probe “the inner texture of existing teaching practices” for teaching improvements (Omeihea & Omeihea, 2019, p. 4). Additionally, it would be important to create space for students to engage in self-reflexive criticality that allows them to form reflective openness (Choo, 2021). Others have also recommended a “holding environment” that allows learners to process and mutually

adjust to the changed identities and roles implicit in a reflexive context (Heifetz & Laurie, 1999, p. 127 in Iszatt-White et al., 2017).

These recommendations could shape pedagogies of reflexivity in arts education, but it is by no means exhaustive. Pedagogies of reflexivity raise critical questions and a deeper discourse around “taken-for-granted issues that have potential moral and ethical implications” (Cunliffe, 2016, p. 745). By reflecting-on-action regarding past experiences and reflecting-for-action, reflexivity leads us into a closer examination, understanding, and dissemination of the inner worlds “to understand more deeply which past artistic practices had best aligned with our professional values and aspirations and why” (Hughes & Pennington, 2017; Treacy & Gaunt, 2021, p. 9).

Reflexive pedagogies enable students to critically develop a deep self-awareness about their own thoughts and reflections, what they are, where they come from, how they make sense of all lived encounters and reimagine future experience (Apostolidou, 2020). When students are empowered with this voice, they will take ownership for their learning (McDermott, 2015), which could lead to reengaging students who have been disengaged in and through schooling and education (Mitra, 2004, p. 653). Embracing a reflexive stance to build higher-order creative and social critical knowledge and competencies would be required of an artistic practitioner to address the complexities of our contemporary world.

Pedagogies of reflexivity offer a transformative approach to teaching and learning, inducing introspection and self-awareness, promoting critical thinking, and an understanding of power dynamics (McDowall, 2020). By encouraging students to reflect on their own perspectives, challenge assumptions, make important intellectual and personally transformative moves (Benmayor, 2008), these pedagogies foster a deeper engagement with the arts and heightens a sense of social responsibility. As the reflexive process requires courage, humility, adaptability, empathy, thoughtfulness, honesty, it will be important to further explore the ‘vulnerability’ that educators experience when they “switch from rational dialogue to the tensions associated with ... a pedagogy of the unknowable” (Hibbert & Cunliffe, 2015, p. 185). Yet, it is nonetheless imperative to increase the professionals’ ability to understand, contextualise and personalise the “what” and “why” of their teaching practice—and consequently their individualised professional identity. As educators continue to explore innovative teaching methodologies, pedagogies of reflexivity provide a valuable framework for cultivating a more inclusive and equitable learning environment. To conclude from Raj and Ulanoff (2022):

It is a teacher’s role to grow into a reflexive practitioner, transforming their instructional praxis. When a teacher becomes reflexive, they respond to the data students provide by using it routinely in their planning to frame instructional approaches. Over time, this will result in a transformation of perspective that Mezirow (1991) described as “the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world”. (p. 167)

References

- Allen, K. R., & Farnsworth, E. B. (1993). Reflexivity in teaching about families. *Family Relations*, 42, 351–356.
- Allen, K., Floyd-Thomas, S., & Gillman, L. (2001). Teaching to transform: From volatility to solidarity in an interdisciplinary family studies classroom. *Family Relations*, 50, 317–325.
- Antonacopoulou, E. P. (2008). Reflexive critique: An innovation in lifelong learning. In C. Wankel & R. DeFillippi (Eds.), *A lifetime of management learning: University and corporate innovations in lifelong learning* (pp. 59–89). Information Age.
- Apostolidou, A. (2020). On the paradoxes of teaching digital anthropology online: Reflexive pedagogy and the challenges of involuntary online learning. In *Enhancing the Human Experience of Learning with Technology: New Challenges for Research into Digital, Open, Distance & Networked Education European Distance and E-Learning Network (EDEN) Proceedings*, Lisbon, Portugal.
- Arvanitis, E. (2018). Preservice teacher education: Towards a transformative and reflexive learning. *Global Studies of Childhood*, 8(2), 114–130.
- Bartell, D. S., & Vespia, K. M. (2009). Teaching and learning in the “interdisciplinary discipline” of human development. In A. R. Gurung, N. L. Chick, & A. Haynie (Eds.), *Exploring signature pedagogies* (pp. 139–160). Stylus Publishing.
- Benmayor, R. (2008). Digital storytelling as a signature pedagogy for the new humanities. *Arts & Humanities in Higher Education*, 7(2), 188–204.
- Blackmore, M. G. (2014). *Informing research: Art and design practitioner researchers engaging with information* [Ph.D. dissertation]. University of New South Wales.
- Choo, S. S. (2021). *Teaching ethics through literature. The significance of ethical criticism in a global age*. Routledge.
- Cummins, M. W., & Brannon, G. E. (2022). Implicating ourselves through our research: A duoethnography of researcher reflexivity. *Journal of Contemporary Ethnography*, 51(1), 85–102.
- Cunliffe, A. L. (2016). ‘On becoming a critically reflexive practitioner’. Redux: What does it mean to be reflexive? *Journal of Management Education*, 40(6), 740–746.
- Ellis, C. (2004). *The ethnographic I: A methodological novel about autoethnography*. AltaMira Press.
- Finlay, L. (2002). Negotiating the swamp: The opportunity and challenge of reflexivity in research practice. *Qualitative Research*, 2(2), 209–230.
- Heifetz, R. A., & Laurie, D. L. (1999). The work of leadership. *Harvard Business Review*, 124–134.
- Hibbert, P. (2012). Approaching reflexivity through reflection: Issues for critical management education. *Journal of Management Education*, 37(6), 803–827.
- Hibbert, P., & Cunliffe, A. (2015). Responsible management: Engaging moral reflexive practice through threshold concepts. *Journal of Business Ethics*, 127, 177–188.
- Higgins, D., & Keating, E. (2016). Seeking meaning in self: The dialogical process of storytelling and professional development. In *Action learning in challenging times: Questioning insight, challenging practice*. Ashridge Business School. <https://liverepository.liverpool.ac.uk/id/eprint/3000641>
- Hughes, S. A., & Pennington, J. L. (2017). *Autoethnography: Process, product, and possibility for critical social research*. Sage.
- Iszatt-White, M., Kempster, S., & Carroll, B. (2017). An educator’s perspective on reflexive pedagogy: Identity undoing and issues of power. *Management Learning*, 48(5), 582–596.
- Johnson, B., & Christenson, L. (2008). *Educational research: Quantitative, qualitative and mixed approaches* (3rd ed.). Sage.
- Joseph, A. (2014, November 16–18). Reflexive pedagogy: Towards crafting discourses of professional knowledge, practice and engagement for social justice. In *5th CESI Conference*, Delhi, India.

- Kan, R. Y. P. (2022). *In-between space of learning: Towards professionalism in the arts* [Ed.D. dissertation]. National Institute of Education, Nanyang Technological University, Singapore. <https://hdl.handle.net/10497/25070>
- McDermott, M. (2015). *A teacher's reflexive story of student voice pedagogies: An autoethnography* [Ph.D. dissertation]. University of Toronto.
- McDowall, A. (2020). Layered spaces: A pedagogy of uncomfortable reflexivity in indigenous education. *Higher Education Research & Development*, 2, 341–355.
- McGranahan, C. (2014). What is ethnography? Teaching ethnographic sensibilities without fieldwork. *Teaching Anthropology*, 4.
- Mezirow, J. (1991). *Transformative dimensions of adult learning*. Jossey-Bass.
- Mickel, L. (2021). Performance practice as research, learning and teaching. *Teaching in Higher Education*. <https://doi.org/10.1080/13562517.2021.2000385>
- Mitra, D. (2004). The significance of students: Can increasing 'student voice' in schools lead to gains in youth development? *Teachers College Record*, 106(4), 651–688.
- Omeihe, O., & Omeihe, K. O. (2019). Transformative reflexivity: Teaching and quality enterprise pedagogy. *Journal of Higher Education Service Science and Management*, i(2), 1–10.
- Pillow, W. (2003). Confession, catharsis, or cure? Rethinking the uses of reflexivity as methodology in qualitative research. *International Journal of Qualitative Studies in Education*, 16(2), 175–196.
- Raj, A. G., & Ulanoff, S. H. (Eds.). (2022). *Storying a reflexive praxis for pedagogy. Concept, method, and practices*. Palgrave Macmillan.
- Schwandt, T. (2001). *Dictionary of qualitative inquiry* (2nd ed.). Sage.
- Shulman, L. S. (1996). Paradigms and research programs in the study of teaching: A contemporary perspective. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 3–36). Macmillan.
- Singleton, B. E., Gillette, M. B., Burman, A., & Blanes, R. (2022). Uncomfortable knowledge: Toward a pedagogy of reflexivity. *Teaching Anthropology*, 11(2), 73–85.
- Taaffe, K. (2014). *Key signature pedagogy: An exploration of instrumental music teaching and learning in Ireland—'Fascinating laboratory' or 'deviant tradition'?* [Ed.D. dissertation]. King's College London.
- Treacy, D., & Gaunt, H. (2021). Promoting interconnections between reflective practice and collective creativity in higher arts education: The potential of engaging with a reflective matrix. *Reflective Practice*, 22(4), 488–500.
- Turner, V. W. (1987). *The anthology of performance*. PAJ Publications.
- Useche, A. C., Galvis, Á. H., & Díaz-Barriga Arceo, F. (2022). Reflexive pedagogy at the heart of educational digital transformation in Latin American higher education institutions. *International Journal of Educational Technology in Higher Education*, 19(1), 62–76.
- Winters, T. M. (2016). A developing research-oriented pedagogy for undergraduate teaching in art and design. *International Journal of Education through Art*, 12(3), 257–270.

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Chapter 8

Digital Storytelling: Crafting Story Content with Moving Images Across Multiple Platforms



Mei Lian Peh

Abstract Visual storytelling is an important component in the Diploma in Illustration Design with Animation Programme at the Nanyang Academy of Fine Arts, University of the Arts Singapore. Students are expected to craft compelling narratives that attract, inspire and motivate action for social impact in their studio projects. Students usually draw inspiration for stories from their personal stories or experiences, common teenage-related topics such as depression, peer pressure, bullying are the usual topics behind the narratives for their projects. Adopting the use of digital storytelling as a pedagogical approach broadens students' knowledge and emphasises the importance of many other issues within the community that they live in. Students can explore alternative social issues, create impactful stories with memorable characters to inform audiences, retell historical events and others, rather than just their personal narratives. By applying Shulman's signature pedagogy approach to think (understand and explore), perform (apply and create) and act (critique, reflect and improvise) in design studios, students are encouraged to collaborate with their peers, empathise with the characters in their stories and immerse their audience with creative touch points on various digital platforms. This chapter shows how adopting digital storytelling as a pedagogical tool facilitates deep and purposeful learning. In the design process, students realise the power of visual stories as a tool to engage their audience, their passion and motivation for their projects.

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*Today, Uncle finally came out of the room. It was not Uncle who came out. It's **NOT** him. Who is it that came out? I don't like him. He isn't very nice. He's mean and he shouts a lot. I miss my uncle. Ray, 11 April 2021*

*The world of Ray is dark, quiet, very quiet, in fact and scary ever since his parents stopped coming back home ... and he is always at home with his uncle, Raedius. NO, it's **NOT** his uncle ... he is a **MONSTER** ... scary, huge and fierce although he does not speak*

What is the inspiration behind the crafting of this digital visual story, and how do visual storytellers unfold a story and introduce multiple sub-plots in their story world?

Introduction

Stories are part and parcel of our everyday lives. We grow up reading storybooks. We listen to stories from people around us and tell them stories in return. Stories can be presented in many forms, from drawings and images such as photographs, to videos or moving images. Stories told in words, published in printed books or magazines, can also be published digitally on screen. Images used for storytelling can range from single images to multiple sequential images on multiple pages. Anderson and Chua (2010) defined digital stories as short personal stories expressed using images and text in simple videos. The term *digital storytelling* is thus coined with a change of platform, where various digital artforms are co-opted to narrate the creators' thoughts, woes, opinions and conflicts.

Digital storytelling in this chapter refers to visual stories that are created using digital tools and presented on digital platform, to convey messages using lively and engaging visuals and characters. Wales (2013) referred to working on multi-modal platforms as going beyond language into visuals such as photos, illustrations, gestures, music, sound and videos captured on mobile devices. It may be static or involve motion—for example, a short animation, a digital book or even an installation. Digital platforms include social media sites, digital comics (such as webtoons), mobile apps, mobile games, and mini animations. Today, stories are often

told across multiple platforms, from print, such as novels and books, to animated stories on digital platforms such as YouTube, Facebook, online blogs and social media platforms (Schiller, 2018).

Storytelling can entertain, teach, educate, and inform communities. Brailas (2017) noted that digital storytelling can be an effective digital communication tool, connecting with audiences cognitively and emotionally. However, stories must be well-crafted and well-presented to achieve these functions. Communication on digital platforms is prevalent in today's world. Content creators should craft stories to be distributed on multiple platforms, so that the messages can reach a wider audience on both traditional and digital platforms.

Traditionally, stories are created in a single format or medium on a single platform; today, a single-story experience can be presented multi-modally, using different sub-stories across multiple (multi-modal) platforms. In commercial or community projects where a story must entertain, inform, educate, provoke or challenge audiences to garner a response, the strategy of using multiple platforms is more appropriate and effective in resonating with the target audiences, evoking a shift in mindset. Ryan (2015) proposed the creation of a variety of independent stories to be “dispersed” and applied across multiple platforms, forming a “unified whole”, termed as Transmedia Storytelling. This raises the question: how can students be guided and encouraged to craft a story world using compelling story ideas and multiple sub-plots to be dispersed across multiple platforms?

The Storytelling Studio

Crowther (2013) observed that *studio*, within the context of the design profession, refers to a physical workspace for an artist or designer, where work activities, dialogues, crits take place. The design studio, in the context of a design school, is a built learning environment designed to emulate the design studio of a professional in the industry. Likewise, a storytelling studio is a place where a high level of engagement, dialogue, discussion and learning take place through a series of planned activities during which stories are crafted.

Asking questions throughout the journey of crafting stories allow students to clarify their thoughts and think from different perspectives (Lambert et al., 2010). Using questions to tease out more story threads is a good strategy and technique to get students to think out-of-the box and expand their story idea beyond that single narrative. For example, if you are the character, what would you write in your diary? What are some of your inner thoughts that can be expressed and told on a different platform? How will this help the readers better empathise with different characters facing the same situation? Questions of such nature are asked in the studio to guide and clarify directions, elicit more ideas, and eliminate confusion. The type of questions asked depends on the nature of the story. For stories that start with the character in focus, questions will centre around the character's demographics and psychographics:

- Who is your main character?
- Any siblings, family?
- Elaborate the situation that character is in?
- Emotion, relationship with others.
- Any unique habits, terms used in speech, language.
- Preference for clothing brands, music/film genre.
- Brand belief or lifestyle, for example, live a sustainable lifestyle?

Besides the characters, the main story idea can be further developed and expanded to build a story world, with details on the environment conditions and settings, especially for story ideas about the future world, which should be crafted based on credible articles written by researchers, scientists and experts. Students need to understand that their content needs to be built from facts and knowledge gathered by themselves or by others through valid research, and not on groundless imagination.

During consultations and critiques, advice given to students is kept “open-ended” with multiple choices and options. The purpose is to develop students’ critical thinking skills, ability to make decisions, and ability to defend and justify their decisions or direction taken. Advice of this nature often confuses students, and only a small percentage of students are willing to take responsibility for their decision making. Nevertheless, it is an effective way to develop critical thinking skills. On the other hand, students with lower confidence need more assurance and guidance in the decision making. Challenges can be given to them to further develop the story idea, for example: If this character is hot-tempered in nature, how will he react in this situation? The decision made will have to be based on relevance to the target audience and the student’s technical skills, to ensure they have the competency to complete the job on time.

Digital storytelling in a design studio environment encourages dialogue with tutors and peers through collaborative critiques in assessments and work in progress, and this is more effective than critique done from only one perspective (Motley et al., 2017). Similarly, dialogue that takes place during sharing of case studies of campaigns in group consultation sessions with tutors and peers encourages more conversation on the creative work, and generates more reflection, thoughts, opinions and ideas.

It is observed that students at an elementary level need more guidance to generate more ideas or to refine the details of their story at the ideation stage. When dialogue and conversation take place more regularly, students are spurred to generate more thoughts when crafting the main plot and sub-plots or story threads. In the production stage, students’ crafting skills such as drawing, animation skills and design-related software skills will enable them to clearly tell their stories visually.

Sagri et al. (2019) posited that although digital storytelling, comics, animations, and other techniques are deemed to be distinct areas, there is a lack of work in integrating all these techniques. Observations gathered from student projects shared in this chapter indicate the effectiveness of integrating different crafting techniques and platforms to immerse the audience in their story world. When students have a clear objective, a deep understanding of, for example, sustainability issues, a defined

target audience and competent crafting skill, they can create captivating and immersive experiences. Students who are more proficient in crafting skills can respond faster to feedback, update and refine their story, and progress at a faster pace. They will then have more time to explore new technologies to create an immersive story experience for their audience and put more thought in identifying suitable platforms to realise their story ideas to draw an emotional response and empathy from the audience with their final creative product.

Multi-modal Storytelling

Trigger to Take the Journey!

Students often perceive topics designated for school projects as boring, preferring to work on their personal stories and subject matter. To better engage student interest and fulfil learning needs, topics chosen for student projects should be broad enough to explore a variety of sub-topics. The topic *sustainability* was selected as the main theme for the student projects analysed in this chapter. As this is a well-known issue of current concern, widely discussed in diverse communities on many platforms, students will be able to see the relevancy of their craft in the many existing campaigns on this topic.

To help students understand the theme of *sustainability*, I tapped on the 17 goals listed in the 2030 United Nations Agenda as a source of reference material or starting points for students to select one topic to focus on:

- No Poverty
- Zero Hunger
- Good Health and Well-Being
- Quality Education
- Gender Equality
- Clean water and sanitation
- Affordable and clean energy
- Decent work and economic growth
- Industry, Innovation and Infrastructure
- Reduced Inequality
- Sustainable Cities and Communities
- Responsible Consumption and Production
- Climate Action
- Life Below Water
- Life on Land
- Peace, Justice, and Strong Institutions
- Partnerships for the Goals.

The pedagogical purpose of a visual storytelling project is firstly, to help students to realise how their craft can have an impact on people, situation and relationships, contributing towards a social cause and benefiting the community. Secondly, the theme on *sustainability* affords opportunities for students to practice mapping ideas and story content from the social world (based on their own observations or others' experiences) to meaningful, relevant and relatable stories. In many instances, students matched their personal stories to one of the 17 goals, and used or tweaked their personal stories to persuade the audience to shift mindset and create conversations and awareness. In this way, the students' interest in the project is maintained and the learning objectives are fulfilled. González-Tennant (2017) stressed that digital storytelling can be effective in stimulating students' interest in a subject matter. How can students be inspired to craft authentic stories based on a theme using their personal experience? The use of a "trigger" is effective in engaging students' interest in the project. A *trigger* refers to a range of items such as photograph, drawing, artifact, animation, film, a personal experience, or an incident that students can relate to, or it is a topic or experience that they can emotionally relate to. A trigger serves as a starting point for discussion; it builds up students' interest and curiosity on the topic to gather more insights on their issue. Staley and Freeman (2017) emphasised that storytelling empowers individuals to express their opinions and thoughts on any topic that is close to their heart.

Now let us look at how three students are triggered to take on the journey of crafting authentic and compelling stories for their projects titled *And Then There Was None*, *What's Wrong with Jen?* and *Sunshine's Here!* We shall examine how triggers help inspire these three students to craft their narratives, develop the story elements, identify appropriate platforms for sub-plots distribution, and use technology to visualise story ideas to emotionally engage the target audience.

The story idea for the first project *And Then There Was None* (summarised in Fig. 8.1), was triggered by the student's personal experiences as well as what she had witnessed of friends who suffered from alcohol abuse while growing up. Although she had not suffered severe physical or emotional harm herself, she hoped that telling the story will encourage others in the same situation to seek help. The process of telling the story helped to provide emotional closure for the student.

Similarly, the story idea for the project *What's Wrong with Jen?* (summarised in Fig. 8.2) was triggered by the student's personal experiences and encounters with people around her. Coupled with the student's research and observations, it resulted in a rich and deep emotional understanding of the topic. The process of telling a story enables the storyteller to gather, organise and structure their thoughts and ideas, and to reflect on, construct and learn through working out their story (Kordaki, 2014).

From the students' written background for *What's Wrong with Jen?* and *And Then There Was None*, I gather that they had a strong passion for their topic due to a personal connection with their trigger. When students are emotionally attached to their personal stories, they are able to expand their stories and create more engaging story sub-plots for distribution across multiple platforms. On the issue of relatability to the audience, *What's Wrong with Jen?* and *And Then There Was None* address

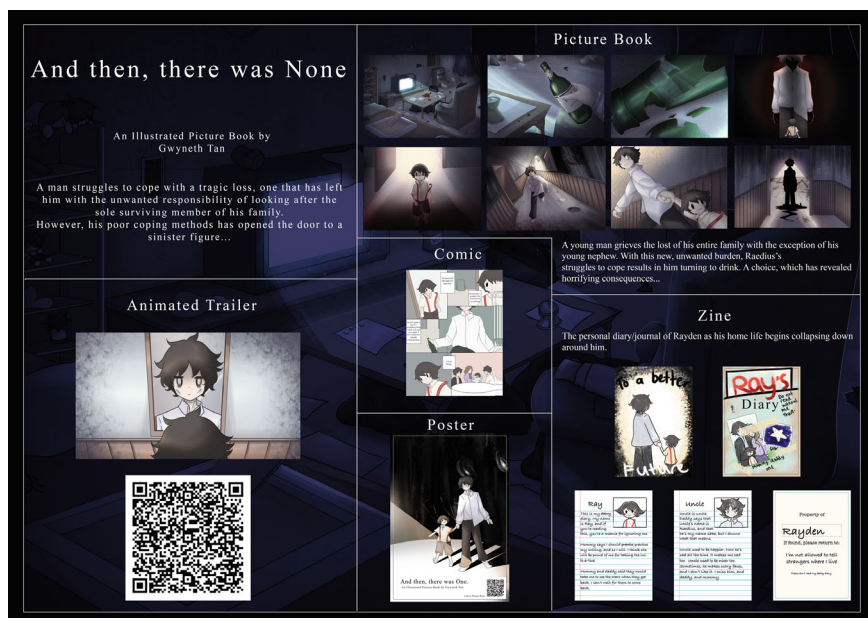


Fig. 8.1 Student project *And Then There Was None*. Note The trigger for the project was the student's personal experience and observation of the impact of alcoholism on families a few years prior to the project

common social issues that are more relatable to teenagers, who may be facing or have encountered similar issues and experiences before.

For the third project *Sunshine's Here!* (summarised in Fig. 8.3), the trigger was the student's empathy for victims of war, especially children whom she felt were often forgotten. War is an issue that may not seem relevant or directly relatable to most people if there is no experience of war or content on war posted on social media platforms. However, with the focus re-channelled to young, "imperfect" child victims of war, she was able to draw a reaction and empathy from the target audience.

Building Connections Along the Way

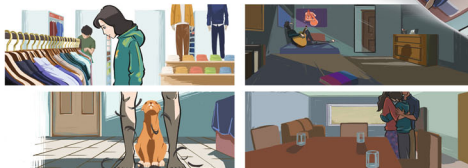
Before the students embark on the journey of crafting their stories, they were introduced to numerous successful campaigns employing multi-modal digital storytelling. Analyses of these campaigns by the students help to develop their understanding of what is good multi-modal storytelling. Students may understand the concepts but have difficulty applying them to their own projects. An exercise analysing current,

WHAT'S WRONG WITH JEN?

About: A picture book about the signs and symptoms of an identity crisis.

Objective: Give younger audiences an idea on how to communicate their issues to their parents. This book is also for parents of children who suffer from similar symptoms.

Picture Book Cover



Jen, a teenager, struggles with her identity. In a fit of pent up anger and frustration, she gets into a heated argument with her mother. Eventually, Jen initiates a calm discussion with her parents which helps both parties come to an understanding.

Poster



Comic Book Cover



Before Jen's situation reached boiling point, there were unsaid signs and symptoms she experienced daily. This short wordless comic book allows the audience to see Jen's symptoms and take it in any way they perceive it.

Fig. 8.2 Student project *What's Wrong with Jen?* *Note* The project tapped on the artist's friends' stories of their struggle with self-identity as adolescents. The artist hoped that this picture book would shed some light on challenges faced by both parents and kids who struggle with their identity

successful, and effective campaigns helps students deconstruct and list the key structures driving the campaign's success, gradually uncovering the rationale behind other components of the project.

Through analysis exercises, students will understand that a key success factor for a successful campaign is having a simple story plot and relatable characters. Story plots must pique the audience's curiosity with numerous hooks, leading them to other platforms to satisfy their urge to recall personal insights. Authentic stories elevate the connection between the audience and characters, touching emotions and making the audience "emotionally present" in the story. Multiple platforms or touch-points such as animated music video on YouTube, campaign song on iTunes, tweet content on Twitter, and printed book with story/song lyrics provide backstories for the characters, helping the audience to connect easily.

Other media platforms such as print posters and karaoke broadcasts, together with a mobile game using the characters' stories can help to reinforce the message. The choice of media, mediums, and platforms for the stories and their sub-plots contributed to the campaign's success in reaching a wider audience. Explaining to students the relationship between the story plot, media, and a thorough understanding of the target audience's demographics and psychographics can be challenging.

Audiences can also be directed to the campaign website where all promotional materials are archived. Campaigns should offer a robust story experience distributed



Fig. 8.3 Student project *Sunshine's Here*. *Note* The trigger for this project was a poster on War and Peace as well as the Yemen Crisis. The message for the project was Peace, Justice and Strong Institutions

across numerous platforms. Anderson and Chua (2010) defined *digital stories* as short personal stories expressed with simple video using images, stories, and text. Drawing on personal experience helps the storyteller to better craft the plot, create story hooks that capture the attention of the audience and express the storyteller's emotions. However, I have observed that students are not comfortable to share their sensitive and personal stories with other students in class. Personal experiences can also be derived from simple social experiments that students have conducted, with the intention to weave the content of the collected information into the story. With stories that they relate well to, the selection of illustration style, setting and colour scheme for the environment will be easier, and they will be able to justify their design decisions. Staley and Freeman (2017) emphasised that storytelling empowers individuals to express their opinions and thoughts on any topic that is close to their heart.

Including the students' personal story helps them to develop a sense of emotional attachment to the project and improves the relatability of the issues or conflicts treated in the story. This is helpful for the average student who will be more confident in crafting the story, producing higher quality work and increasing their self-esteem. The student projects *What's Wrong with Jen?* and *And Then There Was None* are good examples of weaving personal stories into the narrative to immerse the students in their projects. They were able to unfold their stories using multiple sub-plots, from

multiple perspectives, using different voices of different characters, with different sidekicks, different story world, environment and visual symbols, and elements that hook the attention of the audience.

Weaving Micro Digital Stories that “Hook”

So how should stories be crafted to entertain as well as engage and inform the target audiences?

Today’s world is highly technology-driven. We communicate, shop, share, exchange information and connect with friends in the virtual world, beyond our physical location (Dentzel et al., 2015). Hence, storytelling on multiple platforms using different story paths enables messages to reach out to different target audiences using different digital platforms. The transition between traditional and digital platforms should be seamless and fluid across all touch points. Storytelling across multiple platforms affords opportunities for creators to exercise their creativity and imagination with the use of current technology to realise story ideas. Curiosity to uncover new or fresh story elements will retain the audience and keep them connected with the story and campaign.

There are several challenges to attracting and retaining the audiences’ attention on an online platform. The abundance of exciting materials competing for audience attention on digital platforms poses a great challenge for storytellers who must create enough story hooks to retain the audience attention. Appropriate digital tools and platforms must be selected for use of story hooks. The purpose is to immerse the identified target audience in the story world with not only moving visuals but also sound, colours, textures and even smell. The key consideration should be in creating a story experience that will leave a lasting impression on the audience. For example, will an interactive outdoor installation complement the other items to create a more appropriate story experience, or will animated digital stickers be better in conveying the campaign message?

The main story, characters, intended message, and the target audience’s demographics and psychographics must be studied carefully to identify opportunities for story paths from the main story idea. These demographics and psychographics provide indications of the appropriate platforms to publish the story paths. With multiple platforms and story elements, the story’s focus can range from characters or emotions to the environment and story world. However, the concept of multi-threaded storytelling across multiple platforms is not an easy concept for students to understand and apply. The strategy of using an existing project as a case study to examine the concept of stories distributed on multiple platforms is a good starting point for students. The act of analysing and deconstructing the story idea facilitates the learning process and helps students to understand the concept and apply it later. The input of personal experiences here will help in telling a more compelling and relatable story. It helps students to be emotionally connected to their story world and characters.

Technical knowledge and know-how of current technology, apps and platforms are important for the application of appropriate story sub-plots and activities. This is in addition to the main challenge of identifying opportunities to develop multiple sub-plots from the different story threads—to generate a complete series of story experience, suitable for distribution across multiple platforms. It involves expanding the main story and exploring different character’s perspectives. In the industry, this is done in a team, with experts from different fields and technical knowledge. Student projects such as those discussed in this chapter are individual work, which pose a great challenge to students with below average skills and knowledge.

Connecting the Dots

For the audience to be totally immersed in the story via the multiple modes of storytelling, different sub-plots need to be created for different audiences on the various platforms. Print platforms such as zine, a mini magazine, which is popular with younger audiences and teenagers, is defined as a first platform for multiple distribution of sub-plots for the projects showcased in Figs. 8.1, 8.2 and 8.3. Sub-plots from the main story idea help to flesh out the audience’s understanding of the situation, environment, backstory of the characters, and even different perspectives or opinions from a sidekick or other characters.

Although the sub-plots employed in the three projects engage the audience on different platforms with different levels of engagement, it is the story plot and the characters that stick to the audience. Sub-plots augment the audience pool to reach out to more people. The biggest challenge in storytelling on multiple platforms is to lead the audience to “connect the dots” seamlessly, to make sure that they can link the bite-sized sub-stories crafted for the various platforms—sub-stories that work individually and yet cohere to form a complete picture.

Teaching Methods for Multi-modal Digital Storytelling

This section describes two main teaching methods, analyses of animated short films and desk critiques (desk crits for short), which can be considered signature pedagogies for teaching digital storytelling across multiple platforms.

Analysis of Short Animated Films

The process of analysing animated short film and campaigns is an immensely useful exercise for students who are translating their stories from the written form to the visual form. The repeated and continual exploration of digital visual stories deepens

students' understanding and allow them to explore how their crafting skills can help visualise their story ideas. In the translation of story ideas to a visual form, a knowledge of semiotics and visual language provides a good basis for understanding of how visuals can replace words in telling a story. Using the same animated short film or campaign for analysis exercise throughout the semester allows students to revisit the concepts repeatedly and deconstruct them, to share with their peers in class and apply the concepts to their own projects.

Students gain confidence when they are tasked to identify their own animated film for analysis and sharing in class. The ability to apply concepts learnt to their own projects is a higher order skill which is challenging for most students, and thus repetition and use of the same campaign and animated film helps students to understand the concept of multi-modal storytelling, and gain confidence in crafting their own stories/projects.

In addition, allowing students to identify their own short, animated film for analysis further motivates them, reinforces their understanding, and strengthens their ability to explore (compare, contrast and analyse) and apply learnt concepts to their own work. In a related domain, Waern (2013) found that game analysis could become a signature pedagogy in game studies. However, he also highlighted various challenges such as varied students' knowledge at entry level of the class, and students' prior game experience. In this context, as the students in my class have attained knowledge of basic storytelling in their foundation year, they will be familiar with the concepts and terminology relevant for storytelling when they carry out their analysis of short, animated films.

The use of the same animated films repeatedly throughout the semester reinforces concepts and ideas, allowing students of different ability to understand difficult concepts at their own pace and relate traditional storytelling with digital storytelling across multiple platforms. Analysis of short films and campaigns can be considered a signature pedagogy in helping students to internalise new knowledge deeply and holistically with real-world contemporary issues.

The Desk Critique

The storytelling studio need not be confined to a fixed physical space, time or location; it can set up in any location and at any time, even in a remote space. With multiple forms and platforms of communication, discussions and critiques can go beyond the designated lesson and classroom. Desk crit is an informal critique given by peers or lecturers while students are doing their project work in the studio. Desk crit is a common practice across different design disciplines. Crowther (2013) cited critique in the setting of an architectural design studio as a signature pedagogy. He added that desk crit, a private conversation between the students and the tutor and the crit, is significant to the signature pedagogy. Desk crit can take place anywhere as long as the students are doing their work, even in a virtual space without face-to-face meeting. Establishing a bond or good working relation with the students is the only criterion

for desk crit to be effective and sustainable. This is so, because the students are not too affected by the comments given and understand that the feedback is helpful and constructive in developing better work.

The content of critiques given by students reflects their understanding of concepts taught. Likewise, students consume comments given and apply them on their own projects, enabling further refinement or deeper understanding of content taught. Similarly, desk crits and dialogues during consultations sessions with tutors and peers encourage a conversation on the design work which will generate reflection, thoughts and opinions, and may result in more refined ideas. One-to-one critique done traditionally tends to be biased and does not involve the students; nor does it give them a chance to voice their thoughts. Dialogue with tutors and peers through collaborative critiques in assessments and work-in-progress within a design studio environment is more effective than critique done from only one perspective (Motley et al., 2017). Analysis and desk critique, if carried out repeatedly as routines, will contribute to the development of signature habits of a visual digital storyteller.

Analysis of Three Student Projects

In this section, the three student projects are examined in more detail to show how students are guided to understand and build the connections between the target audience, the story idea and the platforms chosen to realise the sub-plots. The student projects can also be used as case studies for teaching. Case studies are useful for teaching concepts that are not easy to understand. Deconstructing the thought process and the crafting of a story helps students to understand the idea, message and objective of a project/story. Brailas (2017) noted that by providing a similar example of the final artefact during the project introduction deepens students' understanding of what they are expected to produce in a classroom.

Each of the student works, *Sunshine's Here!*, *What's Wrong with Jen?*, and *And Then There Was None*, has its own story hooks to retain the audience. Their choice of platforms is somewhat different although all of them adopt the use of story elements such as character design—the “imperfect” orphans/children, the little boy with depressed alcoholic uncle, the teenage girl with an identity crisis. With a strong narrative, characters will stick in the audience memory until they experience other sub-plots on other platforms. Sometimes, characters are used to stimulate audience curiosity to find out what happens to a particular character, and also to “peep” into the character's thoughts and ideas. A closer look at the three student projects will surface the story elements that hook the audience to the sub-stories on the multiple platforms.

The “New” Perfection in the Imperfection

In society, people who do not conform to the norm are often “outcast”. People with some form of disability or imperfection may be discriminated against. In *Sunshine’s Here!*, and *What’s Wrong with Jen*, characters are created with some form of imperfection. The main character in *Sunshine’s Here!*, Asha, has a scar on her forehead, a facial imperfection (Fig. 8.4a).

The “imperfect” plushies (Fig. 8.4b) are an unusual approach as it goes against standard criteria for acceptance. With this plushie, the appeal to treat children with physical imperfection as normal within the community and by their peers is clear. The goal is to normalise physical imperfections as nothing to be ashamed of. The



Fig. 8.4 **a** The main character Asha who has a scar on her forehead. **b** “New” perfect plushies of characters



Fig. 8.5 Character Jen in different outfits, attempting to “conform” to society and parents’ expectations

main character in *What’s Wrong with Jen?* does not dress or behave in a way that society expects of a girl and may be treated as an outcast by some (Fig. 8.5).

Jen’s imperfection is not physical although it is present. All the “new” perfect characters hold interesting back stories crafted to their imperfection, which will interest the audience and lead them to other platforms for the sub-plots containing their back stories. The back story for the character, Asha, will not only reach out to a wide pool of audience but will also be a topic of discussion as most plushies and dolls sold in the market are designed as perfect and beautiful.

Physical details such as clothing, facial expressions, special marks or signs on the body of the character are necessary as the visuals support their back story. Target audiences (teenagers) will find characters like Asha relatable as it could be themselves, their best friend, partner, or someone they know. A scar, birthmark, or facial or bodily imperfection will arouse human curiosity to know the character’s past experience and encounter that resulted in the imperfection.

Sound and Silence

Sound, music, dialogue, text and script are part of a story and are important aids in visual storytelling. A song, together with the lyrics, can help to immerse the audience in the story world. The song can act as a hook that sticks with the audience. The absence of text, sound or music can be an excellent story hook as well if it is aligned with the atmosphere and setting of the story. For *And Then There Was None*, the main story idea is presented in a printed picturebook with no text, which highlights the fear that the neglected child, Jay, felt when he is left with his depressed and alcoholic uncle in the dark, messy house (Fig. 8.6). The use of a darker colour scheme with minimal lights in the room helps convey the mood and ambience.



Fig. 8.6 Silent scenes from the story *And Then There Was None*

Mirror, Mirror on the Wall

A well-designed character is one that the audience can relate to, as it can be a mirror of themselves, or remind them of a family member, friend, classmate, or acquaintance which can be a strong story hook. With the campaigns, *And Then There Was None*, *Sunshine's Here*, *What's Wrong with Jen?*, the characters of Asha, Kevin, Jay and Jen are crafted to help forge the connection between the character and the audience. The audience are encouraged to empathise with the characters' experiences, situations and plight. The target audiences (teenagers) will find characters like Jay, Asha and Jen relatable. It is easy for them to relate to Asha as one might know of someone with a scar, birthmark, facial or body imperfection, or who has lost a loved one or adopted

a child. Likewise for Jen in *What's Wrong with Jen*, many teens face or know of someone facing similar challenges with regard to sexual orientation and preferences.

Characters from stories that stem from personal experiences are likely to resonate with audience members who have had similar experiences. When a story incorporates authentic and relatable elements derived from personal experiences, it can evoke a powerful emotional response in someone who has gone through a similar situation (Lambert et al., 2010). Campaigns of such nature also offer an option to audience members in the same plight, to educate other people, to speak to parents on behalf of audience members on challenging issues such as sexual preferences. For example, this text message in an almost wordless book (see Fig. 8.7) may encourage some audience members to do likewise, to speak to their parents on the issue calmly, discuss, compromise and agree to sort out differences:

As a child, I will inevitably lose my way and look to you for guidance and acceptance. As a parent, I will love and support you regardless of who or what you might become.

The message may be a strong hook if it reflects the inner thoughts of audience in a similar situation.

The next story that most people can relate to is *And Then There is None* on the issue of alcoholism (Fig. 8.8). This story on alcoholism is presented in a wordless book, there is no dialogue, text or conversation: the silence heightened the character's level of fear and also the audience curiosity towards the story world. With alcohol abuse being a common social issue contributing to child abuse, which may in turn lead to adult alcoholism, resulting in a vicious cycle. The illustration in Fig. 8.8 will transport some audience members to memories of previous encounters with alcohol abuse, and be immersed in the story world of Ray and his depressed, alcoholic uncle. Many will empathise with the boy, Ray, in the far end of the room, at the door entrance, and understand and feel his fear and helplessness.

Metaphors, Objects and Symbols at Work!

For stories to be visually engaging, it must be well-crafted with clever use of artefacts, symbols and colours in the story scenes as well as the design of the characters. The use of selected metaphors engage audience at a deeper level, allowing for complex stories to be simplified and easier to comprehend. This creates more opportunity for sub-stories to be crafted and shared on various digital platforms, facilitating mindset shifts towards certain social ideas.

In *Sunshine's Here!*, the use of rain, sunshine, and umbrella as an analogy for happiness, sadness and shelter is relatable and should appeal to worldwide audiences (Fig. 8.9a–c). In the promotional video for the merchandise of the story *Sunshine's Here!*, the audience is called upon to make donations by purchasing the plushies (mini-figurine of Asha and her friends in the orphanage). Sunshine and rain are used as an analogy for hope/happiness, and sadness, and the umbrella symbolises shelter that audience members can help to provide. There is a good understanding



Fig. 8.7 Scenes from the story, *What's Wrong with Jen?* Illustrating Jen's confrontation with her parents

and application of visual codes which will create a more immersive experience for the audience. The video ends with a call to action “Let’s be their sunshine today!”—a callout for the audience to be part of the story, to buy or “adopt” the Rain Children Plushies (Fig. 8.10).

Metaphors are used in the story and the promotional video to convince audience members to adopt an imperfect plushie and donate to help children in need. The concept of adoption is simplified and make possible for audience to commit and help.

The main narrative for *And Then There Was None* was presented in a graphic novel with minimal words or no words at all, which suits the story setting and environment. The audience can hear the character only through the child’s diary which holds



Fig. 8.8 Scenes from the story, *And Then There is None* illustrating Jay's fear

another sub-plot. Hence, each sub-plot is unique and requires careful consideration on how the audience will receive the overall holistic story experience in the end. In the story, a monster was selected as a metaphor (Fig. 8.11) to represent the main character under the influence of alcohol. This allows the audience to think and realise that the monster is the main character when he is drunk, mean, and aggressive. The shadow of the main character as the monster also illustrates the confused emotions in the sober and drunk states, and the guilt and struggle he faces after he abuses people around him.

This is a clever twist as the audience may get confused initially as to how the monster comes about and his identity. The visual reveals that the monster is the uncle, with the use of the uncle's silhouette (Fig. 8.12). It is also a shout out to alcohol abusers on how their habits impact and cause harm to people around them.

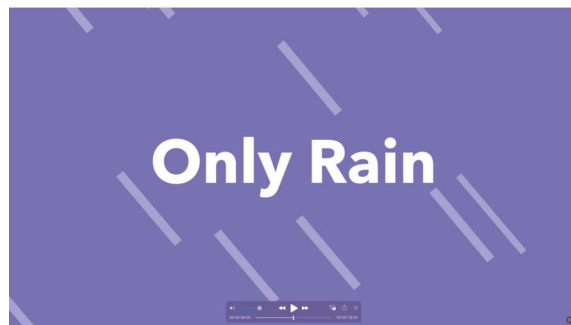
In *What's Wrong with Jen?*, objects such as the breast binder reflect the conflict between Jen and her mother, and tacitly inform the audience of the main issue or theme. The story is told purely with visuals. The scissors indicate cutting her hair short out of frustration. The addition of a cat, a non-human character, indicates that her pet is aware of what happened, being her trusted confidant—a good listener who is unable to tell her secret to another person (Fig. 8.13).

In summary, the use of metaphor in visual storytelling enhances the engagement and impact of a visual story. The task of incorporating visual elements to allow complex stories to be simplified and conveyed effectively can be a challenging task for students. It can take several desk crit discussions and prompting from lecturers to work out the selection of visual codes to use in their visual story. Continuous reinforcement using the same case studies helps students to understand how metaphors

Fig. 8.9 **a** The use of the sun as bright and sunny as a metaphor for hope and happiness. **b** The use of the rain as gloomy and dark as a metaphor for sadness. **c** The use of the umbrella as a metaphor for help and shelter



a



b



c

can be used effectively. Students need to be actively involved in the discussion, to explore and surface visual codes that audiences will be able to understand, decode and respond to. The strategic use of visual symbols and metaphor in the student projects—rain, sunshine and facial scar in *Sunshine's Here!*, the monster to depict alcoholism in *And Then There Was None*, the breast binder and scissors in *What's Wrong with Jen?*—demonstrates the power of visual codes in creating an immersive and meaningful storytelling experience.



Fig. 8.10 The call for adoption of plushies in the video and the packaging of the merchandise



Fig. 8.11 The monster as a metaphor for the character under the influence of alcohol

Framework to Guide Students

A success story orchestrated across multiple platforms and media, using different perspectives to tell the story, should be new, compelling and relatable to the audience, and intrigue them to want to know the other story parts on other platforms to form the big picture of the story world. In addition to having appealing visuals, digital storytelling today has to be multi-threaded, requiring the storyteller to identify sub-plots from different perspectives.



Fig. 8.12 The use of the silhouette of the uncle as the monster helps reveal the identity of the monster

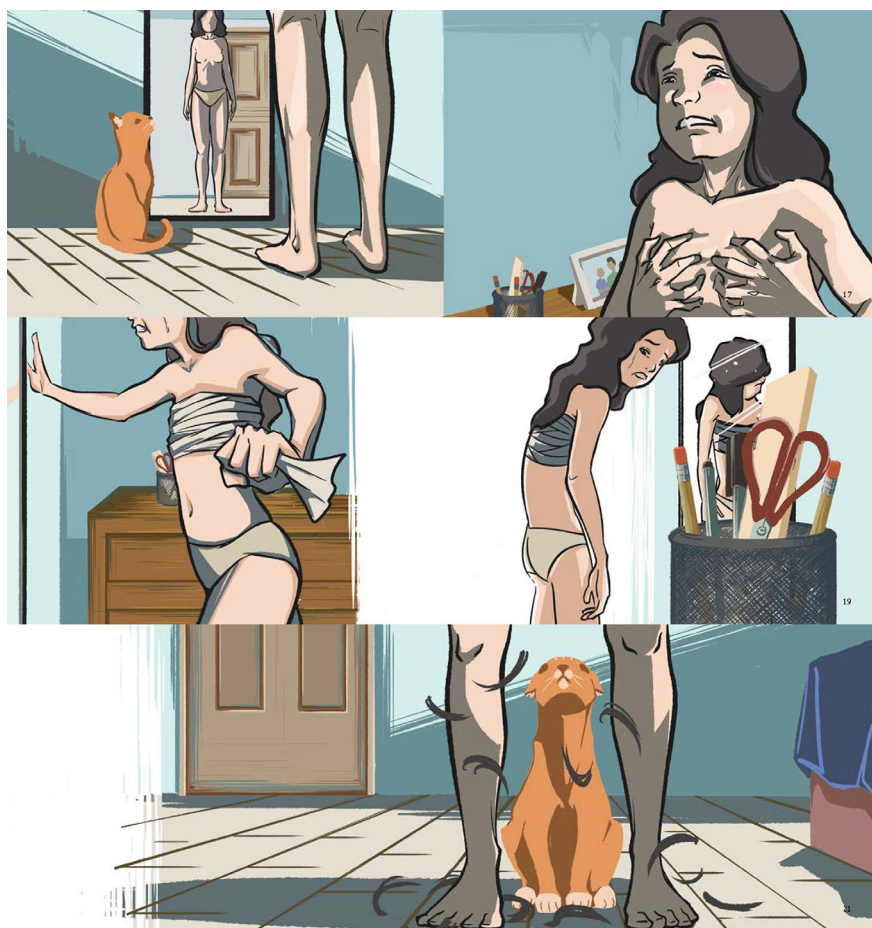


Fig. 8.13 The use of multiple objects as symbols to drive the visual story

I propose the framework outlined in Table 8.1, to guide students in the ideation process—from crafting story ideas to preparing multiple sub-stories plots for distribution on various identified platforms based on the chosen sustainability theme. The framework is based on the ideas of design thinking and design research.

Table 8.1 Framework to facilitate student projects

Steps	Tasks
Research	• Introduction to the 2030 agenda for sustainable development • Research and understand the 17 sustainable development goals • What are triggers? What image, items, photos or personal experience compelled you to craft your story • Identify a ‘trigger’ before selecting a theme that is in sync with your ‘trigger’/topic • Analysing a case study on campaign to reinforce the concept of storytelling across multiple platforms
Case study	• Select a case study of similar theme or nature • Deconstruct the selected case study (French short animation, MEMO) and list – The 3 or 5 ACT structure – 5 story elements – Message in the selected case study – List visual codes used to tell the story • Initial rough sketches/notes for character and story ideas
Initial story ideas	• Logline and story beat for initial story ideas • Expand story paths, using personal story/experience to identify potential in – Character’s backstory – Environment/setting – Stories from any other human or non-human side character, e.g. pets, toys, favourite items within the same community • Creative brief (draft)—making sense, connecting the dots and relate trigger, story message, multiple platforms, relatability to the audiences in the written form
Crafting storybeats	• Crafting your initial story using beat boards – Planning camera angles and movement for your visual storytelling – Looking at shots/angles that make the audience feel that they are part of the story • Developing story paths/sub-plots – How can you embed your personal experience to your existing story or theme? – How can your personal stories enhance your story-plots? – What type of stories are suitable for multiple platforms such as print to screen, books, comics to animation, mobile games or web comics? – Single versus sequel storytelling, different types of stories
Developing story paths	• Expanding your story—looking at all possible/suitable story types questions, questions and more questions. (Group discussion) • Understanding target audience, social media platforms and current technologies, capabilities, and limitations and matching them to the story paths identified
Realisation of story	• Realisation—quality control (crafting and technical skills)

Design thinking was defined by Brown (2009) as a process which consists of the phases empathise, define, ideate, prototype and test, where the researcher adopts the thinking process of observing what people need, want, like and dislike. Through a sensitive and observant designer, design projects can be research-driven. Research in the design process is an essential initial stage, allowing designers to position their design work in a broader and intellectual context. Design research encompasses observations, conducting social experimentation, gathering stories through eavesdropping, capturing visual images or objects such as photographs, drawings or an installation, which can act a trigger or inspiration to start the project.

The framework is crafted with the trigger as a form of creative research or an initial starter to inquire deeper into the selected topics. Example campaigns as case studies create opportunities and topics for students in the class to converse, discuss, argue and agree, incorporating social constructivism, cooperative learning, building stronger class synergy and working relationships with peers. The adoption of a trigger will stimulate interest in the discussion and help students to relate to the example topic of sustainability. Shreeve et al. (2010) relate the practice of the design studio to the social constructivist framework, surfacing them as signature to the pedagogy of the creative sector.

The class discussion can start with the instructor's example trigger to stimulate students to identify their triggers. Identifying a trigger is not easy for students. To help students to understand the concept and usefulness of a trigger, students are asked to complete a simple activity of deconstructing example campaigns using a reverse engineering process—to identify possible triggers for the campaigns. To further reinforce the learning, students are to research and present their own case studies of campaigns, in pairs, with the *sustainability* theme. Getting students to perform multiple analysis activities and keeping them mentally occupied is necessary as students get bored easily. So, students are given the task of searching for and presenting similar multi-modal campaigns within an hour.

In every stage of the design process, lots of conversations and discussions take place, with feedback and critique sessions conducted in the studio between instructors, students and peers. These are carried out individually or in small groups, facilitated by the lecturers. It is through these discussion/consultation sessions that instructors can help students tease out more story contents. This practice resonates with the principles of signature pedagogy (McLain, 2022; Shulman, 2005).

The research and case study stages are usually conducted concurrently. This may confuse students who have difficulty grasping the concept of creating sub-plots from their main plots. Hence, time, repetition and effort to deconstruct with explanations are the main ingredient to training students to rationalise their thinking and create relevant story ideas, materials and methods for their target audience, instead of copying “blindly” or taking detailed directions from the instructor.

Conclusion

In summary, crafting compelling story ideas requires the visual storyteller to relate to the issue and feel strongly about it either through personal experience or inspiration from the environment, with the help of a “trigger”. A trigger, such as a personal experience or encounter, can serve as a catalyst for setting clear goals and message for the project. This will help in crafting appropriate micro stories and selecting relevant platforms. Getting inspiration and familiarising oneself with the rationale behind the creative concepts of popular example campaigns can offer effective inspiration and help in understanding multi-modal storytelling.

The process of crafting micro stories from the main story is a challenging task. It is a tedious process that requires students to work alongside their peers and lecturers in their design studio, carry out multiple design crits, exploring possible story ideas, and questioning and challenging ideas to push boundaries. Students will realise in the process of working on their project that a thorough understanding of the target audience demographics and psychographics lead to a clearer direction for expanding the story and selecting specific platforms for publishing the micro stories.

Competency in crafting skills such as drawing and animation is essential for students to be able integrate their crafting skills and work fluidly across multiple platforms. A knowledge of semiotics is important in the work process but is often overlooked. Understanding how to translate stories from words to visuals is the essence of capturing the audience’s attention. Visuals help to tell stories in a powerful way. However, visuals must be relevant and relatable to the audience’s knowledge and culture for them to interpret the hidden meanings and associations behind the visuals.

The process of generating a cohesive story experience across multiple platforms requires analysing case studies, generating story ideas from triggers, numerous discussions, critical thinking and exploring sub-plots or ideas. In addition, active participation in design crit sessions reinforces content knowledge learnt and drives story ideas. To craft an immersive, engaging experience for the audience, it is important for a visual storyteller to analyse information, think critically, connect the dots, and form their own opinions. Every project content and nature are different, and hence the project development and outcome can be exciting for both students and the lecturer.

References

- Anderson, K. T., & Chua, P. H. (2010). Digital storytelling as an interactive digital media context. *Educational Technology*, 32–36.
- Brailas, A. (2017). Digital storytelling in the classroom: How to tell students to tell a story. *International Journal of Teaching and Case Studies*, 8(1), 16–28.
- Brown, T. (2009). *Change by design: How design thinking creates new alternatives for business and society*. Collins Business.

- Crowther, P. (2013). Understanding the signature pedagogy of the design studio and the opportunities for its technological enhancement. *Journal of Learning Design*, 6(3), 18–28.
- Dentzel, Z., Benkler, Y., Hypponen, M., Hirshberg, P., Gelertner, D., Dimaggio, P., Crystal, D., Castonova, E., Castells, M., & Casalegno, F. (2015). How the internet has changed everyday life. In *CH@NGE: 19 key essays on how internet is changing our lives* (pp. 235–252). BBVA.
- González-Tennant, E. (2017). Digital storytelling in the classroom: New media techniques for an engaged anthropological pedagogy. In M. Nuñez-Janes, A. Thornburg, A. Booker, I. Penier, S. Pack, & A. Leverton (Eds.), *Deep stories: Practicing, teaching, and learning anthropology with digital storytelling* (pp. 152–169). De Gruyter.
- Kordaki, M. (2014). On the design of educational digital stories: The Ed-W model. *Procedia-Social and Behavioral Sciences*, 116, 1631–1635.
- Lambert, J., Hill, A., Mullen, N., Paull, C., Weinshenker, D., Soundararajan, T., & Paulos, E. (2010). *Digital storytelling cookbook*. Digital Diner Press. <https://wrd.as.uky.edu/sites/default/files/cookbook.pdf>
- McLain, M. (2022). Towards a signature pedagogy for design and technology education: A literature review. *International Journal of Technology and Design Education*, 32(3), 1629–1648.
- Motley, P., Chick, N. L., & Hipchen, E. (2017). A conversation about critique as a signature pedagogy in the arts and humanities. *Arts & Humanities in Higher Education*, 16(3), 223–228.
- Ryan, M. L. (2015). Transmedia storytelling: Industry buzzword or new narrative experience? *Storyworlds: A Journal of Narrative Studies*, 7(2), 1–19.
- Sagri, M., Sofos, F., & Mouzaki, D. (2019). Digital storytelling, comics and new technologies in education: Review, research and perspectives. *International Education Journal: Comparative Perspectives*, 17(4), 97–112.
- Schiller, M. (2018). Transmedia storytelling: New practices and audiences. In I. Christie & A. van den Oever (Eds.), *Stories* (pp. 97–108). Amsterdam University Press.
- Shreeve, A., Sims, E., & Trowler, P. (2010). ‘A kind of exchange’: Learning from art and design teaching. *Higher Education Research & Development*, 29(2), 125–138.
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Staley, B., & Freeman, L. A. (2017). Digital storytelling as student-centred pedagogy: Empowering high school students to frame their futures. *Research and Practice in Technology Enhanced Learning*, 12(1), 1–17.
- Waern, A. (2013). Game analysis as a signature pedagogy of game studies. In *Proceedings of the 8th International Conference on the Foundations of Digital Games (FDG 2013)* (pp. 275–282). Society for the Advancement of the Science of Digital Games. <http://fdg2013.org/program/papers.html>
- Wales, P. (2013). Making, creating and shaping meaning through the art of digital storytelling. In C.-H. Lum (Ed.), *Contextualized practices in arts education* (pp. 49–65). Springer.

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Chapter 9

Codetta: Pedagogies of Transition



Rebecca Y. P. Kan

... professional education is about developing pedagogies to link ideas, practices, and values under conditions of inherent uncertainty In the presence of uncertainty, one is obligated to learn from experience. (Shulman, 2005, p. 19)

Abstract Pedagogies of transition illuminate tensions between academic learning and practical application, shifting the focus from innovation for its own sake to building meaningful connections with students' personal and professional interests that can lead to transformative experiences. This codetta outlines various ways in which pedagogies of transition have been approached to advance knowledge and knowing, as well as developments in being and becoming. Through provocations, authentic learning tasks and designing spaces for critical analysis, we can develop pedagogical signatures that link ideas, practices and values.

A perennial challenge in professional learning is to “negotiate the inescapable tension between theory and practice” (Shulman, 1998, p. 517). This tension may be particularly evident through professional education in arts and design, where it is perfectly clear to both the students and community about how a performance, internship or industry placement is relevant towards preparing the professional artiste or designer. However, how students are taught to link the richness of studio practice to professional outcomes remains inadequately explored and understood (Shulman, 2005). The literature to date presents a scant exploration of the skills, competencies and developmental trajectories that facilitate effective transitions from educational settings to professional practice. This paucity underscores the need to recognise and leverage on the potential of an in-between space of learning that resides between formal education and the profession (Kan, 2022; Zeichner, 2005). Hence, making explicit how pedagogies of transition are exemplified in creative pedagogies of arts and design

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represents an important attempt to forge connections between activities in the studio and real-world outcomes.

In the literature on signature pedagogies for the profession, there are various ways in which pedagogies of transition have been approached. Benson and Dresdow (2010) suggested critical incidents as a way to facilitate the bridge didactic study to the active discipline. To facilitate the transition of students into professional social work, Boitel and Fromm (2014) proposed field experience as a signature pedagogy. Bryant and Milstein (2007) observed that supervision, seminars and instructional rounds pedagogy build the capability of law students from novices to professionals. Barrows (1987, 1993) introduced a pedagogy of standardised patients as a teaching tool, which helps prepare future medical professionals transition from theoretical knowledge to practical application with real patients. As we work towards building a repository of signature pedagogies, it is important to note that transitions can have different meanings for different individuals (Ballam et al., 2017). However, not all pedagogies are transitional, and not all transitions are pedagogically relevant.

In the field of design, digital storytelling serves as a quintessential example of a pedagogy of transition, embodying the journey from the germination of a seed idea to the cultivation of a fully realised artistic product. This pedagogical approach encapsulates Shulman's notion to "link ideas, practices, and values under conditions of inherent uncertainty" (Shulman, 2005, p. 517). As students engage with the process of making stories, their creative ideas are developed through iterative phases of growth, nurtured by critical feedback, creative exploration and technical skill development. In the previous chapter, pedagogical strategies of using hooks, triggers, sub-plots, hooks and visual codes in multi-modal digital storytelling not only bridges the gap between theory and practice, but also cultivates a deep-rooted understanding of the professional environment, preparing students to teleport their ideas from an enclosed greenhouse of the studio to the professional meta-verse.

Through digital storytelling, design educators facilitate an in-between space of learning where students can experience the transition from being novices to becoming adept storytellers, capable of weaving their theoretical knowledge into the fabric of practical application, thereby transforming their seed ideas into fully realised artistic products that resonate with real-world audiences. This process is idiosyncratic to pedagogies of transition, which highlights connections that are "not linear but 'rhizomatic, zigzag and spiral'", and frames transitions "as a positive and negative at the same time" (Gale & Parker, 2014, p. 738). In this space in-between, "sub-plots" are developed to drive integrative knowledge and the transformative realisation of the students' creative visions.

Unravelling how students experience perpetually fragmented moments in and out of these transitions of being and becoming enable tutors to better respond and support student experiences that build a greater sense of belonging (Austen et al., 2020). As Peh has shown, the pedagogical approach of unfolding personal narratives "using multiple sub-plots, from multiple perspectives, using different voices of different characters, with different sidekicks, different story world, environment and visual symbols, and elements that hook the attention of the audience" enhances the "relatability of the issues or conflicts treated in the story". Writing their own

personal narratives help students to reconnect with their personal identity (Thomson, 2015), and increases the students' self-efficacy, engagement and motivation. Hence, the tutor's response and support to expand the in-between space of learning would help students to make sense of their evolving and multiple identities, navigate the complexities of their creative medium, understand their audience, and adapt their message to the evolving landscape of digital media.

As Peh observes, the professional challenge for students lies in the process of crafting micro-stories from the main story. Furthermore, students tend to face difficulties making connections between facts or principles, and how they construct narratives about themselves. This problem opens the opportunity for dialogic exchange in pedagogies of transition. As students reprised their past, present and future worlds through storytelling, it became imperative for the tutor to provide the right type of support to build the students' professional identities, personal development and even well-being. In this way, the pedagogical signature of the design educator transfigures from one who teaches to one who designs the space and draws connections between what students need to do and what they encounter in their daily lives.

Here, we outline three practical ways to advance signature pedagogies of transition: first, to create a prompt, such as a personal experience or encounter, which can serve as a catalyst for setting clear goals and message for the project. Second, to curate content in ways applicable to the students' professional real-world contexts. Such exercises bridge the gap between prior knowledge and new knowledge, enabling students to apply previously acquired skills, sharpen their perceptions to an-other world through exposure and apply new experiences to concepts and methods. And third, to design spaces for critical analysis. In Peh's chapter, active participation in design crits reinforces professional knowledge and knowing, while also driving story ideas. Through numerous discussions and iterative critiques to explore sub-plots or ideas, the process generates a cohesive story experience across multiple platforms, thus giving students ownership of their work as co-constructors and co-producers to experience "what it means to be part of the practice, not simply about how to do it, but what it means to be an artist or designer" (Shreeve et al., 2010, p. 132).

Pedagogies of transition is less about pedagogical innovation but more of pedagogical transformation. It is not about changing the ways we approach teaching, but bridging every individual learners' involvement to their professional interests. This also opens new pathways for an epistemic shift of dialogic exchange between student and tutor to advance knowledge and knowing, and developments in being and becoming. Teaching is fundamentally about connecting with learners, so that what is said and done is meaningful to students. Moving conversations to develop the students' understanding of the link between design theory and application, their societal and strategic awareness, and a range of discipline-specific and transferable skills would be an important (but presently 'hidden') concept that extends "fundamental ways in which future practitioners are educated for their new professions" (Shulman, 2005, p. 52).

References

- Austen, L., Pickering, N., & Judge, M. (2020). Student reflections on the pedagogy of transitions into higher education, through digital storytelling. *Journal of Further and Higher Education*, 45(3), 337–348.
- Ballam, N., Perry, B., & Garpelin, A. (2017). Pedagogies of educational transitions: European and Antipodean research. In *International perspectives on early childhood education and development* (Vol. 16). Springer.
- Barrows, H. S. (1987). *Simulated (standardized) patients and other human simulations: A comprehensive guide to their training and use in teaching and evaluation*. Health Sciences Consortium.
- Barrows, H. S. (1993). An overview of the uses of standardized patients for teaching and evaluating clinical skills. *Academic Medicine*, 68(6), 443–453.
- Benson, J., & Dresdow, S. (2010). Critical incidents as a signature pedagogy for developing professional thinking. *Society for Case Research*, 1–11.
- Boitel, C. R., & Fromm, L. R. (2014). Defining signature pedagogy in social work education: Learning theory and the learning contract. *Journal of Social Work Education*, 50, 608–622.
- Bryant, S., & Milstein, E. S. (2007). Rounds: A “signature pedagogy”—For clinical education? *Clinical Law Review*, 195–251.
- Gale, T., & Parker, S. (2014). Navigating change: A typology of student transition in higher education. *Studies in Higher Education*, 39(5), 734–753.
- Kan, R. Y. P. (2022). *In-between space of learning: Towards professionalism in the arts* [Ed.D. dissertation]. National Institute of Education, Nanyang Technological University, Singapore. <https://hdl.handle.net/10497/25070>
- Shreeve, A., Sims, E., & Trowler, P. (2010). ‘A kind of exchange’: Learning from art and design teaching. *Higher Education Research & Development*, 29(2), 125–138.
- Shulman, L. S. (1998). Theory, practice, and the education of professionals. *The Elementary School Journal*, 98(5), Special Issue: John Dewey: The Chicago Years, 511–526.
- Shulman, L. S. (2005). Pedagogies of uncertainty. *Liberal Education*, 91(2), 18–25.
- Thomson, D. I. C. (2015). “Teaching” formation of professional identity. *Regent University Law Review*, 27, 303–337.
- Zeichner, K. M. (2005). Becoming a teacher educator: A personal perspective. *Teaching and Teacher Education*, 21(2), 117–124.

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Chapter 10

Knowledge Graph System for Digitised Archival Collections: Learning from the Life, Work and Times of Past Masters



Christopher S. G. Khoo and Eleanor A. L. Tan

Abstract This chapter discusses an underutilised resource in arts educational institutions that have a significant history: their archival collections, including the personal archives of famous artists and musicians who taught at the institution, were trained there, or were otherwise associated with the institution. The kinds of knowledge, insights and narratives that can be derived from such archival collections are examined. The authors propose knowledge graph as a suitable knowledge organisation scheme for representing items in the personal archives and their inter-relationships as well as links to concepts and resources on the Web. Three approaches to developing a knowledge graph are illustrated using the personal archive of two pioneer musicians and composers in post-World War II Singapore as case studies: Zubir Said and Leong Yoon Pin. A digital archive system comprising a graph database management system for storing the knowledge graph, and a graph visualisation interface for presenting the knowledge graph was developed. The initial results of a user study of the system and interface are described. The authors suggest that it is important for arts professionals to understand the development of their art in the locale in which they are practising, and to consider how their artistic practice can draw from the artistic heritage of the community. They refer to this kind of learning as a pedagogy of artistic tradition and heritage.

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Introduction

A storied arts educational institution such as the Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore will have a substantial and richly diverse institutional archive that includes the personal archives of famous artists and musicians who taught at the institution, were trained there, or were otherwise associated with the institution. These personal archives may have been bequeathed to the institution or donated by their families after their passing. They are likely to include letters, journals/notes, sketches, manuscripts, audio and video recordings, photographs, etc., and are usually housed in the library or a separate institutional archive. These archival collections are useful resources for researching the life, work and times of the artists, and can be useful teaching resources as an understanding of local artistic heritage is an important foundation for an artist. It is fair to say, however, that they are under-utilised and seldom used in the professional training of artists and musicians. This may be because the materials are not placed on open shelves for easy public access, but stored in rooms with controlled environments and restricted access for protection and preservation.

To make archival collections readily accessible to students, researchers and the public, they need to be digitised and the digital items stored in a digital content management system, and made searchable and browsable via a digital archive portal or digital library system. However, current digital archive and library systems are item-centric and record-centric, with minimal support for learning and research: they have limited facilities to help users link and integrate related information, synthesise narratives, and analyse their content to derive insights of various kinds.

This paper proposes a new type of digital archive system based on knowledge graph technologies, including graph database management and graph visualisation interface. *Knowledge graph* is a knowledge organisation scheme that represents relationships between digital entities, concepts and ideas using a network structure of nodes and links (or edges). We illustrate three approaches to developing a knowledge graph, using the personal archives of two pioneer musicians and composers in post-World War II Singapore as case studies: Zubir Said and Leong Yoon Pin. We explore how these two collections can be digitally organised and presented in a Web interface to support learning and research. In the process, we examine what kinds of knowledge, insights and narratives can be derived from the content of NAFA's archival collections, and suggest the kinds of questions that can be answered by studying these two collections. The questions generally relate to the artistic characteristics of their works, as well as the social, economic, political and cultural environment in which they worked, and how these influenced their compositional choices—as while ideas are infinite, their realisation is finite in a live musical performance. In addition, we survey the other archive collections housed at NAFA and what else can be learnt from them.

While it is clear that these archival collections and a knowledge graph system can help art/music history researchers, and more generally historians researching Singapore's history and development, it is less clear how they can enrich art and design

professional education. We examine what additional analyses and technologies are needed for the archival collections to add an important dimension to the education of professional artists and musicians. We suggest that it is important for arts professionals, and musicians in particular, to understand the development of their art in the locale in which they are practising, and to consider how their artistic practice can draw from the artistic heritage of the community and perhaps be rooted in it. We term this a *pedagogy of artistic tradition and heritage*.

In the rest of the chapter, we first explain knowledge graph and knowledge graph technologies. We describe the two personal archives that are used as case studies, and suggest three approaches to developing a knowledge graph. We reflect on what kinds of learning and insights the knowledge graph may support, and present preliminary results of a user study to assess the extent that users can interact with and interpret a knowledge graph to derive new knowledge. We then relate our insights to the concept of signature pedagogy, and suggest how a pedagogy of artistic tradition and heritage adds to the framework of signature pedagogy.

Knowledge Graph and Graph Visualisation

We propose *knowledge graph* as a suitable knowledge organisation scheme for representing digitised items in personal archives, their inter-relationships, and their links to related concepts and knowledge structures, as well as to related resources on the Web. We also propose the use of a graph database management system for storing the knowledge graph, and a graph visualisation interface for presenting to users the portions of the knowledge graph retrieved as search results. This section provides a non-technical overview of knowledge graph and related technologies—to set the stage for explaining our approach to exploiting archival collections for user learning and research.

We characterise *knowledge graph* informally as a “social network” of entities, concepts and ideas (collectively referred to as *resources*), represented as a network of nodes and links (or edges). The nodes are each labelled with a unique identifier (ID) and a text label for user-friendly display, and assigned a type or class (i.e. concept). The links are directional, pointing from one node to another, and are represented as arrows. Links are each labelled with a relation type. In this way, the nodes and links are assigned “meaning” or semantics. Each node and link is also associated with a set of properties (i.e. attributes and their values). We can think of the properties of a node/link as being stored in the node/link.

In the literature, the term *knowledge graph* is used interchangeably with *ontology*, and is associated with the concepts of *semantic web* and *linked data* (Berners-Lee, 2009). However, *ontology* has more focus on logically correct and consistent representation and inferencing, and support for intelligent applications. Currently, ontologies are usually specified using formalisms (representation languages) that are World Wide Web Consortium recommendations—for example, the Resource Description Framework (RDF 1.1) and the Web Ontology Language (OWL 2).

We distinguish *knowledge graph* from *ontology*, and characterise knowledge graph as being less concerned with formal logic and having more focus on the network representation, relational structure, and supporting user browsing, learning and research. Instead of using the RDF/OWL language, we represent the knowledge graph in a graph database management system (specifically Neo4j database), that uses a more informal *labelled property graph* model (see Khoo et al., 2024 for a more detailed explanation).

We suggest three approaches to constructing a knowledge graph:

1. *The top-down approach* identifies the document genres of the archive items as well as the subject areas of their content. Then, existing ontologies for the document genre and subject area are identified, and terms/classes in these ontologies that are relevant to the archive items are imported into the knowledge graph to tag the archive items and represent their relations.
2. *The bottom-up approach* analyses the content of the archive items to select important terms/concepts as tags for the items, as well as construct categories to group items with similar content/concepts. Existing domain ontologies may be consulted to select terms to represent the selected concepts and categories. This will make it easier to link the knowledge graph with other knowledge graphs on the Web in the future.
3. *The narrative approach* starts with a particular topic or question in mind, constructs a narrative or story for the topic/question, and then creates a knowledge graph following the structure of the narrative.

We illustrate these three approaches later using the Zubir Said collection and the Leong Yoon Pin collection.

Whichever way the knowledge graph is constructed, it still has to be presented to the user on a Web interface or a mobile screen. An obvious way to present a knowledge graph is as a graph (network) visualisation. We developed a graph visualisation interface for the Zubir Said collection using the Cytoscape.js JavaScript library (Franz et al., 2016, 2023) as well as a text-oriented interface using React.js JavaScript library. Design issues for these interfaces are discussed in a later section, together with the initial results of a user study.

Personal Archive of Two Music Composers: Zubir Said and Leong Yoon Pin

As case studies, we make use of the personal archives of two pioneer music composers in Singapore who were active during the post-World War II era when Singapore strove for independence from Great Britain, and the issue of nation-building was large in the public discourse.

Zubir Said (1907–1987) was a film music composer for Malay films during the golden age of the film industry in Singapore (Zubir, 2012). He was a prolific songwriter who wrote more than 1500 songs, including film songs, popular songs and

patriotic songs (Sim, 2014). One of his patriotic songs, *Majulah Singapura* (translated *Onward Singapore*), was selected to be the Singapore national anthem. Born in Bukittinggi, Indonesia, he moved to Singapore in 1928 at age 21. In Singapore, he first worked as a violinist in a traditional Malay opera troupe (*Bangsawan*), becoming the troupe's leader. He was later recruited by His Master's Voice (HMV), a recording company, as a recording supervisor (c. 1935). His job included scouting for talented singers in Malaya and Indonesia, and thus he became a well-known figure in the music industry. After World War II, he worked as a freelance photographer for two years. In 1949, he obtained a job with film production company Shaw Brothers to compose songs for Malay films. He then moved to another film company, Cathay Keris, where he composed background music and songs for Malay films for 12 years, from 1953 until his retirement in 1965.

While the professional life of Zubir Said is well documented, it is his private letters to family, adoptive relations and friends that reveal his habit of being. It is through his correspondence that we appreciate the true measure of Zubir Said: his humility and simplicity, generosity of spirit and compassion. The road Zubir Said Drive, where the School of the Arts is located, is named in honour of him. The younger generation was always a significant part of his life, particularly from the 1960s when he took on the role of music educator and teacher after his retirement from Cathay Keris. Above all, Zubir Said was a staunch advocate for patriotic music writing. He wrote articles, delivered speeches and rallied his music colleagues to write music on this theme.

Zubir Said's personal archive was donated by his family to NAFA in 2018, three decades after his death in 1987. The authors of this study digitised a subset of the collection, which comprised mainly letters, photographic materials, speeches, personal documents, awards, memorabilia and hand-written music scores. These were analysed to identify conceptual relationships between them and their content, and represented in a knowledge graph. The items are linked to related resources at the National Archives of Singapore, National Library of Singapore, news sites (*Channel News Asia*, *The Straits Times*, etc.), and YouTube videos. A Web application (Khoo, 2021) was then developed using a Neo4j graph database management system to manage the knowledge graph, and a graph visualisation software (Cytoscape.js) to present on a Web browser. A user study was carried out to investigate whether users could identify relational facts and relational patterns from the graph visualisation, and synthesise a narrative from the graph presentation. We also compiled a list of questions and topics that may be answerable from the complete Zubir Said archive, to provide an indication of what can be learnt from this archive.

The second music composer that we examined is Leong Yoon Pin (1931–2011) (Tan, 2011). He was a teacher, conductor and composer, and was well-known for his choral and instrumental music which drew upon local themes and from Chinese literature, lending an Asian flavour to his oeuvre. Leong was a self-taught musician who undertook formal lessons only in his 20s. After graduating from the local Teachers' Training College, he taught music in primary schools. During this period, he conducted the Rediffusion Youth Choir and later in 1959 the Metro Philharmonic Choir, composing major choral works for these choirs. In the mid-1950s, he studied at the Guildhall School of Music and Drama, London, after which he taught at the

Teacher's Training College in Singapore as a music lecturer. He went to Paris to study composition with Nadia Boulanger from 1966 to 1967. Upon his return, Leong led the semi-professional Singapore National Orchestra in 1968, and was in the planning committee of the Singapore Symphony Orchestra in 1970. In 1975, he enrolled in a postgraduate music education programme at the University of Newcastle-upon-Tyne in the United Kingdom. His compositions include symphonies, tone poems, operas, a piano concerto and numerous choral works. His *Overture: Dayong Sampan* (1980), based on a Malay folk tune was his most well-known work. It was the first orchestral piece by a local composer to be performed by the Singapore Symphony Orchestra (SSO). In 2000, he was appointed the SSO's first composer-in-residence.

Leong's personal and professional correspondence, music sketches, printed scores, essays and memorabilia were donated to NAFA by his estate in 2012, shortly after his death. His estate made the decision to donate the manuscript scores to the Yong Siew Toh Conservatory, with digital copies of the scores deposited in NAFA's collection. A search in NAFA library's online catalogue retrieved 2742 items listed in Leong's name. Spanning over six decades, the Leong archive, including performance programmes and minutes of the planning committee for a national orchestra, is remarkable in providing a window to the music scene of Singapore from the 1950s to the first decade of 2000. Among other things, the repertoire of local choirs may be of interest to the cultural historian as it suggests the choirs' cultural and political affiliations after Singapore's independence from the British in the late 1950s. The repertoire of Chinese choirs, in particular Leong's short-lived Rediffusion Youth Choir, was perceived to be left-leaning, which may be the reason for their dissolution within a few years (Chia, 2014).

The trove of valuable documents necessitates a different approach to developing the knowledge graph and archival system interface, to focus more on narratives and commentaries/critiques of Leong's music. We are examining how other researchers have made use of the collection in their research, and how extant writings on Leong's life and works may be enriched by materials and content in the collection. Based on these analyses, we plan to develop a digital archive system and interface for the Leong Yoon Ping collection.

Development of the Knowledge Graph

Top-Down Development Using Existing Ontologies

As the Zubir Said and Leong Yoon Pin collections have a substantial number of hand-written manuscripts of music compositions and photographs, we adopted *The Music Ontology* (Pickering, n.d.) for modelling music-related concepts and the IPTC Photo Metadata Standard (Version 2019.1 Revision 1c, IPTC, 2019) for information relating to photographs. BIO (Biographical ontology) was adopted for biographical events (Davis & Galbraith, 2003) and the Simple Event Model was consulted to

model non-biographical events. CIDOC Conceptual Reference Model (CRM) (1999) was adopted for modelling heritage artifacts and concepts, and Functional Requirements for Bibliographic Records (IFLA, 1997) and Dublin Core Terms (2020) for creative works. The following general-purpose ontologies/term lists—Schema.org and DBpedia—were consulted for concepts not covered in the other ontologies.

The full representation of a musical work and related music scores, arrangements, performances, audio and video recordings, published CDs or DVDs, and AudioFile, VideoFile and ImageFiles were found to be too complex and detailed for users to understand and navigate, and so had to be simplified. Figure 10.1 shows a graph visualisation centred on the Musical Work *Majulah Singapura*, linked to different versions and arrangements (Scores), Performances (events) and Items (audio files, video files and image files). Figure 10.2 shows an exchange of letters between Zubir Said and Christopher Hooi, and related information.

This top-down approach of constructing a knowledge graph works well for well-known entity types, but doesn't work well for modelling the information content of the documents. For this, a bottom-up approach is needed, as described in the next section.

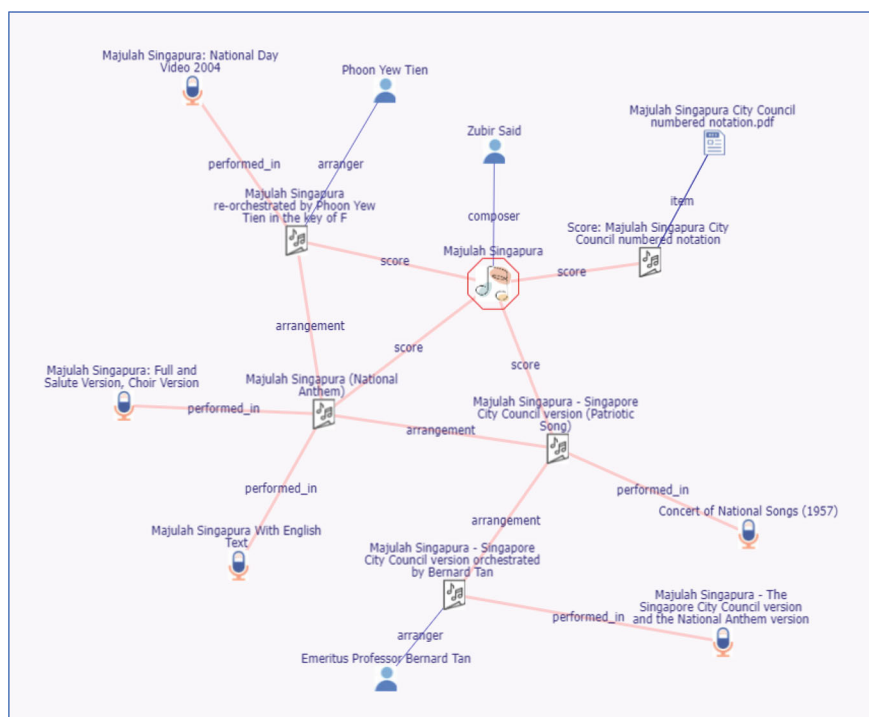


Fig. 10.1 Graph visualisation centred on Musical Work *Majulah Singapura*

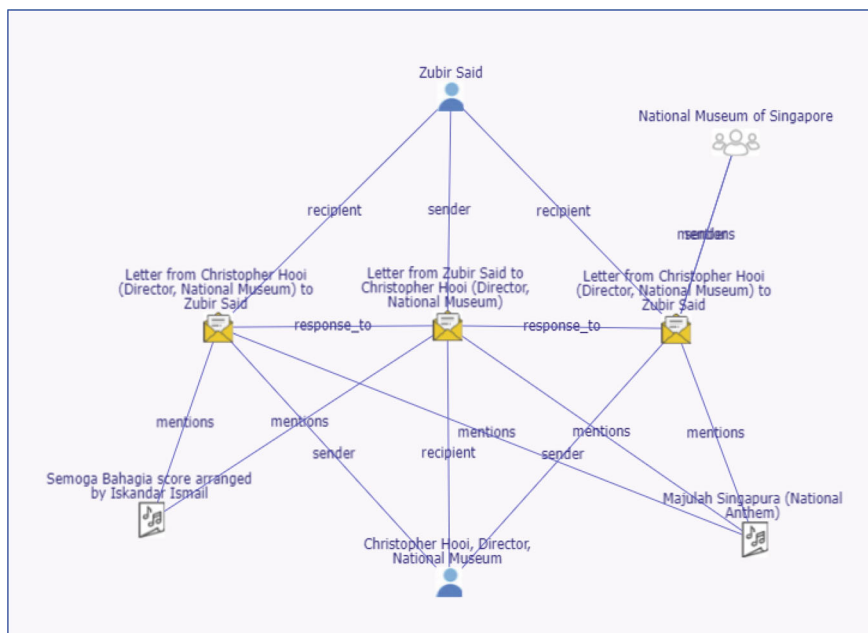


Fig. 10.2 Exchange of letters between Zubir Said and Christopher Hooi, and related information

Bottom-Up Development Based on Content of Archive Items

The bottom-up approach of knowledge graph development involves reading the text of the documents carefully, and identifying concepts/terms relating to the music as well as to industry, social, political and cultural issues of the time—so that historians can locate useful information using those terms. Thus, concepts and categories are selected with the broad intention to help researchers gain insights into the artist's art as well as the milieu that contextualises the artist's works. Figure 10.3 shows some topics that were created bottom-up, and the items tagged with those topics.

The top-down and bottom-up approaches to constructing the knowledge graph do not have particular researchers or research questions in mind. The purpose is to help any and every user (student, researcher or casual public visitor) gain some interesting or useful information based on the content of the archive. The selection of concepts and categories are guided by the broad assumption that the archival collection can shed light on artistic and musical characteristics of the compositions, and also offer a historical perspective of the changing social, economic, political and cultural environment of the time.

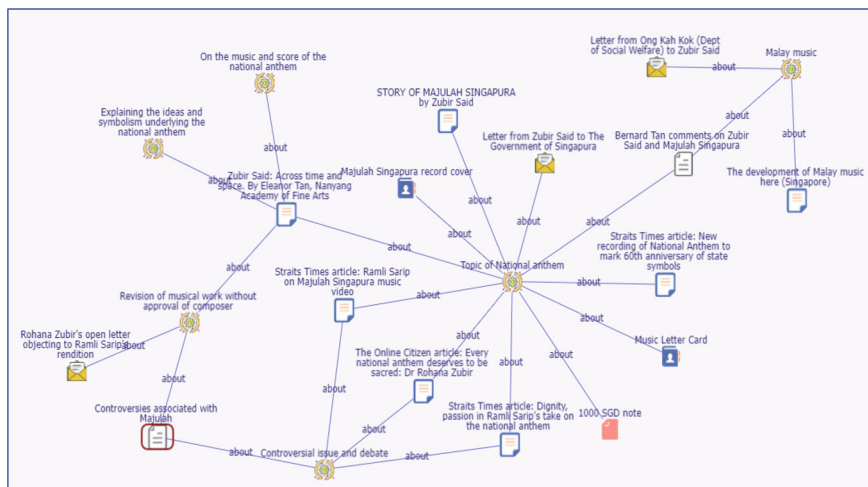


Fig. 10.3 Graph visualisation of some topics and related resources

Narrative-Based Knowledge Graph

A knowledge graph constructed using the top-down and bottom-up approaches may not help a user to write a coherent narrative on a topic if the concepts/terms used to tag the archival entities do not closely match the user's topic. Even if they do match, the broad concept tags may not help the user to link together a logical sequence of information, arguments and ideas to synthesise a narrative.

We envision two approaches to constructing a narrative-based knowledge graph. The first is to construct a storyboard that tells a story, and as the user is drawn into the story, resources from the collection are adduced to support (i.e. offer evidence), flesh out or illustrate the story. A second, less direct approach is to avoid providing an explicit storyline but only structure the resources (using a knowledge graph) to nudge users towards constructing the storyline on their own.

Two issues then arise: how to construct a narrative, and how the interface should be designed to guide the user to synthesise the narrative. We address the first issue of constructing possible narratives by searching for papers and articles that have been written on the life, work and milieu of the two composers. The compelling essay by Tan (2019) on the missing eight bars in *The Hunt for Majulah Singapura* is a fitting essay for us to create a storyboard which unfolds the narrative of the hunt for the missing bars.

The second issue of constructing an appropriate interface for a narrative is being explored by the authors. A graph visualisation is good for presenting a network of entities and concepts for browsing related items, and for examining relationship patterns. Though it can present a sequence of entities on a timeline, there are probably more effective ways of presenting sequential information. If the narrative has been storyboarded into a sequence of panels or frames, then these panels can be

implemented as panels or cards on screen that can be displayed in sequence or as stacked-up cards. A combination of small graph visualisations and cards that are implemented as stacked or tabbed panels, or as tool tips or pop-up windows that are draggable can all be used to present or suggest a narrative.

A text-based presentation was implemented for the Zubir Said interface using React.js (Walke, 2013). React.js JavaScript library developed by Facebook is now commonly used for developing interactive Web interfaces. Our conceptual design for the text-based interface is to select one focal entity (node) and display all the direct relations and related entities. The user can then select one of the related nodes (entities) to become a new focal node, to expand with related links and entities. In this way, the user can traverse or browse the network. In other words, at any particular focal node, the user is shown a list of all the possible next steps (links) to take.

The visual design of the interface has to highlight the focal entity and present all direct relations and related entities. Our visual design concept is a card + boxes concept. Each card displays the focal node/entity and all its direct relations. Figure 10.4 shows how letters in the collection are represented—one letter entity on each card. The focal entity is represented by an entity box (purple box in Fig. 10.4). As the focal entity may have different types of relations to other entities, each relationship type is represented in a relation box (orange box), which contains sub-boxes listing the entities that are linked by that relation. Another way of looking at it is to visualise a relation box as a stack of dimsum baskets—each basket representing one entity. Each entity box can be double-clicked to generate a new pop-up card containing that entity as the focal entity together with the stacks of relationship types. A stack of cards can be generated, with each card displayed on top of the previous card. Figure 10.5 shows a stack of pop-up cards. The pop-up cards can be dragged around and re-sized, and moved up and down the stack.

In the next section, we consider what kinds of questions can be answered from the two personal archives and the narratives that can be constructed to answer the questions.

Questions That Can Be Answered by the Archival Collections

There are two kinds of questions that can be answered by studying the archival materials:

1. The social, economic, political and cultural milieu of the artist that can be studied for its historical insights relating to a geographic region, or as context of the artist's creations.
2. The artistry of the artist: the characteristics of the artist's art and their influences.

Archives are the primary source for answering the first kind of question—questions relating to the historical development of a city and its cultural institutions. The second kind of question can also be answered by an artist's personal archive,

Zubir Said Knowledge Graph

Text-based display Try the alternative graph (network) visualization

Tips Click on a button on the left panel to select a topic to display related entity-relations on cards below. Double-click on an entity box below to expand with related entities in a popup card. The cards and boxes below can be resized by dragging the bottom left corner. Popup cards are **draggable**. Pin (!) a popup card before resizing. Click on ↑ to bring popup card forward, ↓ backwards.

The interface displays a grid of cards organized into three rows. Each row contains three cards. The first card in each row is a 'letter' node, and the subsequent two cards are related entities. The cards are color-coded: purple for letters, orange for 'about' topics, and light blue for 'recipient' or 'sender' entities. Each card contains a title, a label, a type, a comment, and a date. The cards are interactive, with buttons for expanding, pinning, and resizing.

Card ID	Label	Type	Comment	Date
ID: 15 August 1957	Rejection letter - national anthem of Malaya	Letter	Letter from Dept. of Information, Malaya, declining Zubir Said's submission for national anthem of Federation of Malaya	1957-8-15
ID: National anthem Malaya-Topic	Topic: National anthem for Federation of Malaya	Topic	collection: ZubirSaid	
ID: Zubir Said	Zubir Said	SingPioneer	birthProvince: Minangkabau gender: Male race: Malay collection: ZubirSaid birthdate: 1907-7-22 yearArrivedInSingapore: 1928 birthTown: Bukittinggi	
ID: 1 July 1957	Letter accepting invitation - national anthem of Malaya	Letter	Letter to Dept. of Information, Malaya, accepting invitation to submit a song for consideration as national anthem of Federation of Malaya	1957-7-1
ID: 15 July 1958 Letter of acceptance to compose MS	Letter of acceptance to compose Majulah Singapura	Letter	Letter of acceptance to compose Majulah Singapura for Grand Finale of the Opening Performance of the Victoria Memorial Hall	1958-7-15
ID: National anthem origin-Topic	Origin of the national anthem	Topic	collection: ZubirSaid	
ID: Zubir Said	Zubir Said	SingPioneer	birthProvince: Minangkabau gender: Male race: Malay collection: ZubirSaid birthdate: 1907-7-22 yearArrivedInSingapore: 1928 birthTown: Bukittinggi	
ID: 1 July 1957	Letter accepting invitation - national anthem of Malaya	Letter	Letter to Dept. of Information, Malaya, accepting invitation to submit a song for	
ID: 27 June 1957 Invitation to compose anthem for Federation	Invitation to submit - national anthem of Malaya	Letter	comment: Invitation to submit a	
ID: Zubir Said	Zubir Said	SingPioneer	birthProvince: Minangkabau gender: Male race: Malay	

Fig. 10.4 Text-based interface, showing a *letter* node on each card, together with relations linked to the letter

as preliminary sketches of a composition will reveal the idea and development of a musical composition or art piece. Contemporaneous journals and letters can reveal the ideas and motivations behind the piece of musical work. These questions will broach the broader contextual perspective, leading to an informed performance of the work. In this section, we suggest some questions that can be answered by the two composers' archival collections based on our knowledge of the materials available, and also on research articles that have been written on their life and work.

For the Zubir Said collection, the subset that was digitised and made available via our knowledge graph system is biased towards materials related to the Singapore national anthem. We constructed the following narrative topics as user tasks for our user study of whether study participants can outline a narrative on a specified topic:

- Describe the different versions of *Majulah Singapura*, and the different arrangements (for different instrumental groups) over the years.
- Describe the origin of *Majulah Singapura*: how it came to be composed, selected as Singapore national anthem, and revised into its final form.
- There have been some controversies and disagreements related to *Majulah Singapura* over the years. Describe these controversies and disagreements, and related events and issues that transpired.

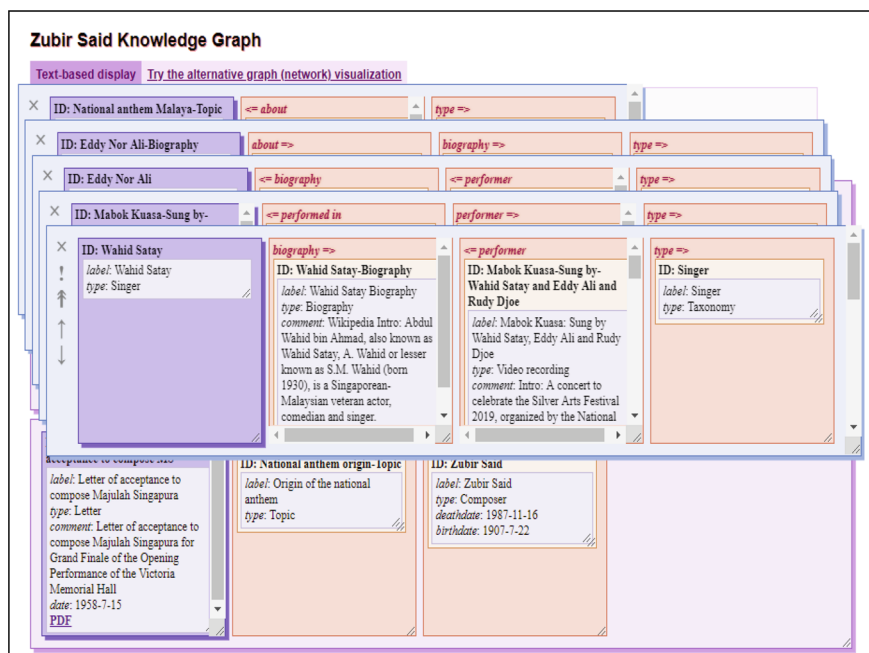


Fig. 10.5 Text-based interface with a set of pop-up cards

Of more interest to professional musicians and aspiring composers is how the social and political milieu affects and motivates the composer. Of particular interest is Zubir Said's 1975 speech to students on what he considers as the characteristics of *Majulah Singapura* (Tan, 2020; Zubir, 2012). Close reading of this speech reveals the organisation of his thinking and how his progressive ideals on citizenship are expressed in the music and lyrics of the anthem. Zubir Said characterised *Majulah Singapura* as an anthem for the people and the state of Singapore, and not for a king or queen, sultan or president. This reflects Zubir Said's habit of heart and the values of equality, unity, progress and prosperity that he cherished as appropriate for the newly independent Singapore (Zubir, 2012).

What then is the voice of Zubir Said as musician and composer of the national anthem? His inspiration must come from the fragile political and social context of the time, particularly from 1957 (before *Majulah Singapura* was written) when he was active as a composer of patriotic songs celebrating the outcome of the second Merdeka (translated *Independence*) Talks (Embong & Tahir, 2012), with the country gaining the status of a self-governing state (Zubir, 2012). Zubir Said was passionate in his belief that the artist had a responsibility to engage in the political issues of the day, and in his case through the composition of national songs. His 1957 manifesto *Declaration of Calendar of National Songs* exhorts the citizens to stay united. To this end, he contributed a series of at least eight songs to mark each month of the year until August 31, the day of Singapore Independence (Zubir, 2012, pp. 108–109).

While the finished compositions can be detached from their socio-political context, understanding the stimuli and influences upon Zubir Said will help a Singaporean interpret the songs with a deeper awareness of the conditions that gave rise to his particular view of the Singapore identity.

Other themes that can be explored in the Zubir Said collection (including materials not yet digitised) include how the immigrant experience influenced Zubir Said's music.¹ Is there a common theme of exploration in the new land, or of continuity with the past in the works of Zubir Said and other immigrant artists and composers? What are the common and differentiating elements in their works? When Zubir Said arrived in Singapore harbour in 1928 onboard a boat, he could not immediately land as it was still deep in the night. But he could see the twinkling lights on the shores and was so excited he wanted to swim ashore immediately. This city of lights mesmerised him as he came from a small town in Bukittinggi, West Sumatra.

As an island nation, the sea and river are important sources of sustenance and artistic inspiration, and a dominant part of Singapore's landscape, soundscape and even cityscape as she developed into a bustling metropolis. It has stirred the imagination of many, and is a recurring motif in the works of artists. *Seascape* (1966), a woodblock print, was the collective effort of six artists, produced for Singapore's first exhibition of woodblock prints in 1966.² Leong Yoon Pin's *Overture: Dayong Sampan* (1980) and Symphonic poem *Temasekian* (1990), Dick Lee's *Home* (1998), Chua Mia Tee's *Singapore River* (1983), Georgette Chen's *Singapore Waterfront* (1958), Lim Cheng Hoe's *Singapore River* (1962), and Edwin Thumboo's poem *Singapore River* (1962), composed in response to Lim's 1962 watercolour painting, are just some examples. In his poem, Thumboo reflects on the enduring life of the river, how it gives and takes, watches and waits. For Thumboo, the river is a manifestation of particular concepts of time and destiny, empire and nationhood, modernity and a government's vision for the future (National Gallery Singapore, 2023).

As for Leong Yoon Pin, the topography of the island gave inspiration to his Symphonic poem *Temasekian*, Singapore's fourteenth-century name, which means *Sea Town* in the Malay language (Early History of Singapore, 2024). According to Leong, he was inspired "by memories of junk boats sailing in the high seas in the deep of the night, the yearning for sighting land after months of journey, and sweet scent of the tropical forest". Such multisensory experience underscores the connectedness between sight, scent and sound for the composer, and helps the listener to relive the process of the work's creation.³

Leong's manuscripts further disclose how he integrated different cultural elements into the fabric of his compositions. Indeed, Leong admitted to Israeli conductor Ronly-Riklis in a 1982 typewritten letter that "I feel that the Malay element is

¹ For example, Zubir Said drew upon the rhythms of Indonesian songs for patriotic songs or film songs, and not Malay songs which were limited in style.

² The artists include Choo Keng Kwang, Lim Yew Kuan, Foo Chee San, Lim Mu Hue, See Cheen Tee, and Tan Tee Chie.

³ NAFA library 0127952. A slightly different published version exists. ISMN: 979-0-9016509-0-9. NAFA library 0128465. Leong was born in Singapore and thus this perilous journey as he described is part of the collective stories of our immigrant community who came via the sea.

already part of my musical style, whether I like it or not, it's bound to crop up here and there in the score".⁴ What constitutes "Malayness" in a composition? Is it a particular rhythmic motive, form or musical turn of phrase? Is Leong's "Malayness" an acquired musical feature or one imbibed into his musical consciousness from childhood, serving as a foil to the learned western music education of his youth?

More revealing is Leong's handwritten manuscript of his systematic incorporation of elements of multi-culturalism in *Temasekian*:

1. Dreams of multi-culturalism
 - a. Streets of Chinese Lion Dance intermingle with
 - b. Indian Temple (Ceylon Rd) oboe/cor anglais blusterous
 - c. Malay Ronggeng—flowing long melodies (on the high string. Violin)
2. The flamboyance of youth in Orchard Road
3. The negative qualities like greed, inconsideration.
4. The law-abiding ... grew out of fear for "fines"—a "burlesque".⁵

For Leong and his European contemporaries, irony in music has been interpreted by musicologists as a subtle way of expressing political sentiment, if not discontent. This understanding will help the conductor to infuse the music with the appropriate sentiment, whether through phrasing, articulatory and dynamic contrasts, or tempo.

The typescript *Music Compositions of Leong Yoon Pin over the past 50 years* is yet another important document in the archive. This list (from 2010) reveals his penchant for the choral idiom and the inspiration he drew from poetry from around the world.⁶ While many of Leong's choral works bear happy and aspirational titles, the discordant title of *Nightmare* (1989) piqued our curiosity. A photocopy of the poem, presumably taken from the published poems of Angeline Yap (b. 1959), exists in the archives (Angeline Yap, n.d.). Leong's faint scribbles of dynamics and expressive markings against the text reveal how he selected musical devices, a habit of hand, to underscore the darkness of Yap's poem.⁷ Incidentally, researchers may wish to investigate the inspiration behind Yap's (1977) and Leong's (1989) *Nightmare*, and how their sentiments represent the collective voices of artists in the socio-political context of their times.

Yet another item of interest in this document can be found on the last page, listing the performance year of such orchestral works as Leong's *Dance Suite*, *Jubilation*, *Episodes in Journey to the West*, and *Overture: Dayong Sampan*, amongst others. Researchers may be compelled to explore the different interpretations of the *Overture*, commissioned by the Singapore Symphony Orchestra (SSO) for a performance in 1980. According to Leong's record, it was performed on at least eight occasions locally: by two foreign conductors, Israeli Ronly-Riklis (SSO 1980, 1987) and

⁴ NAFA library 0126903.

⁵ NAFA library 0127951.

⁶ NAFA library 0127570.

⁷ NAFA library 0128752.

German Volker Hartung (NAFA 2009), and four local conductors Lim Yau (1984), Choo Hoey (1989), Lan Shui (2009), and Lim Soon Lee (2010).⁸

To prompt further reflection, one may ask: Has the meaning of *Dayong Sampan* (rowing a wooden boat) lost its significance with the ubiquity of air travel? Would this lack of awareness of the perilous boat journey from China to Singapore, particularly during the monsoon season, result in a different interpretation of the folk song Dayong Sampan? Would a Singaporean interpret the theme more intuitively, and hence more convincingly than a foreign conductor? In an interview for the National Archives, Leong revealed that Ronly-Riklis “brought out a lot of beautiful things” in his interpretation (Chou, 1994). Decades later, Leong also voiced his approval of Hartung’s interpretation when he attended the NAFA school orchestra performance at the Lee Foundation Theatre (Nafamusic, 2009). What pleased Leong in these performances? How can our generation benefit from this insight—to weigh the possible against the probable—and to make performance a living tradition without being mired in history?

Without doubt, Leong’s development as a conductor and composer was forged in the multi-cultural and multi-racial environment that he grew up in, and the desire for peaceful co-existence amongst its people. To this end, he composed works assimilating the elements of the cultures of this land. In his choral work *Sunset* written for the Singapore Youth Festival in 2005, Leong reveals that the inspiration behind the work is the musical heritage of Singapore’s local cultures of Malay, Indian, and Chinese. The cultural symbiosis of the Malay dance genre *joget*, Indian plucked lute and drums, and Chinese pipa musical motive set to tri-lingual text reveals a systematic way in which he crafts musical ideas.⁹ Leong’s paper *The Function of Music in Multi-Cultural Societies—Conflicts, Anxieties, and More*¹⁰ reveals habits of mind, ear and hand, and how the musical influences and motivations arising from the diverse cultures and soundscape of Singapore forged his signature style. *Street Calls*, *Dragon Dance*, *We are Singaporeans*, *Building a Nation*, and *Chinatown Suite* are just some of the more popular choral works which elucidate Leong’s compositional ideals on the function of music in multi-cultural societies.¹¹

Not many are aware of the extent of Leong’s involvement and responsibilities in the Singapore National Orchestra Planning Committee. Leong’s meticulous record keeping is priceless for researchers who wish to explore the committee’s plans from the late 1960s to early 70s, leading to the debut of the Singapore Symphony Orchestra in 1979. Various named the Singapore National Orchestra (SNO), Singapore Philharmonic Orchestra (SPO) and the Singapore Symphony Orchestra (SSO), research scholars will be keen to explore the details presented in a paper relating to the

⁸ “Music Compositions of Leong Yoon Pin over the past 50 years”. Typescript. NAFA 0127570. For NAFA’s School of Music 2009 performance, see Nafamusic (2009).

⁹ NAFA library 0128760.

¹⁰ NAFA library 0128003.

¹¹ Also in the archive are two undated typescripts with handwritten annotations by Leong: “How Music Functions in a Multicultural Society—with special reference to the situation in Singapore”. NAFA library 0127531. “The Problems of Music in a Multicultural Society such as Experienced in Singapore”. NAFA library 0127530.

formation of the SSO, including the composition of orchestra members, strategy for recruitment, rehearsal and concert venues, administration and organisation.¹²

At the launch of Dr Rohana Zubir's book on her father in 2012, a film retrospective dedicated to Zubir Said was held at the National Museum of Singapore (NMS) over the course of eleven days. The National Museum also published the programme booklet *Majulah! The Film Music of Zubir Said* to honour the composer. Joe Peters' essay *Zubir Said and his Music for Film* is significant for its revelation that Zubir Said's insistence in using the *cipta* notation,¹³ a numerical system of notation, was a way to preserve his cultural roots and tradition because *cipta* "held the code to the soundscape of Malay traditional music" (Peters, 2012), a habit of ear that he had absorbed as a child in West Sumatra. Also included in this booklet are two significant essays by Zubir Said: *The Development of Malay Music* and *Music in the Age of Merdeka* (Independence), both of which reveal his intellectual, patriotic and idealistic turn of mind.

Other Archival Collections at the Nanyang Academy of Fine Arts

In 2004, when NAFA moved into its new campus on Bencoolen Street (Singapore), a dedicated room measuring 35 m² on the upper floor of the library was allocated to house its collection of Southeast Asian materials, later named the Tanoto Foundation Centre for Southeast Asian Arts (TFCSEA). It houses thousands of art paraphernalia ranging from brochures, posters, photographs, art society publications, exhibition catalogues, etc. collected from the early years of NAFA's existence to the present.

According to former head librarian Carol Sim, since the Academy's inception in 1938 it has always been the library's ambition to collect "information resources pertaining to the arts of the region" (Sim, 2011). Towards this goal, the Academy accepted materials donated by staff, students, alumni, and visiting artists. In the initial years, most of the collected materials were in Chinese, but with the changing language landscape, the collection expanded to include more English-based and bilingual materials (Lau, 2009; Sim, 2011). The TFCSEA collection contains more than 10,000 brochures of art societies, publications and magazines on the Singapore art scene from the 1920s.

These materials, organised in file boxes, are separated into different categories. The largest category, of roughly 200 grey boxes, have such tags as the Equator Art

¹² NAFA library, without catalogue number. "Final Draft of the Paper Relating to the Formation of the Singapore Symphony Orchestra". Leong's copy of this 4-page typescript contains his annotations. It is written by Tan Siew Loon from the Broadcasting Department and presented to Dr Goh Poh Seng, Chairman of the National Theatre Trust, and Members of the Planning Committee. Minutes of a subsequent 7th meeting on 12 August 1970 confirmed the name Singapore Symphony Orchestra. However, a later revision dated 18 August reverted to Singapore Philharmonic Orchestra.

¹³ For the manuscript of the version of *Majulah Singapura* in *cipta* or *solmisasi* number notation, see Programme book, p. 105.

Society, Federation of Art Societies, Modern Art Society Singapore (1963–2011), Singapore Art Society (1949–1999), and Society of Chinese Artists (1935–2016), amongst others. Within each box are publications of the respective art organisation, exhibition catalogues and festival brochures. The artists represented in the aforementioned society publications are inherently Asian, sharing a common technique and aesthetic, and possessing a particular style and sensibility within a tradition of painting. Similarly, the aesthetic influence of European art was an important force, particularly as this collection stretches back to the 1930s, an epoch when modernist ideas in European art were fermenting.

An art historian may ask: what are the elements in an art work that represent the particular time and history that the artists lived in? What were their concerns and how did they develop an artistic language that is distinctive of their time and place? A multi-layered *knowledge graph* connecting different kinds of information from multiple types of materials and genres can help researchers tease out different strands of possible narratives to represent the evolving identity of the artists before and after Singapore's independence. Or they may explore how artists reconcile the romantic nostalgia of pastoral scenes (motherland) with the fractured modern cityscapes, to create works that represent their place in time.¹⁴ They may also trace continuities or disruptions in artistic practices, allowing an opportunity for interpretive syntheses across time and space.

User Study of the Knowledge Graph Visualisation Interface

We have proposed *knowledge graph* as a means to represent and organise archival materials and their relationships, as well as a graph visualisation interface to support user browsing, learning and research. We carried out a small user study to find out to what extent users can browse and learn from the graph visualisation interface after a 15-min training session. The user sessions were carried out online via the Zoom Meetings video conference service. The Zoom screen recordings of the user sessions were analysed to uncover insights on how the users accomplished the assigned tasks using the interface, and issues that helped or hindered the task accomplishment. The user study was divided into two parts: (1) To find out whether novice users can read a graph visualisation to identify desired relational information; (2) whether novice users can synthesise a narrative using the graph visualisation.

We briefly describe the structure of the interface and interaction functions available, as these affect the user interaction. Figure 10.6 shows the parts of the Web interface:

1. A search menu panel on the left, listing pre-defined queries and a keyword search box;
2. A graph visualisation canvas, to display the graph visualisation;

¹⁴ See works of Cheong Soo Pieng (1917–1983) and Hong Sek Chern (1967), both of whom were teachers in NAFA.

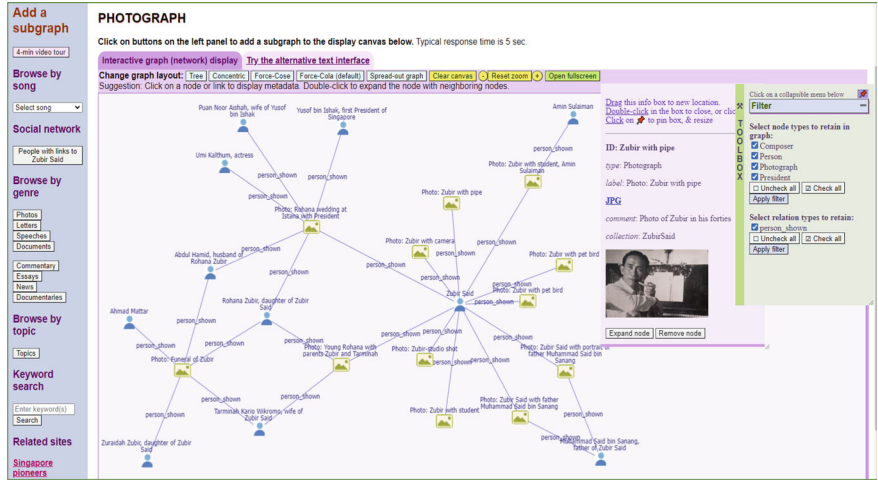


Fig. 10.6 Web interface showing search menu panel (left), graph visualisation canvas (centre), pop-up Info Box (draggable), and filter menu panel (sliding from the right)

3. A pop-up text display panel called Info Box, to display properties stored in a node or link when the node/linked is clicked on (i.e. selected);
4. A filter menu, to specify node types and link types to retain or remove.

The user interacts with the interface in the following ways:

1. Clicking on a button on the left search menu panel submits a query to the graph database to retrieve a set of nodes and links to display on the graph visualisation canvas.
2. Interacting with the graph visualisation in various ways:
 - A single-click on a node or link displays its properties in the pop-up Info Box.
 - A right-click or double-click on a node retrieves neighbour nodes (i.e. related resources) from the graph database.
 - Pulling or dragging on a node repositions the node or adjusts the graph layout.
3. Clicking on a layout button on the menu bar of the graph visualisation canvas applies a different graph layout algorithm.
4. Clicking on checkboxes on the right filter panel selects node types or link types to retain or remove.

Preliminary results of the user study have been presented at the A-LIEP 2023 conference (Khoo et al., 2023). We offer a summary of the results here. Twenty participants were asked to perform six tasks, each targeting a different kind of relational pattern. The six tasks are listed in Table 10.1. For Task 1 (Find two songs that Zubir Said wrote for movies), the user can identify the required information in a few ways:

Table 10.1 Six relation finding tasks used in Part 1 of the user study

Task 1. Find two songs that Zubir Said wrote for <i>movies</i> . What are the titles of the two songs and the movies in which they were sung? [Tip: On the left panel, click on <i>Browse by song</i> to select a song, and explore the network display]
Task 2. Find two “City Council” versions of <i>Majulah Singapura</i> . Display the music scores (PDF files) in the Web browser. Compare the two versions of the score. How are the scores different? [Tip: On the left panel, click on <i>Browse by song</i> and select <i>Majulah Singapura</i>]
Task 3. What is Zubir Said’s wife’s name? [Tip: Click on the button <i>People with links to Zubir Said</i>]
Task 4. Find at least one person (other than Zubir Said) who appears in at least three of the photos [Tip: Click on the button <i>Photos</i>]
Task 5. Find two persons who appear <i>together</i> (i.e., co-occur) in two photos (suggesting that they know each other well)
Task 6. Find out whether Zubir Said composed the national anthem of <u>Malaysia</u> [Tip: Click on the button <i>Letters</i>]

1. By tracing a path (sequence of links) in the graph from a *Musical Work* node to a *film* node. For example, with the graph in Fig. 10.7, the user can trace a path from the node *Mabok Kuasa* (translated *Drunk on Power*) to the film node *Chelorong Cheloreng*.
2. Recognising the desired information in the text label of a node. For example, the text label *Mabok Kuasa: Sung in film Chelorong Cheloreng* (1962) for a Performance node (see Fig. 10.7) provides the desired information.
3. Recognising the desired information in the properties of a film node, displayed in the pop-up Info Box when the node is clicked on (also illustrated in Fig. 10.7).
4. Some combination of the above—for example, tracing the path from a Musical Work node to a film node, and then confirming by clicking on the node to read the node properties.

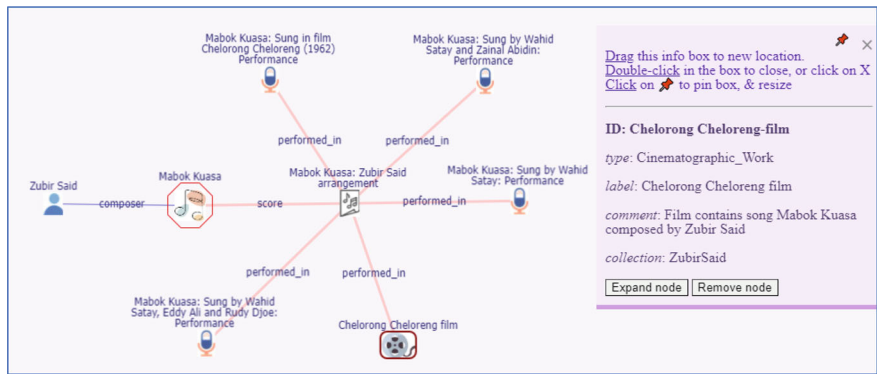


Fig. 10.7 Knowledge graph centred on Musical Work *Mabok Kuasa* (translated *Drunk on Power*), sung in Malay film *Chelorong Cheloreng*

Out of 18 users who displayed subgraphs centred on individual songs, 12 (two-thirds) obtained the answer solely from the graph without clicking on the node to read the metadata. Another 5 users clicked on the node to check information stored as node properties. This indicates that most users were able to interpret the semantics of the graph display. We also noted that users were generally comfortable in using the filter menu to remove some nodes or links—to simplify the graph for easier scanning.

Task 2 (Find two *City Council* versions of *Majulah Singapura*) requires the user to find two particular scores or arrangements of *Majulah Singapura*. The City Council versions were the earliest versions of the song before it was shortened to become the Singapore national anthem. Users are expected to scan the graph to locate the term *City Council* in the node labels (see Fig. 10.1). Four of the participants did not manage to spot the *City Council* nodes in the graph visualisation. Twelve participants used the filter menu to good effect—to reduce the graph size so that the nodes with *City Council* in the text label could be spotted more easily.

For Task 3 (What is Zubir Said's wife's name?), the user is expected to look for a *wife* link. The graph visualisation has a *spouse* link, as well as a node with text label *Tarminah Kario Wikromo, wife of Zubir Said*. Most of the users used the filter menu to reduce the graph size. Users spent quite a lot of time and expended considerable effort trying different filter options to reduce the graph size for easier scanning. Nine participants noticed the spouse link checkbox in the filter menu, and used it to highlight the spouse link in the graph. Two other participants spotted the spouse link in the graph without applying a filter. This indicates that about half the participants were able to use labelled links to locate relational information. The other half of the participants found the answer by noticing the word *wife* in the node label *Tarminah Kario Wikromo, wife of Zubir Said*.

Task 4 (Find at least one person who appears in at least three of the photographs) and Task 5 (Find two persons who appear together in two photographs) are related, focussing on identifying relationship structures. In Fig. 10.8, the only Person node with links to three Photograph nodes is Rohana Zubir (node circled in red). On the other hand, Fig. 10.8 shows three pairs of Person nodes who co-occur in two photographs. For example, at the left end of the graph, Muhammad Said and Zubir Said formed a square structure with two Photograph nodes—indicating they shared two photographs. Twelve participants were able to locate an answer by examining the graph structure, indicating that they could make semantic sense of the graph structure. An alternative approach to finding an answer is to examine the properties of individual Photograph nodes for the names of persons in the photographs. Six users followed this approach, reflecting the traditional record-centric approach of reading individual records for relevant information rather than interpreting the link structure or pattern.

For Task 6 (Find out whether Zubir Said composed the national anthem of Malaysia), the relevant information can be found in a sequence of letters between Zubir Said and a Malayan government office, tagged with the Topic *National anthem for the Federation of Malaya*. The last letter is labelled *Rejection letter—national anthem of Malaya*, which indicates the negative answer. Following the hint in the task description to click on the *Letters* query button will retrieve 78 nodes (see Fig. 10.9).

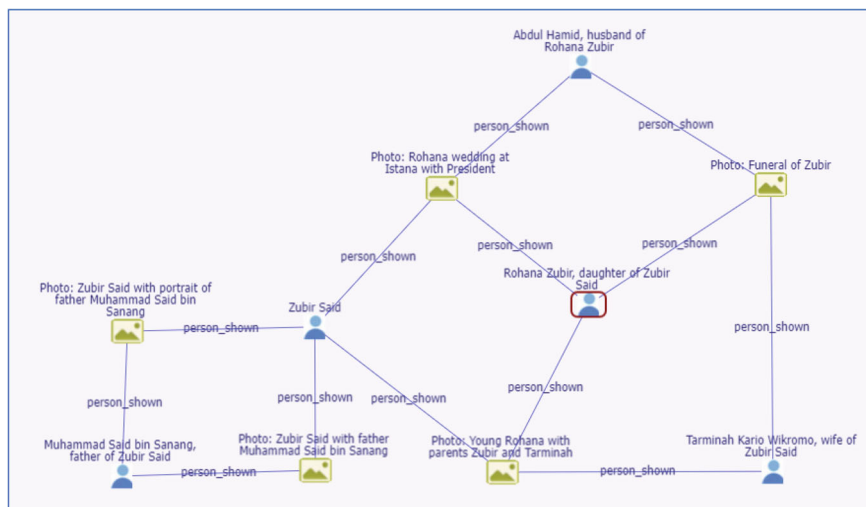


Fig. 10.8 A “bimodal” graph of photographs and persons portrayed in them

A graph size of over 50 nodes is too big to scan the node labels for the keywords *national anthem* and *Malaysia*.¹⁵ Indeed, 15 participants reduced the graph size by applying a filter. Five participants didn’t follow the hint to start with the *Letters* query, indicating they couldn’t understand why the desired information would be found in a letter. Of these 5 participants, 3 started with the *Topics* query. This can lead to the correct answer, as there is a Topic for *National Anthem for Federation of Malaya*.

In summary, analysis of the Zoom screen recordings of 20 user sessions found that the majority of users were able to interpret the knowledge graph visualisation to find particular types of relational information after a 15-minute guided tour. However, as the semantics of relations are reflected in the link labels and often also in the node labels, it was not always clear whether the user found the relational information based on the link structure or on the node label. It may be both. We expect that as users become more familiar with graph visualisations and interacting with the visualisations, they will be more effective in retrieving, extracting and interpreting relational information.

In the second part of the user study (which is ongoing), participants were asked to outline an essay in bullet point form on one of three topics: (1) The different versions of *Majulah Singapura*, (2) The origin of *Majulah Singapura*, (3) Controversies and disagreements related to *Majulah Singapura* over the years. From the ten subjects who participated in this part of the study to date, we learnt that users were able to outline a narrative for the three topics used, but clearly more help and interface support is needed to help users explore possible narrative threads. In an earlier section,

¹⁵ The pre-independence name of *Malaya* is used in the node labels, which presents an additional challenge to users.

analysed and understood using digital representation and music analysis methods? These functionalities go beyond knowledge graph and graph visualisation technologies, and point towards music analysis and AI tools to analyse music represented in digital music notation.

We have made a case for the archive collections in art and design education institutions to be used in the education of aspiring art and design professionals, focussing on musicians. We considered the kinds of knowledge and narratives that can be synthesised from the content of the archive, and suggested how they can help students understand the habits of mind and habits of heart that accomplished musicians possess. Habits of hand and habits of ear in the form of compositional techniques and soundscape of a composer can also be studied and appreciated, although this requires additional analysis and technology, as will be described later. More difficult to archive, however, is the artists' teaching philosophy and dedication as teacher and educator as the pedagogy for teaching was mostly intuitive in the early days. Fortunately, both Zubir Said and Leong Yoon Pin have developed and published teaching methods for general music education.¹⁶

A literature search in Google Scholar, ERIC database, and Library Literature and Information Science Full Text database found only a few papers describing how music archives have been used in classroom teaching. Bousalis (2023) described how online collections of U.S. Southern folk music, including collections at the Library of Congress and the Smithsonian Institute, can be used to teach the history and culture of the U.S. South in relation to music. She described lesson plans where students are asked to analyse lyrics of the songs to derive insights into the social, cultural, economic and political history of the U.S. South. Mills (2009) also showed how exploring American folk music can help students to understand the relation between music, history and culture. More relevant to our interest of how archives can be used in professional music education is Davis' (2022) paper, in which she illustrated how she made use of online archives at the Library of Congress to teach orchestra playing and interpretation, using as examples Aaron Copland's orchestral work *Hoedown* and Cécile Chaminade's works.

Also of relevance is Volioti and Williamon's (2021) online questionnaire survey of how musicians made use of music recordings in learning instrumental works. They found that professional musicians used recordings for self-regulated learning and for establishing their self-identity in relation to others. Surprisingly, musicians perceived that listening to music recordings helped them to establish their musical voice in relation to other performers, and supported their creativity by alerting them to a bigger range of technical and interpretive possibilities.

As the above examples show, archive collections have to be digitised and made accessible online so that they can be viewed and analysed by students and public users at any time and place. These digital artefacts have to be organised in a way to support study and learning. We have suggested that a knowledge graph could be used

¹⁶ Zubir Said published his *Solmisasi System* in 1959, while Leong Yoon Pin, and a team of music curriculum specialists from the Ministry of Education, developed *The Active Approach to Music Making* in 1982.

to represent the resources and their content, their inter-relationships and relations to concepts and external resources. Three approaches to developing a knowledge graph are illustrated using the personal archive of two pioneer musicians and composers in post-World War II Singapore as case studies: Zubir Said and Leong Yoon Pin.

A knowledge graph of even a modest size should be stored in a graph database management system, to perform graph pattern matching, analysis and retrieval of subgraphs in response to users' queries. The subgraph retrieved by the graph database and the results of graph pattern retrieval has to be presented to the user on an interface that supports user-graph interaction and learning. We have implemented a graph visualisation interface to help users to link and integrate information. A user study with twenty participants found that users are generally able to understand relational information presented in the graph visualisation, and are able to derive relational facts to answer factual questions, after watching a 4-minute video tour and a 10-minute familiarisation session.

A second part of the user study to find out whether the knowledge graph interface can help users to construct a coherent narrative identified some issues to be addressed in future development. We plan to extend our knowledge graph to represent narratives derived from research papers and articles on the composers and their work. Commentaries and critiques of experts can also be added as an additional layer of knowledge graph. However, to help users construct new narratives, the authors plan to explore the use of generative AI techniques. New interface designs perhaps using React.js JavaScript libraries (in addition to graph visualisation) will be needed to help the users.

Knowledge graph and graph visualisation are generic knowledge organisation and presentation tools that are applicable to any knowledge domain and not specific to music. Interdisciplinary research and development in applying digital technologies (including graph database, cloud computing and interface technologies), knowledge organisation techniques (such as knowledge graph), and analytic and AI tools (including generative AI) to music and more generally art and design archive collections is a promising research field that is almost virgin territory. This will lead to developing a pedagogy of artistic tradition and heritage to contribute to the education of art and design professionals.

We conclude with a thought-provoking question whether the modern art and design professional can truly access the social, cultural and political environment that past artists lived in. In the words of the eminent Hungarian-born musicologist Paul Henry Lang (1997), "The arts of each epoch are unique and can never be duplicated or even fully recalled, for art is vision. Furthermore, every age finds in the past those elements in which it can discern something of itself. We know the spirit of other eras only to a certain degree; we see in them what our own age enables us to see" (p. 172). Nevertheless, we are of the opinion that historical information and heritage materials even if interpreted with a modern lens can stimulate new ideas. Understanding how current ideas are built on the "old" can help art and design professionals to develop creative works and perform creatively with confidence that what they create are both old and new!

References

- Angeline Yap: *Biography and brief introduction*. (n.d.). <https://www.postcolonialweb.org/singapore/literature/poetry/ayap/bio2.html>
- Berners-Lee, T. (2009). *Linked data*. Design Issues. <https://www.w3.org/DesignIssues/LinkedData>
- Bousalis, R. (2023). Exploring the use of digitally archived folk music to teach Southern United States history. *The Social Studies*, 114(6), 282–296.
- Chia, W. K. (2014). Chinese choral activities. In J. Zubillaga-Pow & C. K. Ho (Eds.), *Singapore soundscape: Musical renaissance of a global city* (pp. 64–76). National Library Board. <https://repository.nie.edu.sg/bitstream/10497/16371/4/BC-CCA-2014-64.pdf>
- Chou, C. (1994). *Interview with Leong Yoon Pin*. National Archives.
- CIDOC Conceptual Reference Model (CRM) [software]. (1999). <https://www.cidoc-crm.org/>
- Davis, I., & Galbraith, D. (2003). *BIO: A vocabulary for biographical information* [software]. <https://vocab.org/bio/>
- Davis, S. A. (2022). “Who keeps your flame? Who tells your story?” Teaching orchestra through primary sources. *Music Educators Journal*, 109(2), 29–37.
- DCMI Usage Board. (2020). *DCMI metadata terms*. <https://www.dublincore.org/specifications/dublin-core/dcmi-terms/>
- Early History of Singapore. (2024, January 5). In *Wikipedia*. https://en.wikipedia.org/wiki/Early_history_of_Singapore
- Embong, N., & Tahir, I. (Trans.). (2012). Zubir Said. ‘Music in the age of Merdeka’. In *MAJULAH! The film music of Zubir Said*. National Museum of Singapore.
- Franz, M., Lopes, C. T., Fong, D., Kucera, M., Siper, M. C., Huck, G., Dong, Y., Sumer, O., & Bader G. D. (2023). Cytoscape.js 2023 update: A graph theory library for visualization and analysis. *Bioinformatics*, 39(1). <https://doi.org/10.1093/bioinformatics/btad031>
- Franz, M., Lopes, C. T., Huck, G., Dong, Y., Sumer, O., & Bader, G. D. (2016). Cytoscape.js: A graph theory library for visualisation and analysis. *Bioinformatics*, 32(2), 309–311.
- IFLA Study Group. (1997). *Functional requirements for bibliographic records. Final report*. International Federation of Library Associations and Institutions. https://www.ifla.org/wp-content/uploads/2019/05/assets/cataloguing/frbr/frbr_2008.pdf
- IPTC Photo Metadata Working Group. (n.d.). *IPTC Photo Metadata Standard 2019.1* [software]. <https://www.iptc.org/std/photometadata/specification/IPTC-PhotoMetadata-2019.1.html>
- Khoo, C. S. G. (2021). *Majulah Singapura. Zubir Said and the national anthem*. <https://ZubirSaid.sg>
- Khoo, C. S. G., Guo, L., & Tan, E. A. L. (2023). User study of a knowledge graph visualization interface to a digital archive collection: Initial results. In *Presented at the 11th Asia-Pacific Library and Information Education and Practice (A-LIEP) Conference*, Taipei.
- Khoo, C. S. G., Tan, E. A. L., Ng, S.-G., Chan, C.-F., Stanley-Baker, M., & Cheng, W.-N. (2024). Knowledge graph visualization interface for digital heritage collections: Design issues and recommendations. *Information Technology and Libraries*, 43(1).
- Lang, P. H. (1997). *Musicology and performance*. In A. Mann & G. J. Buelow (Eds.). Yale University Press.
- Lau, A. T. (2009). *Arts education & the new economy: NAFA 1938–2009*. Suntree Media.
- Mills, S. W. (2009). Bringing the family tradition in bluegrass music to the music classroom. *General Music Today*, 22(2), 12–18.
- Nafamusic. (2009, May 5). *Leong Yoon Pin—Overture ‘Dayong Sampan’*. Volker Hartung, conductor [Video]. YouTube. <https://www.youtube.com/watch?v=sI0loS6jgc4>
- National Gallery Singapore. (2023). From the visual to the literary: Three poems inspired by Lim Cheng Hoe’s Singapore river. *Perspectives Magazine*. <https://www.nationalgallery.sg/magazine/visual-literary-three-poems-inspired-lim-cheng-hoes-singapore-river>
- Neo4j. (n.d.). *Graph database and analytics*. <https://neo4j.com/>
- Peters, J. (2012). Zubir Said and his music for film. In *Majulah! The film music of Zubir Said* (p. 74). National Museum of Singapore.

- Pickering, R. (n.d.). *The music ontology* [software]. <http://musicontology.com/>
- Shulman, L. S. (2005a). Pedagogies of uncertainty. *Liberal Education*, 91(2), 18–25.
- Shulman, L. S. (2005b). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Sim, C. (2011). *Introduction and background of Southeast Asian Arts Centre in NAFA Library*. Tanoto Foundation Centre for Southeast Asian Arts at NAFA. https://tfcsea.nafa.edu.sg/tanoto_foundation_centre_southeastasianarts.aspx
- Sim, C. (2014). *Zubir Said*. In Singapore Infopedia. <https://www.nlb.gov.sg/main/article-detail?cmsuuiid=4b3061ce-c763-480d-9867-ac364bb139bf>
- Tan, B. (2019). The hunt for Majulah Singapura. *Cultural Connections*, 4. <https://www.mccy.gov.sg/cultureacademy/researchandpublications/journals/Cultural-Connections-Vol-4>
- Tan, E. A. L. (2011). *Leong Yoon Pin*. In Singapore Infopedia. <https://www.nlb.gov.sg/main/article-detail?cmsuuiid=04da9fec-9b2a-4041-9722-d34fbaaf4ad8>
- Tan, E. A. L. (2020). Zubir Said across time and space. In C. S. G. Khoo (Ed.), *Majulah Singapura. Zubir Said and the national anthem*. <https://zubirsaid.info/wp-content/uploads/2020/09/Zubir-Said-Across-Time-and-Space.pdf>
- Volioti, G., & Williamon, A. (2021). Performers' discourses on listening to recordings. *Research Studies in Music Education*, 43(3), 481–497.
- Walke, J. (2013). *React* [software]. <https://react.dev/>
- Zubir, R. (2012). *Zubir Said: The composer of Majulah Singapura*. ISEAS Publishing.

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Chapter 11

Codetta: Pedagogies of Artistic Tradition and Heritage



Christopher S. G. Khoo and Eleanor A. L. Tan

Abstract Pedagogies of artistic tradition and heritage advocate for using online archives and collections to support self-regulated learning, creative inspiration, and the development of artistic voice and identity. Rather than static repositories, archives can function as living collections that are continually re-enacted to generate new experiences and understanding as records of performances and commentaries are added. This codetta reflects on the nature of archives relating to music and performance, and their possible use in the education of aspiring arts professionals and in inspiring future creative works. The use of archives to support a pedagogy of artistic tradition and heritage is at a nascent stage, as is the development of archives information systems and interfaces to support this pedagogy.

Characteristics of Music and Performance Archives

Arts and design education institutions that have educated a few generations of arts and design professionals are likely to have established an archive to preserve and conserve materials related to the history and development of the school, including creative works of its students and faculty (e.g. the Berklee College of Music Archives (Esty, 2012) and University of the Arts London archive (Mahurter, 2014)). The archive is likely to include collections relating to the life and work of eminent artists, including former students and faculty, who have contributed their personal archive to the school, or whose family or estate have done so after their death—in order to preserve their work and legacy for study and research. Arts groups and arts organisations may also contribute their archives to a school in the expectation that they will

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be better preserved, made accessible to scholars, and maintained long after the group or organisation has ceased. Items archived can be very varied covering many genres and many aspects of artistic creation, as well as documenting the life and times of the artist or group. Understandably, the types of materials in an archive depend to a large extent on the art form.

For music composers, the breathtaking range of possible archival materials has been described by Kivisiv and Kutman (2017) in their report on an ambitious project to develop a comprehensive personal archive for Arvo Pärt, a living Estonian composer of classical music. The Arvo Pärt Centre sought to provide a 360-degree perspective of each of the composer's musical compositions, including the impulse, inspiration and idea for the work, the origin or commission that led to it, the première performance etc. based on letters, musical sketches and diaries, manuscripts and scores, and more. The archive includes recordings of radio and television programmes about the composer, films with music by Arvo Pärt, and recordings of ballet performances, films and documentaries that have made use of his music. Also included are private recordings of rehearsals, concerts, and interviews recorded by family members, researchers and journalists. An important part of the archive are scholarly writings on Arvo Pärt's compositions, including drafts with comments from the composer, which serve to document the creative process of the composer and the heritage he leaves behind for future generations. To facilitate access to the diverse and wide range of documents present in the archive, the centre developed a custom-built database, Arvo Pärt Information System (APIS), to manage all the data. This system links the different groups of entries, making it possible to traverse from musical works and documents to information on performances, recordings and media coverage (Kivisiv & Kutman, 2017, p. 158).

Archive materials are primary and secondary sources for scholars who research the development of particular art forms as well as the cultural and social development of a geographic region. It is assumed that researchers will apply their own research and analysis methods and frameworks to the materials. The responsibility of the archivist or librarian is to preserve and conserve the materials and organise them into fonds (having the same origin, artist or institution), series and files—preserving the provenance and original order of the materials (International Council on Archives, 2000; The National Archives (U.K.), 2016). As Gale and Featherstone (2011) put it, “archival researchers engage with the activity of archiving the already archived. ... researchers reorder and catalogue their findings, often producing another personalised archive of information, material, impressions and questions” (p. 19).

The focus of this codetta, however, is not on the value of archives to researchers and scholars—this is patently true. We propose that archives of materials relating to creative arts and design can be very useful both to arts and design professionals and to students training to be such professionals. We survey the literature to find out how archival collections have been used in education. We propose that the *pedagogies of artistic tradition and heritage* based on archival collections is a promising one that has been underdeveloped and underused. Previous research and scholarship has identified possible teaching approaches that suggest how archive information systems and interfaces can be developed to support such learning.

Our discussion is limited to archives related to music and performance, especially drama/theatre and dance. A search in the archival science literature as well as arts education literature retrieved only a small number of papers on educational uses of archives. Databases searched include Google Scholar, ERIC database, and Library Literature and Information Science Full Text database. In the rest of the chapter, we discuss philosophical issues relating to using arts and performance archives for research and for informing future creative works and performances. We then survey educational uses of arts and performance archives in tertiary education institutions.

Issues in Using Archives for Research and Performance

An archive, however comprehensive, cannot capture all the important materials related to an event, organisation or artist. Items may have ended up in the archive serendipitously or have been selected by an archivist or collector who deemed them important enough to preserve, using their judgement and understanding. Secondly, archival materials are preserved out of the temporal context or historical flow in which the materials were created or used. A historian studying the materials in a different temporal context with a different educational and socio-economic-cultural background will not be able to understand the past in the same way that a contemporaneous artist would have understood it. The past is irretrievably lost and cannot be reconstituted even if all relevant archival materials are available.

The problem is worse with archives documenting theatre and dance performances. Many authors have pointed out that a live performance is ephemeral by nature, and a performance captured in a video recording is no longer a performance (e.g. Borggreen & Gade, 2013). Furthermore, much of what happens in a performance is in the audience members' minds, in the interaction between audience and performers, and in the audience members' memories (Barba & Fowler, 1990). In addition, choreographer(s), designers, and composers may be considered part and parcel of a performance (Oke, 2017).

A creative work may be performed multiple times at different locations and possibly with different cast members. A performer may perform the same work multiple times, each time trying to give a better or more inspired performance. Oke (2017) pointed out that choreographers may revise parts of their work when restaging a performance and a dancer's body also varies and changes overtime. He further elaborated that as dance involves movement of human bodies, performance variations are an intrinsic part of dance. All these raise the question of what constitutes "the performance" to be archived. Jones et al. (2009) noted that "archives tend to focus on a single end product, yet performances are constantly in a state of becoming and have no definable end. The archive consequently enforces a false sense of completeness on a performance event that is part of a much wider work" (p. 169).

Oke (2017) took up McFee's (1992) concept of *dancework*, which encompasses more than just one performance iteration, to propose that a performance archive

should cover the choreographer's concept of the dancework, the performers' perspectives, other contributors' perspectives, and the audience, critics' and researchers' perspectives. Oke (2017) stressed that experts' perspectives ("a jury of knowledgeable outsiders") should be captured to identify the essence of the dancework based on witnessing multiple performances of the work.

The use of performance archives in research and for professional learning has also raised philosophical questions. Performance archives have been used to "recover" an artistic tradition, style or skill to incorporate in a performer's or performing group's art. The contentious issue is that artists are expected not to imitate or replicate a past performance however great—but to create something new, carrying the stamp of their own artistic voice or individuality.

To overcome these issues, authors in archival science have proposed a new perspective of archive not as collections that preserve the past for the future, which is deemed impossible. Instead, the perspective that is gaining traction is that archives preserve traces of the past which future researchers and professionals can engage with to generate new understandings and new futures. This perspective entails that archival materials should be continually engaged with by current and future researchers and professionals—who will leave their imprint on the archive so that it continues to evolve. Gale and Featherstone (2011) proposed that "researchers remake history, making objects and materials from the past relevant to the ways in which we understand our present and conceptualise our futures, and this contributes to the process of cultural meaning-making" (p. 20). Haines (2019) suggested that archives are not taken out of the flow of history but are "environments from which past activity can, potentially, be revived". Oke (2017) urged that an archival record of a dancework should "move from being 'untouchable' to becoming 'compost' for new investigations and ideas and new interactions with audiences by virtue of making them re-accessible, and by making clear the re-use and re-presentation possibilities ..." (p. 205). The analogy of new cities being built atop the old in ancient Rome comes to mind here. Clearly, the value of archives is to provide the foundation of heritage and to embrace the accretion of re-enactments or new creations, allowing the work to be re-evaluated and adapted to new realities. For the pianist and conductor Barenboim, "even the most intelligent and humane ideas need constantly to be subjected to further scrutiny, if nothing else because of the relationship between content and time; our understanding of ideas is in permanent transformation in the progression of linear time" (Barenboim, 2008, p. 41).

Use of Archival Materials in Tertiary Education

Archivists have partnered with teachers to incorporate archival materials in classroom lessons to teach academic and research skills. Other authors have reported using archival materials to teach history in relation to an art form. However, our main interest is in the education of arts professionals, and in showing future professionals

how archival materials can be used to inform, enrich, and inspire creative works and performance.

At the University of the Arts London, archivists have partnered with faculty to explore ways of using archival materials in the classroom (Mahurter, 2014). One initiative adopted an “object-based learning” approach where students learn to examine archive artefacts to gain new knowledge and insights—to hone academic, research and subject-specific skills. Reason (2003) has noted that a key attraction of an archive for users is being able to handle physical items and objects from the past, which presumably stimulates curiosity and interest.

Archives have also been used in teaching the history of a geographic region via examining the relation between an art form (e.g. music) and an aspect of history. Mills (2009) reported on how exploring American folk music from Old Time to bluegrass traditions helped students to understand the relation between music, history and culture—focusing on family tradition, the cultural context of the mountain and rural region, and performances of bluegrass and Old Time musicians. Similarly, Bousalis (2023) described class activities for five social studies lessons that make use of archives of folksongs to analyse the lyrics to gain a deeper understanding of the social, cultural, economic and political history of the U.S. South.

Mahurter’s (2014) description of a lesson in a Bachelor of Arts in Bespoke Tailoring programme (University of the Arts London) offers a good case study of how archival artefacts can be used to teach skills that are directly relevant to the students’ future professional work. In this lesson, the archivist showed samples of tailored suits from the menswear collection so students could handle the garments to examine their design, cut and construction. Students learnt how to “identify the different tailoring techniques used by individual tailors and apply this to their own garment construction. The archive session was practice based, focusing on how the knowledge gained from close examination and analysis of an existing garment could be transferred and translated into their own work” (p. 19).

Conclusion

Archivists at educational institutions have endeavoured to make archival materials useful in education and have partnered with educators to develop classroom lessons using archival materials to teach academic and research skills or to enhance the learning of a particular subject. What is rare is the link to professional artistic work or performance—how archives can be used by artists and students to improve their art. This chapter has highlighted a few examples of how archival materials can be made directly relevant to professional artistic work and performance. More case studies and lesson plans are needed to show the way.

Archival materials can be used to inspire a performer with old ideas but used in a new form. They can help the performer to understand a creative work better and offer the performer more options in interpretation. Understanding how current ideas

are built on the “old” can help art and design professionals to develop creative works with confidence as what they create are both old and new!

To support these ways of using archival materials for learning and inspiring artistic creations and performance, new knowledge organisation systems are needed to organise digitised archival materials for these purposes. New archive information systems, digital processing technologies (including artificial intelligence), and user interfaces need to be developed in partnership with educators. In Chap. 10, Khoo and Tan have proposed knowledge graphs, graph database and graph visualisation as a promising approach. The use of archives to support pedagogies of artistic tradition and heritage is at a nascent stage, as is the development of knowledge organisation systems and digital technologies to support this pedagogy. But the future holds much promise.

References

- Barba, E., & Fowler, R. (1990). Four spectators. *The Drama Review*, 34(1), 96–101.
- Barenboim, D. (2008). *Music quickens time*. Verso.
- Borggreen, G., & Gade, R. (2013). Introduction: The archive in performance studies. In G. Borggreen & R. Gade (Eds.), *Performing archives/archives of performance*. Museum Tusculanum Press.
- Bousalis, R. (2023). Exploring the use of digitally archived folk music to teach Southern United States history. *The Social Studies*, 114(6), 282–296.
- Esty, A. (2012). Berklee College of Music Archives: Preserving the past and learning for the future. *Computers in Libraries*, 32(4), 6–40.
- Gale, M. B., & Featherstone, A. (2011). The imperative of the archive: Creative archive research. In B. Kershaw & H. Nicholson (Eds.), *Research methods in theatre and performance* (pp. 17–40). Edinburgh University Press.
- Haines, E. (2019). Archive. In V. Agnew, J. Lamb, & J. Tomann (Eds.), *Routledge handbook of reenactment studies: Key terms in the field* (pp. 11–15). Routledge.
- International Council on Archives. (2000). *ISAD (G): General international standard archival description* (2nd ed.). International Council on Archives.
- Jones, S., Abbott, D., & Ross, S. (2009). Redefining the performing arts archive. *Archival Science*, 9, 165–171.
- Kivisiv, A., & Kutman, K. (2017). Archiving a living composer: Building Arvo Pärt’s personal archive. *Fontes Artis Musicae*, 64(2), 152–163.
- Mahurter, S. (2014). Academic uses of archives and special collections: Thrill of the real. *SCONUL Focus*, 60, 17–21.
- McFee, G. (1992). *Understanding dance*. Routledge.
- Mills, S. W. (2009). Bringing the family tradition in blue grass music to the music classroom. *General Music Today*, 22(2), 12–18.
- Oke, A. (2017). Keeping time in dance archives: Moving towards the phenomenological archive space. *Archives and Records*, 38(2), 197–211.
- Reason, M. (2003). Archive or memory? The detritus of live performance. *New Theatre Quarterly*, 19(1), 82–89.
- The National Archives (U.K.). (2016). *Archive principles and practice: An introduction to archives for non-archivists*. The National Archives. <https://www.nationalarchives.gov.uk/archives-sector/advice-and-guidance/managing-your-collection/developing-collections/cataloguing-archive-collections/>

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Part IV
Narrating Tales from Artist-Educators

Chapter 12

Performative Movement in Actor's Training: Seeking Truth in the Body to Build Trust



Grace Y. M. Leong and Christopher S. G. Khoo

Abstract Theatre is a dramatic and performative art form where performers enact a story using words, voice, and body movement. This chapter focuses on performative body movement and the training and preparation of actors to give a “truthful” performance in body movement. While a dramatic performance enacts a make-believe world and imaginary situations, they have to feel real enough to the audience to immerse them in the constructed world and draw emotions and responses as if the world and situations were real. To achieve this, the actor must give a truthful performance. This chapter examines what that means and what it takes for an actor to give a truthful performance. The focus of the discussion is not on body movement techniques, but on the alignment of mental states and processes (mind), physical states/processes (body), and the emotion and soul (heart) in the quest for “truth”. The chapter examines what it means to seek truth in the body, how it must lead to trust and care, and the approaches taken by three theatre artist-educators to prepare aspiring actors for truthful performances. In the process, the chapter examines the deep structure of the signature pedagogy for acting and performative art forms—especially in the alignment and interaction of the habits of mind, hand/body, and heart/soul for giving a whole-heartedly truthful performance.

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Introduction

Truthfulness is essential for a compelling theatre performance. The actors' body movements should express emotion truthfully. To achieve this, the training, performance preparation, and body movement practice of the actors need to be directed towards achieving truthful manifestation of human emotion in the body: "every moment must be saturated with a belief in the truthfulness of the emotion felt, and in the action carried out by the actor" (Stanislavski, 1989, p. 130). But what does *truthful* mean in the context of truthful performance and truthful expression of emotion? How is it possible for a performance to be truthful when both actors and audience know that the performance is make-believe? How can a teacher guide theatre performance students to grasp the concept of *truthful performance* and work towards realising it in live performance?

Other terms associated with *truthfulness* include *verisimilitude* and *authenticity*. *Verisimilitude* is defined by Cambridge online dictionary as "the quality of seeming true or of having the appearance of being real". Cremona (2020) paraphrased it as "believable". *Authenticity* is defined by the Merriam-Webster online dictionary as "true to one's own personality, spirit, or character". This suggests that a truthfully manifested emotion is not "real" or "true"—just seemingly truthful or believable for the character that the actor is playing.

However, many adopt a constructivist-interpretive perspective that all reality is constructed and interpreted in the human mind, and human actions and emotions acquire meaning from the human symbolic (meaning) system relevant to a specific context (e.g., performance context). Thus, a truthful performance is perceived as real and truthful in the audience members' mind as well as the actor's. This points to the paradox that a make-believe enactment can be perceived as truer than reality, capturing the essence or heart of a situation.

Another paradox is that an actor cannot give a truthful performance by aiming to be truthful: the actor has to seek truth or seek the truth. But what does *seeking truth* mean in a play or musical, or in a character, or in a sequence of body movements? And what does it involve? Clearly, finding truth is a cognitive event—an epiphany or eureka moment, accompanied by a sense of certainty that truth is apprehended. It may be sensed as a clear vision or understanding of something which may be visual, aural, kinaesthetic, or mental.

So, how can an aspiring actor be trained to realise different realities truthfully, based on a character and artistic vision using body movement? Can one manipulate the "truth" using body movement, and alter reality and meaning?

This chapter explores these questions in relation to the first author's (Leong's) performative practice and her experience in teaching performative body movement at the Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore. Three theatre performance artist-educators at NAFA were also consulted to obtain their perspectives on training aspiring theatre performers to give truthful performances. A theatre performance is not a solitary art form or a monologue: a live performance takes place in the context of an audience. Thus, audience members play an important

role in a truthful performance. A good live performance involves shifting perceptions and realities as the actors move audience members to tears or laughter (Langman, 2014, p. 9). When actors perform truthfully, they communicate sensory messages and meaning vividly to the audience, who then reconstruct the meaning and reality in their minds, and respond emotionally in the constructed world. The audience members' response and reaction are communicated back to the actors, thereby influencing the performance. An audience member is sometimes referred to as a *witness* or *spectator*, but one that participates actively in the performance event.

A truthful performance elicits *trust* and *care* in the audience. Trust is needed for the audience to whole-heartedly enter the reality constructed through the actors' body movements. This trusting immersion in the actors' constructed reality leads to care—care for that reality and for the characters portrayed, but also care for the actors personally. There must also be mutual trust and care among the ensemble of actors to enact a truthful performance. Trust and care are also important in the training of actors and their performative body movement; there must be mutual trust and care between teachers, students, and peers (i.e., between students).

Thus, several types of mental, cognitive, emotional, and physical actions and processes take place within the actor and the audience to produce a truthful performance, as well as between teacher and aspiring actor. In examining and discussing these actions and processes, we find it useful to categorise them into three aspects of a person: body, mind, and soul (or heart). The mind is associated with the conscious, rational, and analytical thinking of the actor and witness. However, the mind also includes unconscious or subconscious thinking that is not accessible to rational analysis or introspection by the conscious mind. The body is the medium by which the actor enacts the performance that is communicated to the audience. Many theatre practitioners and authors feel that there is something left over after considering mental and bodily processes. This is often characterised as the *soul* or *heart*. The soul encompasses emotions, artistic vision, inspiration, and morals/ethics, which are important for giving a truthful performance.

The rest of the chapter will flesh out these concepts and examine conceptualisations of theatre performance that seek to explain the theatre experience of both actors and audience. The needed training and preparation of aspiring actors to deliver truthful performative body movements are examined. Finally, the chapter attempts to identify what constitutes signature pedagogy in performative body movement in theatre performance.

Conceptualisations of Theatre Performance

Philosophers and theatre practitioners have long sought to understand what a good theatre performance is, and the processes that underpin or produce a good performance. Following classical Greek philosophy that art has the goal of imitating nature (Larham, 2012), a dramatic performance was initially viewed as mimetic: a good performance mimics reality as closely as possible. It is a faithful imitation or mimicry

of reality. But how does an actor convey a good imitation of reality? Sainte-Albine (Hill, 1750, p. 16) argued that to portray an emotion well, the actor has to actually feel it. The actor has to generate the emotion appropriate for the situation and abandon himself or herself to the emotion to portray it truthfully. In contrast to this passionate approach to performance, Diderot, a French philosopher, art critic, and writer, best known for serving as co-founder, chief editor, and contributor to the *Encyclopédie*, espouses the notion that the actor has to conceptualise an “ideal model” of the character in the actor’s imagination. Then in performance, the actor seeks to actualise and embody this model (Herstand & Pixley, 1976).

This ideal model may be taken as the actor’s artistic vision or interpretation. However, modern theatre practitioners do not view a performance as mimicking an artistic vision. Rather, the vision informs or guides the performance. A performance may be a perfect realisation of some ideal or conception, and yet be lifeless or lack “soul” and does not move the audience. The current view is that a performance does not provide a facsimile of a “reality” but constructs a new reality; and every live performance constructs a new reality. Goldman argued that the aim of a theatrical performance is not to represent reality but to present a form of reality, embedded in the “real life” outside the performance (Herstand & Pixley, 1976). The purpose is to enliven the audience to experience the emotions, movements, and thoughts portrayed by the performers’ body movements. Stanislavski (2010, p. 19) proposed a related concept of the actor experiencing a role, living it, and making it his or her own.

But how does a performance come to life? Larlham (2012) examined eighteenth-century conceptualisations of theatre performance, tracing it to classical Greek and Roman concepts. He argued that some modern concepts have their roots in eighteenth-century thinking and classical philosophy. For example, in classical philosophy, *emotion* was conceived of as “motion of the soul”—a psycho-kinetic substance moving through the body to produce physiological effects and animate the body. In the early eighteenth century, this was elaborated into a mechanistic view of soul–body interaction, where all internal events in the body and external objects are somehow linked and interact with one another. The actor generates emotions that agitate the actor’s body and excite sensations in the spectators, which are felt as passions in the spectators’ souls. The spectators are kinetically and kinaesthetically moved by “the actor’s impassioned expressivity” (Larlham, 2012, p. 433). The audience response is viewed as a kind of mimesis, reflecting the emotion of the performer. There is a “physiological symmetry between performing and spectating bodies” (Larlham, 2012, p. 86). Larlham noted that this is similar to current concepts of *kinaesthetic empathy* and *embodied intersubjective*.

Descartes’ view of the universe as a plenum filled with bodies and different kinds of matter that interact through constant collisional motion (referred to as the Cartesian universe) is adopted to explain the physiological symmetry between performers and audience. For Descartes, the human organism is one subsystem in the mechanical universe. He applied a mechanical-physiological model to explain passion or emotion in the body. He defined passions as “perceptions, sentiments, or motions of the soul” which are caused by the movements of the spirits (Larlham, 2012, p. 437). Though this mechanical-physiological model is no longer aligned with modern thinking in

psychology and physiology, it is still a useful framework for thinking about the interaction between performer and audience.

Our perspective is that a live theatrical event is a synchronous communication event—a dialogue between the performers and the audience. When actors perform, they send out messages that form meaning and shifting perceptions of the audience, transporting the mind of the audience to an imaginary world evoked through the performers' body, mind, and heart skills. The exchange of realities between performers and audience can be viewed as an active shift of energy from performer to the audience, though the audience has the higher “transformative” encounter during the performance. If the audience is unmoved, the performers will sense the coldness of response that will dampen their passion, referred to in Chinese as “冷场”. In the context of acting or performing on stage, it refers to a situation where there is a lack of engagement or response from the audience, resulting in an uncomfortable or awkward silence.

Stanislavski's System

Konstantin Stanislavski, a renowned Russian actor and director, developed a revolutionary system for training actors known as the Stanislavski System. The system is centred on the pursuit of truthful and realistic performances. Stanislavski's original works (often read in translations from the Russian) emphasise the importance of psychological realism and the actor's deep understanding of their character. The complexity of training human actors in Stanislavski's system involves these key training principles:

- *Emotional truthfulness*: Stanislavski stressed the need for actors to connect emotionally with their characters. This involves delving into one's own emotional experiences to find authentic responses to the character's circumstances (Moore, 1965, pp. 42–44; Stanislavski, 1989, pp. 127–162; 2010, pp. 152–228).
- *Given circumstances*: Actors must thoroughly understand the given circumstances of the play, including the character's background, relationships, and the environment. This knowledge serves as the foundation for creating a believable performance (Moore, 1965, p. 33; Stanislavski, 2010, pp. 37–59).
- *Objective and super-objective*: Actors must define their character's objectives (short-term goals) and super-objective (long-term life goals). Understanding these motivations helps the actor portray a character with depth and purpose (Moore, 1965, pp. 62–64; Stanislavski, 1989, pp. 271–280).
- *Subtext*: Stanislavski emphasised the importance of subtext—the unspoken thoughts and emotions beneath the character's dialogue. Actors are encouraged to explore the subtext to convey a richer and more nuanced performance.

- *Imagination and creativity*: Stanislavski advocated for the use of imagination to bring characters to life. By tapping into their creativity, actors can discover new aspects of their characters and make the performance more vivid and genuine (Moore, 1965, pp. 34–37).
- *Concentration and observation*: Actors should develop a keen sense of concentration, both on their own actions and the actions of others. Observing the world around them allows actors to incorporate realistic details into their performances (Moore, 1965, p. 37; Stanislavski, 1989, pp. 127–162; 2010, pp. 86–118).

Stanislavski's system revolves around achieving truthful and realistic performances through a deep understanding of the character, emotional truthfulness, and a connection between the actor's own experiences and those of the character they portray. He experimented in his training system to create character out of an actor's self, cultivating and enhancing an actor's artistic vision. In other words, to achieve the standard of truthful and realistic performance, actors need to amalgamate the principles through training, together with artistic vision to create a compelling performance.

Teaching emotional truthfulness is challenging yet rewarding. When coaching students who may have limited life experiences, it is important to allocate additional time for establishing a secure environment that encourages vulnerability in order to cultivate trust, before progressing towards emotional truthfulness required for character development.

Acting is not just about playing a character on stage, but the realisation of an embodiment of a character, a total transformation to become the character that one is creating: you become the “real” character that you are creating. The process of creating another character out of yourself is complex; it is like creating an artwork where the canvas and tools are all your own self. You are manipulating yourself to become the character that you create. You are the creator and the artwork at the same time. To unpack this complexity of creating a character out of one's own self, Stanislavski's System remains one of the most effective for actor training.

Stanislavski famously said, “love the art in yourself but not yourself in the art”. To use a metaphor, a painter needs to be professionally trained, and the final artefact becomes the finished work. In acting, the final artefact is the “character” that plays itself out. This character is the artist himself or herself. For the theatre practitioner, the character is housed within his or her own body. Dr Yu Wei Jie, theatre principal lecturer at NAFA, stressed that an actor should never play his/her own self but the character [self]. There are therefore two individuals involved—the actor's own self and the character's self. The actor's work seeks to enhance the understanding of “self”, an inside view of self (knowing who you are) and the ability to distinguish the duality of “self” while being in character. This is the ability to synthesise the actor's personality with the character's personality.

Chekhov's Method

Michael Chekhov was also a Russian actor and director and nephew of Anton Chekhov (famous Russian playwright and short-story writer). He developed his own unique approach to acting, often referred to as the Michael Chekhov Technique. This technique involves a holistic exploration of the actor's instrument, incorporating elements of movement, imagination, psychological gesture, and the interplay of thinking, feeling, and willing. His technique is a holistic and imaginative approach to acting that emphasises the integration of the actor's mind, body, and emotions. The integration of thinking, feeling, and willing (TFW) is a key principle in the Michael Chekhov Technique, where actors are encouraged to balance and harmonise these three elements to create a fully embodied and authentic performance. Rather than isolating each aspect, Chekhov emphasised their interconnectedness, recognising that thinking, feeling, and willing are not separate entities but parts of a unified, dynamic process.

By engaging in this holistic approach, actors can bring depth and truth to their characters, allowing intellectual understanding, emotional authenticity, and motivated action to work together seamlessly. This concept reflects Chekhov's belief in the unity of mind and body, encouraging actors to explore the full spectrum of their being in the pursuit of truthful and imaginative performances. The key elements and training methods associated with Michael Chekhov's technique include:

- *Psychological gesture*: One of the central concepts in the Michael Chekhov Technique is the idea of the psychological gesture. This involves creating a physical movement that embodies the character's inner essence and emotional state. The psychological gesture helps the actor access the character's core motivations and emotions (Chekhov, 1953/2002, pp. 63–76; Petit, 2010, pp. 66–70).
- *Imagination and atmosphere*: Like Stanislavski, Chekhov places a strong emphasis on the actor's imagination. Actors are encouraged to vividly imagine the world of the play, their character's experiences, and the atmosphere of the scene. Engaging the imagination helps actors connect emotionally with the material.
- *Qualities of movement*: Chekhov introduced the concept of “qualities of movement”, which involves exploring different physical qualities and energies to express emotions. By experimenting with movement qualities, actors can discover unique and authentic ways of embodying a character's emotional state.
- *Character centres*: Chekhov identified three character centres—head, heart, and will—each associated with different aspects of a character's personality. Actors explore these centres to understand and embody the character's thoughts, emotions, and intentions.
- *Inner and outer gesture*: The technique involves distinguishing between inner and outer gestures. Inner gestures relate to the character's internal emotional life, while outer gestures are expressed physically. The coordination of these gestures contributes to a layered and truthful performance.
- *Imaginary centre and imaginary body*: Actors explore the concept of imaginary centre, creating a dynamic inner landscape that influences their movement and

expression. The imaginary body allows actors to explore physicality beyond their own physical form, promoting a sense of freedom and creative exploration.

In movement lessons, students are guided to explore different psychological gestures while creating a character. They will try to create multiple gestures and find a gesture that is most suitable for the inner landscape of the character. In order to demonstrate the suitability of this gesture over others, emotional authenticity and truthful conversations are necessary. Frustration arises when the student struggles to connect his or her authentic emotional state with that of the character.

Integration of Body, Mind, and Soul

Stanislavski and Chekhov both believed in body, mind, and soul training for actors. In the tripartite framework of body–mind–soul, the mind is associated with the conscious, rational, and analytical thinking of the actor and the witness, including the actor’s decision-making and conscious direction of the body movement. However, the mind also includes unconscious or subconscious thinking¹ that is not accessible to rational analysis or introspection by the conscious mind. The operation of the unconscious mind is signalled by its results that appear in the conscious mind as hunches, instinctive understanding, and insights that “come out of the blue” with no conscious knowledge of the steps or process that led to the insights. It also manifests its working in affecting body movement without rational control.

There is an area of overlap between mind and body, usually unconscious, that has been characterised as body-thinking or thinking by the body about the body. This includes insights and performance solutions that spontaneously arise from the body movement, as if the body has an unconscious mind of its own working out performance issues, with the conscious mind only realising what has happened after the fact. For instance, during the repetition of text or movement in a rehearsal, the performer can attain a state of “flow” by continuously practising and repeating the text and movement until the repetition reaches a state when the emotion of the character flows in without getting “stuck”. This is akin to building muscle memory to achieve the state of flow when the body and mind “know” what to do instinctively.

Many performers feel that there is something left over after considering mental and bodily processes. This includes emotions, artistic vision, inspiration, and ethics, which can be grouped together as the activity of the soul or heart. This soul may represent a higher-level synthesis—a connection with the divine or something beyond oneself or a capability to transcend one’s current training, practice, situation, and limitations. The soul is the part of the actor that seeks after truth, recognises truth, and guides the bodily enactment of truth.

The mind–body–soul framework can also be applied to analyse the experience of the theatre audience as external witnesses. However, the actor also has an internal

¹ No distinction is made between the *unconscious* and *subconscious* in the chapter, and they are used interchangeably.

witness: the actor at some level knows that this is a performance, and some part of the actor's mind is observing and monitoring the performance and the audience reaction, and making adjustments to the performance. At the same time, audience members do know that it is a performance (as witness) and yet allow themselves to be "transported" to a different reality (as a participant).

In classical Greek philosophy, the soul is viewed as the vital principle that animates the body and is also responsible for "thought, emotion, judgement, desire, perception, imagination, and even the basic processes of nutrition and digestion" (Larllham, 2012, p. 87). The Cartesian "soul-body" theory has evolved into the mechanism of *movement* in the actor's training today. A moving performance arises from the performer's ability to align the whole human physical and emotional qualities that include the spirit and soul of human. This is the focus of the acting training technique derived from Chekhov, who introduced a psycho-physical approach to acting that nurtures the imagination while grounding emotion in physical action (Langman, 2014). The notion of human body-mind-emotion plus, a holistic integrated approach, is key to creating a truthful and believable performance.

The idea of "mind over body" is predominantly a Western conception of the body-mind relationship (Meehan, 2015, p. 2) where thinking comes before action. Ancient Eastern somatic practices such as Yoga, Qi Gong, and Taiji, however, are founded on the more holistic body-mind-spirit balance in a non-hierarchical plane of motion. Balance of this trinity is key in many Eastern somatic practices, offering a challenge as well as opportunity for a new understanding of the actor's body-based training. Western somatic practices assume that the soul is a force distinct from the human body; Eastern practice views the soul as part of an integral "body-mind-spirit" of humanness. Watching a live performative (e.g., dance or theatre production), one might occasionally feel that the performer or performance has "no soul", or that it is a "technical" performer/performance, which points to the importance of *soul* in relation to body and mind.

Chekhov's training techniques, following a psycho-physical approach that relates impulse, imagination, and inner and outer gestures, offer practical tools for working with imagination, feelings, and atmosphere. His method of creating a character's action based on the holistic integration of Thinking-Feeling-Willing (TFW) was derived from the process of "active imagination" in Jungian psychoanalysis, where the client brings unconscious impulses into creative form. This is practised through movement—as the mover closes his or her eyes, waits for an impulse to take physical form, and follows its expression (Meehan, 2015, p. 4). The soul is present when the "condition" is right. This condition needs preparation and cultivation: the bodily performer needs training and practice to create this condition for connecting the body-mind-soul.

The interplay between body, mind, and soul helps to create the "realities" of the performer and thus the "realistic" human experience. Theatre performance that emphasises "whole person" acting/performing suggests embracing the integration of all aspects (including the soul) to train a "truthful" performer. Performers can train to alter their own truths and realities through their body when the body is "ready" to sense and is open to receive impulses (Kabat-Zinn, 2023). The impulses

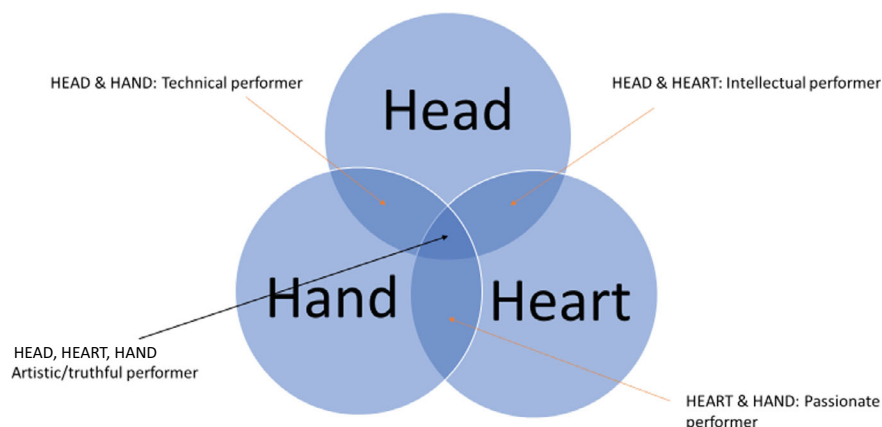


Fig. 12.1 Combinations of head, hand, and heart, and the types of performers they indicate

are then analysed and processed through the thinking mind where mental processes we associate with *cognition* are linked to bodily processes. Having the right physical condition allows the body to manifest truthful movement and gesture to be then transmitted to the audience. This is somewhat like projecting images, but what is communicated to the audience is the performer's reality—what Chekhov conceived of as “real” gestures comprising the thoughts, feelings, and will of a human being. Actors and performers who use their body and mind as the main instrument for shifting perception of the audience inherit the profession of theatrical traits. Although many performances are now happening outside of traditional theatre venues, reality transference and make-believe concepts are still at the heart of the art form.

The training of aspiring actors must include training the mind (head), body (hand), and soul (heart). The diagram in Fig. 12.1 can serve as a guide for conversations in the teaching and learning of actor's training. The diagram suggests that different combinations of head, hand and heart may produce different kinds of performers:

- An over-emphasis on training the head and hand may produce a *technical performer*, who is focused, accurate in technique and consistent in performance. Such performers pay attention to technical details and work hard to achieve perfection.
- An over-emphasis on training the head and heart may produce an *intellectual performer*, who analyses human intention and behaviour, and pay attention to understanding the emotion and feelings.
- An over-emphasis on heart and hand may produce a *passionate performer* who pays attention to the purpose of the work and generates energy and flow in performance. Such a performer possesses an X-factor and is confident and focussed in the moments of performance.
- A balance of all three aspects of hand, head and heart may produce a *truthful performer*, whose performance combines an accurate and consistent technique

with a unique perspective of the subject matter, shows care and trust in the ensemble, and exudes an X-factor that energises both ensemble partners and audience.

What Is Truth and Truthful Performance?

Examining the concept of “truth” in the performative body will help to develop clearer instruction and assessment criteria for body–mind alignment in the training of an actor’s body movement. What is truthful performance of the human body? What does the truth in the body look like and feel like?

Suppose, when taking a subway train home from work one day, you encounter the situation that all the passengers are making eye contact and acknowledging one another and not focused on their mobile phones. You would be very surprised. To a city dweller who is familiar with everyday train scenes, this would feel unreal or surreal. Our body responds to the world around us filtered through personal experience. Therefore, to shift perception and make *real pretence* in a performance, the actor’s body movement ought to be truth bounding: the body-behaviour must be compelling enough to draw the audience into the reality of the performer. The training of the actor’s body movement is aimed at drawing the audience to believe in the world portrayed by the actor and guiding the audience’s experience to serve a higher goal.

The organic interactivity of the soul–body composite means that these sensations are also immediately felt as passions in the spectators’ souls. It is taken as natural and inevitable that when the actor abandons himself or herself to the passion appropriate to the character, the assembled spectators will also surrender themselves to a corresponding internal movement. As a result, the audience is kinetically and kinaesthetically “touched”, “moved”, or “struck” by the actor’s impassioned expressivity (Larham, 2012, p. 433).

This transfer of energy from the actor to the audience still forms the basis of performance in the twenty-first century. It has been suggested that a theatrical event might even be a kind of petri dish for exploring energy exchanges between actors and the audience, where “both actors and spectators are engaged with the process of transmission” (McCutcheon, 2008, p. 145).

Artistic vision embracing the aesthetic in human spirit brings the whole human body, mind, and soul together in an integrated manifestation of an artist. Truth therefore is found in the artistic vision of the play where the actor and the character are no longer a duality but one being during the performance. Truthfulness is therefore interpreted by Stanislavski as the ability to immerse self in the role that is natural and believable. The pathways to fuse duality to oneness are multi-faceted. It often starts with analysing the actor’s self and the character’s self by observing the relationships of intention and behaviour, the inner and the outer, the mind and the body. The actor has to question every intention of the character (why do you do what you do) and create action that follows that intention. This is a question that a director often asks the actor, “what is your intention in this scene?” To create an inner landscape to

facilitate intention and behaviour that is believable, the actor needs to understand the truth about his or her body and the emotion that “feels right” to act truthfully.

For example, to create a character who has just heard the shocking news that her child has been murdered, the intention can be to create the scene of a mother’s loss and anguish: “... in anguish your body breaks down” (Brown, 2021, p. 91). But to what extent is the actor able to “feel” anguish and create a scene portraying anguish that comes from the depth of understanding and emotion of trauma, and show the “breakdown” of the body in anguish and loss? The more deeply an actor understands his or her emotion and body ability, the more possibilities and choices the actor has in pairing up his or her emotion and behaviour. When an actor has truthfully paired his or her emotion with the body to create movement that “feels right” to the actor, this is the artistic vision of the actor. Truth is thus seen in the artistic vision of the actor, who will seek more depth of emotion and physical ability to empower the actor’s performance to be truthful and believable.

In the course of the first author’s (Leong’s) teaching, she often encounters situations when the student says “this feels right” when attempting to create a character and finally finding a version that “feels right”. When she asks what does “feel right” mean to you? The student often says “it feels good, you just know it”. For many years, she tried to understand what “feels good” and “you just know it” mean in creating a character, so that she could expand on it in her teaching. Perhaps it is the truth that sets you free, and when that happens it feels good, and you just know it!

We unpack the “truth” in the body of the performer this way. All emotions have a cognitive antecedent (Elster, 1996, p. 1387); it also drives behaviour and contours the body. When you feel sad your body responds to that sadness with a certain shape and formation. If your emotion and body do not respond in alignment, you feel awkward, you feel wrong. On the other hand, if they are aligned, you are in a natural state of being, you feel right—the goal of Chekhov’s Thinking-Feeling-Will techniques.

However, the ability to “feel” right or wrong is not natural to many of us; understanding the alignment of thought, emotion, and body requires years of practice. When Leong was a young performer, she remembers some of her teachers saying “listen to your body”. She didn’t really understand what that meant and simply took the advice as a metaphorical adjective. Over the years as she continued to practice her art in body and movement, she came to understand what listening to your body meant—and it was literal, not figurative. Her performance must have been such that it was obvious to her teachers she was not listening to her body. Perhaps she was too stiff in her movement, and her emotion could not get into the character: 不能入戏 (unable to immerse oneself in the character). Her performance was not truthful because she was not listening to her body. She had not learnt to “listen” to her “self” to find out the “real situation” in her body that housed her thoughts and emotions. It took years to finally grasp the notion of *listening to your body*: it means to stay quiet and focus on your body part by part, simply observing and sensing your body—similar to the practice of meditation and somatic practice.

The ability to remain quiet and stay focused is a skill to be learnt. Starting with breathing and standing still, one engages one’s metacognition to observe the inner “self”—paying attention to one’s breathing and progressively “scanning” the body

from head to toe. This know-thy-self awareness exercise can immediately help the mind and body to be calm and alert, setting the body to neutrality, and preparing the mind and body to be attuned to oneself. Ten minutes of breathing and stillness before the lesson can save hours of unfruitful critique frustration. It can inspire ideas that set off momentous movement and create those “right time and right people” moments. Then, as Kabat-Zinn (2023) suggested, the body is ready to receive impulses and change the course of reality in the body and mind, leading to a truthful performance.

Teaching of the Art of Performative Body Movement

Drama and theatre are a *performative art* form, more specifically a *dramatic art*, as it is make-believe, designed, carefully crafted, and performed. The salient issue for performance-based training is that the “art” that the performer is crafting is housed inside the performer’s own body–mind.

Actors need to analyse the text of the play to understand the author’s intent, the play’s theme, and the social, historical, and stylistic aspects that influenced the text. This is the conscious analytical action involving the mind. Then, actors use their body and voice, as well as experience and imagination (the soul) to enact the reality of the play (Kornetsky, 2017, p. 244).

Movement training for actors prepares them to create appropriate movement for action and explore interpretive gestures for conveying emotion using their bodies to enact the world of the play. In a professional theatre programme, the movement curriculum can include courses such as animal studies, martial arts, acrobatics, specific movement techniques such as Laban, as well as dance (e.g., classical ballet, flamenco, or character dance) (Savrami, 2016), all aimed at developing the bodies of the actors for physical dexterity and control to express the characters they play (Snow, 2012). Movement training in the theatre curriculum is under researched (Evans, 2009). The concept of attaining “soul and spirit” is perhaps too “unscientific” in an education institutional environment; it may have to be embedded in a more mundane concept such as *emotion*. Teaching and learning performative movement-based techniques that address the alignment of body–mind seem elusive and hard to articulate. Indeed, the complexity and articulation of the alignments in “body, mind, and soul” are highly individual and intricate.

The anatomy of the body governs certain truths of the body in response to the environment. For example, a running and sitting body creates different blood flow strength and speed in the body, and this is a non-debatable truth. The different speed of blood flow creates different responses in the body, which create different moving shapes of the body, which become external stimuli that are perceived and interpreted by the audience. For example, after running for five minutes, the body shows certain physical movements: the chest moves up and down, and the mouth opens up to take in more air, etc. The human body abides by certain truths due to its anatomical build. The preparation and training of the actor’s body must align with these believable truths to claim truthfulness in the naturalistic acting style. This kind of anatomical truth of the

body response to a natural environment is limited to naturalistic styles of performing. Exploration of performative body goes beyond conforming to anatomical truths.

Today, many contemporary theatre arts groups combine different styles of performance—for example, stylised performance that incorporates different traditional gestures to evoke social injustice (DV8 Physical Theatre, 2011) is an example.

Regardless of the performing styles, the actor must tell the story or theme as authentically and truthfully as possible (Kornetsky, 2017, p. 244). The performer needs to respond beyond anatomical truths of the body and respond in interpretive and representation modes. Theatre performing methods such as Viewpoints and Suzuki Methods enable performers to experience phonological negotiation and change of realities in the body (Lim, 2016). The performer's body conveys its truths to inspire and create new expressions for the complex body–mind–soul being. Truthful experience of the body becomes a subject of “feeling right”. The realities of the body depend on the depth of knowing oneself as a human person, embodied in a physical, emotional, and intellectual being.

Wilson (2015) found in her phenomenological research that meaning can be considered embedded in practices, feelings, and cognitions. It is challenging to access the meaning embedded in practices or in the body. We argue that truth and meaning in the body can be sensed with training in movement studies. In other words, performers can be trained to alter their own truths and realities through their body, perhaps when the body is ready to sense and is open to impulses. The right conditioning allows the body to articulate truthful movement, reminiscent of Chekhov's *psychology gestures*, consisting of the thoughts, feelings, and will of a human being.

Interview of Three Artist-Educators on Teaching Artistic Vision

The first author (Leong) interviewed three experienced artist-educators in the School of Theatre, NAFA, Singapore, to gather their perspectives and methods for training aspiring actors and theatre performers. The artist-educators have taught for more than a decade in the Diploma of Theatre programme. Dr Yu Wei Jie, a principal teaching fellow at NAFA, teaches contextual theory studies. Ms Zhang Jing, a senior lecturer at NAFA, teaches acting classes. Ms Zhao Na, a senior lecturer at NAFA, teaches voice classes. One of the interview questions is “How do you see your teaching embodying truth, and what methods do you use to draw out truth in self and character”.

For Yu, who teaches theory-based subjects such as history and conceptual theories, the truth is revealed through the text and research on the text, which allows students to respond to the truth at their intellectual level. Students need to know how to draw a connection between their emotional and intellectual responses. They may be confused by the different facets of truth in their practice, which may dispel one another. The alignment of mind and emotion is essential for learning in the state of “flow”. The teacher helps by understanding the learner's level of capability and

assigns suitable tasks to stimulate curiosity and encourage the student to ask questions, setting the stage for finding “truth” in their practice. The students learn that different experiences and facets of truth offer a bigger picture of truth that empowers their performance as a performer.

Zhang designs an assignment to build rapport with students in Year 1 where everyone is new to the learning environment. The activity is done in Week 4 in the acting class with everyone sitting in a circle with the teacher. The students are asked to relate a story of a fearful or frightening encounter they have experienced, or their most heart-wrenching experience, or their deepest secret. This allows the teacher to find out the students’ X-factor, to build on in the training.

This is like a circle of trust and empathy: everyone in the circle listens with such intensity and is emotionally charged with compassion, and a moment of “goodness” always appears in this circle. This exercise draws out the best of the listeners, where students are entrusted with the “burden” of another student’s traumatic experience. Many of them will hug and show support to the speaker by holding the hand of the speaker and crying together. We do not know how much of the stories are fabricated and how much of it is truth, but we know there are listeners who give full attention to the speaker. The teacher observes the response of her students in this highly vulnerable environment to take notes of her students’ truthful behaviour in both speaking and listening. Students experience truthfulness through emotional response (Brown, 2015; Furtak, 2018).

Zhao, voice lecturer in the theatre programme, devotes some time to examining the gap between the students’ capability and professional standards in voice projection. She then personalises the learning tasks for each student according to her “diagnosis”. She actively listens and watches the students’ performance of voice projection and occasionally demonstrates the professional standard. In many ways, teachers mentor students through their professional knowledge by personal experience and encounter in teaching. In Zhao’s voice classes, personalisation and demonstration of professional standards to students, and teaching students to hear what they should be hearing and to adjust their mind and body to reach the standard is a physically and mentally taxing task. The ability to block out distractions in a classroom (e.g., students practising voice work) and being able to laser focus on one student’s voice is an important skill, as is the ability to predict whether the instruction will meet an individual’s needs, and how to diagnose problems. The time spent customising voice work with the students to raise the standard enhances trust between teacher and student.

The three artist-educators who teach acting, contextual studies, and voice all play a role in shaping the artistic vision of the students through different techniques and pedagogies, enabling students to experience themselves intellectually (head), emotionally (heart/soul), physically (body), and relationally (hand and feet). This full human experience helps to shape the student’s understanding of their own unique way of responding to “truth” in the training process.

Trust and Care as Habit of the Heart

An important theme in the three artist-educators' experience and method of training aspiring actors, described in the previous section, is trust and care. Trust and care are habits of heart that are important both to performers as well as their teachers. In the actor's critique sessions, the quality of the feedback depends on the level of trust between the lecturers who are critiquing and the students who are receiving feedback. This level of trust is scaffolded in the pedagogy in the tasks of practice-based lessons such as acting, voice, and movement training in theatre curriculum.

Although the level of trust can be raised in various ways, they all involve the physical presence of and conversation between teacher and student. The senses of visual, auditory, touch, and even smell are fully alive in the presence of the performer (student) and critical audience (teacher). In this performative mode of critique session, students perform live in front of their teacher and peers (audience), where truth runs like a current through the bodies of the performer to the audience who are touched by the performer's "passion" (Larllham, 2012, p. 433).

Another habit of heart of a performer is to "care" for the being. Self-care can set one's body back to neutral state, ready to perceive information and analyse emotion objectively, and enable the performer to transform into another character effectively. Like an athlete conditioning the muscles of the body to perform his or her best for the competition, performers condition their body to perform its best to transpire truthful performance that will touch the audience. Performers pay attention to their body before performance with a carefully prepared warm-up routine to elevate self-care awareness.

When we grow to care for oneself, we see true nature. When we see the true nature of a body, we start to understand its condition and care for it. Continuing in this line of thought, one needs to cultivate caring to achieve truthfulness. Teaching in a classroom full of people who share the same goal fosters a higher level of care and attention with one another (Wolf et al., 2016). Perhaps the subjective interpretation of human experience such as care, truthfulness, trust, can become assessment criteria for movement-based studies.

When students start to care about their craft of performance, they pay attention to the details of every intention and movement on stage. Attention to detail is time-consuming work. Many performers practice many hours a day to take care of their performative craft and advance their artistry. Self-driven practice is derived from the student's motivation to do a "good" job in their performance. We see that in many practical classes such as Zhang Jing and Zhao Na's acting and voice lessons where students are recapitulating the same part during rehearsal, repetition of the same material in the next class, but diving deeper into the content, showing details in their performance body.

Caring brings forth trust (Von Krogh, 1998). When you care about something you pay attention to the details, when you pay attention to detail your time expands (longer chronological time), you take time to experience your "self". Knowing your "self" more in that time-space, you discover new insights about something; when

that happens you know your “self” a little better; when you know, you trust; and when you trust you build confidence; when you have confidence, you start to move beyond yourself a little; when you do things beyond your own self, you grow. This trust in the human body is acquired by knowing the truth in the interconnection of the body, emotion, and mind.

Conclusion

This chapter has attempted to shed light on the deep structure of the signature pedagogy for acting and performative art forms—especially in the alignment and interaction of the habits of mind, hand/body, and heart/soul for giving a whole-heartedly truthful performance.

The awareness to access meaning embedded in practices or in the body can illuminate truth in the body and alter its presence. Artist-educators in theatre performance seek to help students to understand that their body houses a powerful “teacher” who can change the course of its reality. Aspiring theatre professionals need to “listen” to their body to find those impulses. When they find the impulses of their body, they discover themselves anew and that is the moment of truth that empowers them to make change. They are no longer a victim to them “self”, but a trustworthy caretaker of them “self”. Movement training that builds trust in oneself through the body is anatomical and ontological. Constantly seeking to balance the body–mind–soul alignment, it helps students to regulate their emotion and thoughts, realise new insights of themselves, and build new knowledge and confidence to face life challenges. Perhaps what is in us is much more valuable than what the world has to offer. The practice of performative movement in actor training cultivates the habit of heart to seek the truth in self-discovery that resonates with “it feels right, I know it”.

In creating a character, nothing can be done without the involvement of body, mind, and emotion of the actor. It is an immersive, whole human involvement. Setting up an environment for conducive learning in body movement for acting involves layers of scaffolding and improvisation of “knowing when to do what”, seize the time and sense the right moment. Speaking the right words to the right person at the right time can change the course of conduct and belief. Creating these “ah ha” moments in the training environment allows truthful conversation to happen, and a communication to the inner “self” begins. This self-discovery process is in the form of continuing conversation between the teacher and the learner that leads to seeking truthfulness and goodness in the performance (Kornetsky, 2017, p. 244). Many who chose to become an actor or a performer have encountered an experience of momentous impact related to the theatre in their growing-up years—a scene that touches them emotionally, a character they fall in love with, a performance that leaves them in awe, an encounter of being inspired by the theatre arts, etc. The students who come to study theatre arts love something about theatre, and if we can ascertain that and guide them accordingly, the seed that has been planted in them will continue to grow

(Cremona, 2020). That is why most of the first day of lesson involves asking students, “What made you come to study in theatre?”

Movement training can be a way to cultivate the mental wellbeing of today’s youths who are constantly engaged with social media. With an outward looking mentality, their minds and eyes are fed with infinite information resulting in the fear of losing out and sometimes losing themselves in others’ voices. Looking inwardly and studying the truth within the body can be a new feed for youths to anchor themselves in their body to navigate the world rather than letting the world toss them around.

References

- Brown, B. (2015). *Daring greatly: How the courage to be vulnerable transforms the way we live, love, parent, and lead*. Penguin.
- Brown, B. (2021). *Atlas of the heart: Mapping meaningful connection and the language of human experience*. Random House.
- Cambridge Online Dictionary. (n.d.). Verisimilitude. In *Cambridge.com dictionary*. <https://dictionary.cambridge.org/dictionary/english/verisimilitude>
- Chekhov, M. (2002). *To the actor*. Routledge. (Original work published 1953.)
- Cremona, V. A. (2020). Stanislavski’s system: Mimesis, truth and verisimilitude. *Stanislavski Studies*, 8(1), 23–32.
- DV8 Physical Theatre. (2011, August). *Can we talk about this?: Ann Cryer* [Video]. YouTube. <https://youtu.be/vNVPumETpuA?si=I639RjRqrGTLwy1E>
- Elster, J. (1996). Rationality and the emotions. *The Economic Journal*, 106(438), 1386–1397.
- Evans, M. (2009). *Movement training for the modern actor* (1st ed.). Routledge.
- Furtak, R. A. (2018). *Knowing emotions: Truthfulness and recognition in affective experience*. Oxford University Press.
- Herstand, T., & Pixley, E. (1976). Review of the actor’s freedom: Toward a theory of drama, by M. Goldman. *Educational Theatre Journal*, 28(2), 278–279.
- Hill, J. (1750). *The actor: A treatise on the art of playing, interspersed with theatrical anecdotes, critical remarks on plays, and occasional observations on audiences*. R. Griffiths.
- Kabat-Zinn, J. (2023). *Wherever you go, there you are: Mindfulness meditation in everyday life*. Hachette Books.
- Kornetsky, L. (2017). Signature pedagogy in theatre arts. *Arts and Humanities in Higher Education*, 16(3), 241–251.
- Langman, D. (2014). *The art of acting: Body-soul-spirit-word. A practical and spiritual guide, 1*. Temple Lodge Publishing.
- Larlham, D. (2012). The felt truth of mimetic experience: Motions of the soul and the kinetics of passion in the eighteenth-century theatre. *The Eighteenth Century*, 53(4), 432–454.
- Lim, A. E. H. (2016). Actor training and intercultural jam in a multilingual context. *Theatre, Dance and Performance Training*, 7(1), 74–88.
- McCutcheon, J. R. (2008). Playing the exchange: The actor audience dynamic. In *Awakening the performing body* (pp. 145–155). Brill.
- Meehan, E. (2015). Speak: Authentic movement, ‘embodied text’ and performance as research. *Journal of Dance & Somatic Practices*, 7(2), 313–329.
- Merriam-Webster Online Dictionary. (n.d.). Authentic. In *Merriam-Webster.com dictionary*. <https://www.merriam-webster.com/dictionary/authentic>
- Moore, S. (1965). *The Stanislavski system: The professional training of an actor*. The Viking Press.
- Petit, L. (2010). *The Michael Chekhov handbook: For the actor*. Routledge.

- Savrami, K. (2016). Does dance matter? The relevance of dance technique in professional actor training. *Research in Dance Education*, 17(3), 204–217.
- Snow, J. (2012). *Movement training for actors*. Methuen Drama.
- Stanislavski, C. (1989). *An actor prepares* (E. R. Hapgood, Trans.). Routledge.
- Stanislavski, C. (2010). *An actor's work: A student's diary* (J. Benedetti, Ed. & Trans.). Routledge.
- Von Krogh, G. (1998). Care in knowledge creation. *California Management Review*, 40(3), 133–153.
- Wilson, A. (2015). A guide to phenomenological research. *Nursing Standard*, 29(34), 38–43.
- Wolf, W., Launay, J., & Dunbar, R. I. (2016). Joint attention, shared goals, and social bonding. *British Journal of Psychology*, 107(2), 322–337.

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Chapter 13

Codetta: Pedagogies of Truth



Rebecca Y. P. Kan

*“What are you doing here?” he asked.
“I’m looking for the truth, or at least useful knowledge,” was the reply.
I’m pretty sure someone must have left it here.
But it’s so dark, muddy, and toxic here that I fear you will never find anything of value. Why don’t you go look where there is a bit more light?
Because the muddier it is, the better the chance that I will find something truly interesting. It’s so unlikely that anything of value will be hidden in plain sight. (Shulman, 2002, p. 248)*

Abstract Pedagogies of truth refer to teaching methods and approaches that prioritise the discovery of truth. These pedagogies are grounded on the belief that education should not only impart knowledge and skills, but also foster the students’ intellectual and emotional intelligence to gain new insights about themselves, construct new realities and develop the confidence to critically engage with the world around them. Such pedagogical signatures are especially important in an age where masters are no longer gatekeepers of truth. In artistic practice, the search for truth relates to a complete alignment through habits of mind, body, hand, ear, heart and soul. Hence, educational practices that empower students to discover their strengths, limitations and biases manifest a more objective and truthful approach to performing, making and learning in the arts.

Pedagogies of truth refer to teaching methods and approaches that prioritise the discovery of truth through the pursuit of art. These pedagogies are grounded in the belief that creative education should not only impart knowledge and skills but also foster the students’ intellectual and emotional intelligence to discover new insights about themselves, construct new realities, and build confidence to critically engage with the world around them. In the present age of post-truths, where “expertise—and

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the experts who hold knowledge and methods for validating knowledge claims—are under attack” (Harrison & Luckett, 2019, p. 259), the importance of interrogating claims to truth is even more vital.

Leong and Khoo (Chap. 12) take a post-positivist view that rejects the idea of a single, presumed universal standard of truth (Crotty, 1998; Nabih, 2010). Instead, they argue that truth is context-dependent and can vary depending on the situation or the cultural norms of a particular society. What may be considered truthful in one setting may not hold the same value in another (D'Eon, 2020; Wisker, 2014). As Deleuze (1994) stresses, “There is no truth to be excavated; I wish to think the art encounter as an event, a multiplicity and not as essence” (cited in Higgins et al., 2017, p. 22).

In addition, the authors suggest that the complexities and nuances of human experiences cannot be easily measured or quantified. Truth, they argue, is not just filtered through personal experiences in student-actors but requires the involvement of auditors to experience the emotions, movements and thoughts that are conveyed. It is in the mastery of artist-educators that we can elicit truthfulness in actor training from emotional, intellectual, and personalised approaches in teaching and learning. The findings from interviews and observations of theatre practitioner/scholar/educators pinpoint more distinctly about how the development of a conceptual framework through habits of the mind, body and soul are related to truthful performative movements, and the important role that authenticity plays in signature pedagogy, where there is “overall cohesion of one’s rational, emotional, verbal, non-verbal, visible and non-visible signals and information” (Kiel et al., 2016, p. 209).

In the context of the performing arts, pedagogies of truth encourage students to penetrate outward expression in closer alignment with their interior condition. The purpose is not to remove the artists’ personal identity voice, but to enhance and refresh the audience with transformative encounters that elicit dispositions of trust and care. In music and dance performances, it is likewise important to “communicate sensory messages and meaning vividly to the audience, who then re-construct the meaning and reality in their minds, and respond emotionally in the constructed world” (Leong and Khoo, Chap. 12). The exchange of realities between performers and audience can be viewed as an active shift of energy from performer to the audience, though the audience has the higher “transformative” encounter during the performance. In *Text and Act*, Taruskin (1995) observed that one can derive truth not from historical verisimilitude, but from performance as a true mirror of present-day taste: “Being the true voice of one’s time is (as Shaw might have said) roughly forty thousand times as vital and important as being the assumed voice of history” (p. 166).

Truth in itself should and can be contested as non-truths or half-truths (Calder, 2013; Levinas, 1989). This chapter attests that the way truth is being approached and manifested is different in every pedagogical approach and could even be a hotly debated discourse in which rival truth claims are subjected to rigorous scrutiny. Fitch (2016) quotes the views of a sculpture educator, who embraces the post-modernist belief that reality is beyond absolute interpretation: “‘Reality is a matter of consensus’, where what is considered true is dependent mainly on the strength of the majority who agree with one another” (p. 165). Today, commercial viability is king

of artistic survival. The evolution of performances from great and renowned soloists to spectacular contemporary performing artists of today is by no means accidental, but both essential and organically natural. Performances that have unprecedented success derive truth for being, for better or worse, a true mirror of late-twentieth-century taste. Modern audiences have been begun to discover art that they can call their own and performers are now adapting to modern taste. In the words of Taruskin (1995), performances are “an authenticity born of its unquestionable relevance to our sense of ourselves at this moment and to the culture we have invented. We like what is authentic because authentic is what we like” (p. 192). As such, we need to encourage bold, novelistic and upfront advances of art and artists, not to deny the truth, nor take truth to be clear-cut and revealed by any one autocratic master, but to continually refine, critique and explore “truths that won’t stand still” (Pelias, 2004, p. 171).

This calls for an urgent need to be concerned about pedagogies of truth in the profession of the arts. The educators’ insistence that truth, and need to educate both students and audience about the performer’s perception of truth, implies pedagogical strategies that should be further developed. Two questions arise: (1) what role should a signature pedagogy play in providing the search for truth? and (2) what steps should a signature pedagogy take to strengthen its effectiveness in seeking truth?

Here, we propose a few strategies.

First, we need to make every effort to reflect more about habits of the heart, head, and hands that can influence perceptions of truth. By encouraging students to confront uncomfortable awareness of their body, mind, and soul, these pedagogies enable students to discover their strengths, limitations and biases, fostering a more objective and truthful approach to performing, making and learning in the arts. In the words of Leong, “when you find the impulses of your body, you discover yourself anew and that is the moment of truth that empowers you to make change, you are no longer a victim to your ‘self’, but a trustworthy caretaker of your ‘self’”.

Second, we should recognise the value of truth within the aesthetic positions of *fin-de-siècle* twentieth-first-century post-modernism. With generative AI, masters previously viewed as authority figures are no longer gatekeepers of the truth. Traditional pedagogies represent the progressively weakening survival of earlier teaching techniques, largely inherited from masters of the past and one that is fast becoming historical. On the other hand, post-modernism implies that truth is “individually constructed, not universally implemented” (Katt, 2014 in Stringer et al., 2014, p. 162). Therefore, teaching and learning are transpired through “local investigations of real-life experiences, rather than by relying solely on generalised studies” (Stringer et al., 2014, p. 10). According to this view, truth is not an objective and neutral concept but rather a contested terrain where different interests and perspectives influenced by social, political, and cultural factors compete for dominance. By prompting a post-modernist approach, pedagogies of truth help us to develop a new cognitive frame, where it is insufficient merely to expect students to be truth-seeking, but to foster a developmental process of change where students themselves come to understand that “there is truth out there, but we can only know it imperfectly” (D’Eon, 2020, p. e1).

Third, we propose a new approach to higher education in the arts that brings us to rethink how we are sensing and sensitising students to beauty in nature or to “truths” about other lives or cultures (Choo, 2021). The topic of authenticity and truth should become an essential part of the arts education curriculum. An education that puts a spotlight on truth fosters the virtues of a democratic (vs. autocratic) education among both students and teachers (Stevenson, 2010). Communities and audience learn by participation and education of the truth from the performances, the critics and the pedagogues, suggesting there are different levels of understanding and acknowledgement of the truth. In critique as signature pedagogy, Klebesadel and Kornetsky (2009) acknowledge that artistic truth “is as much socially as personally constructed” (p. 108). What is essentially truth needs to be in accord with contemporary taste: a performance is “truthful” because it “tailored to please modern ears” (Dulak, 2011, p. 33). As Calder (2006) states, “facts are not like furniture at all; they are more like dry ice, disappearing at room temperature” (p. 1361). But at the heart of this issue is what Fitch (2016) identified, viz. that students lack awareness of various ideological differences and aesthetic beliefs that can underpin the way they are taught, and “students are placed in a profoundly unfair situation as they may be penalised for reasons they may not understand, could not expect, and cannot refute” (p. 195). If artist-educators believe that seeking truth is an important creative disposition, then it is the responsibility to position deep and implicit structures into the contexts of learning, where students can come to understand the nature of underlying beliefs and attitudes and develop as independent investigators after the truth (MacFarlane, 2021).

Fourth, one needs to recognise that merely providing real-world experiences in the discipline alone does not bring out the truth in students. This is especially so in this age, when generative intelligence questions the truthfulness of artistic creations made by students. But even way before the AI-explosion, we had masters who, through critiques, dictated outcomes delivered by the apprentice (Ghassan & Bohemia, 2015). Hence, the ways we adapt real-world experiences to enable truth sensing should be based on the needs of the students than on the expectations of the discipline (Shively, 2015). Just as a truthful performance should strive for a balance between authenticity and creativity, so also a curriculum rooted on meaning-making should strive for a balance between real and future worlds. It would be important to capture different realities and at each instance realise the essence or heart of every context.

One approach in undergraduate theatre programs is to use critique to train students to “deploy their bodies, voices, experience, understanding, and imagination to capture the essence of a character and enact the world of the play they are learning”, in order to make choices that are clear and justifiable (Kornetsky, 2017, p. 245). Another approach in theatre assessment is to encourage interpretive narratives that “lie deeply within the theatre education community’s values” (Gray, 2015, p. 86). But for pedagogies of truth to be effective, rather than simply allowing emotional responses among students, the teachers must create a safe environment where students are not punished for failure (Sawyer, 2017). Leong’s account of theatre practices in the School of Theatre at the Nanyang Academy of Fine Arts, University of the Arts Singapore, allows us to re-frame how we can train student-performers in truth-bounding

strategies that are sufficiently compelling to draw the audience into the reality of the performer. In a nutshell, theatre pedagogical practice is truth-bounding at work and signature pedagogies of truth can only be found through master performing artist-educators who elucidate truth by their pedagogies. Quoting from Saberi (2017), “you may know a truth, but if it’s at all complicated, you have to be an artist not to utter it as a lie” (p. 636).

Fifth, encourage digital storytelling. Enabling students to speak deeply about their personal and authentic experiences through digital storytelling helps students understand their own realities in a more meaningful and personalised way and deepens understanding of identity and difference, leading to emotional truths that build a tangible connection from narrator to listener (Benmayor, 2008; Raj & Ulanoff, 2022). Benmayor (2012) goes further to explain that the shared experience of authoring stories digitally relays more than the truth of an individual, but conveys to the students a realisation that they are participating in a collective experience, where they speak not only for themselves but also for others. In this way, “the invisible becomes visible, creating a space for empathic listening, learning, and understanding” (p. 523).

Pedagogies that embody truth are living traditions—while proclaiming deference to historical authenticity, but allowing artistic sensibilities or artistic vision to deliver the final outcome, we empower students with the necessary tools to construct new realities in an ever-changing world. But the challenge of such pedagogies lies in the students’ perceptions of truth and, specifically, in the connections and similarities between the practices, the students are engaging in and the value of those practices in their future professional communities (Barab et al., 2000; Radinsky et al., 1998). Students also need to break free of traditional ways of thinking, and “recognise multiple possibilities, multiple truths, be able to adapt to new environments and conditions, and be flexible in their thinking and not limited by rigid binaries” (Viramontes, 2012, p. 3). Until we relinquish anachronistic modes of thinking, we will never achieve integrated, authentic and truth-bounding practices. By making every effort to balance claims to truth, these pedagogies foster intellectual independence and creativity. Additionally, pedagogies of truth enhance students’ ability to engage in meaningful dialogue and collaboration, preparing them for future professional endeavours. In generating differentness, this signature answers to modernity’s desire for diversity and inclusivity.

References

- Barab, S. A., Squire, K. D., & Dueber, W. (2000). A co-evolutionary model for supporting the emergence of authenticity. *Educational Technology Research and Development*, 48(2), 37–62.
- Benmayor, R. (2008). Digital storytelling as a signature pedagogy for the new humanities. *Arts & Humanities in Higher Education*, 7(2), 188–204.
- Benmayor, R. (2012). Digital testimonio as a signature pedagogy for Latin@ Studies. *Equity & Excellence in Education*, 45(3), 507–524.
- Calder, L. (2006). Uncoverage: Toward a signature pedagogy for history survey. *The Journal of American History*, 94, 1358–1370.

- Calder, L. (2013). The stories we tell. *OAH (Organization of American Historians) Magazine of History*, 27(3), 5–8.
- Choo, S. S. (2021). *Teaching ethics through literature. The significance of ethical criticism in a global age*. Routledge.
- Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. Sage.
- D'Eon, M. F. (2020). Being a post-positivist is exhausting: The daunting commitment to an uncertain truth. *Canadian Medical Education Journal*, 11(5), e1–e4.
- Deleuze, G. (1994). *Difference and repetition* (P. Patton, Trans.). Columbia University Press.
- Dulak, M. (2011). The quiet metamorphosis of early music. *Repercussions*, 2(2), 31–61.
- Fitch, S. (2016). *Critiques, credits and credibility: Assessment practices in higher education* [Ph.D. dissertation]. Concordia University, Montreal.
- Ghassan, A., & Bohemia, E. (2015). Amplifying learner's voices through the global studio. In M. Tovey (Ed.), *Design pedagogy developments in art and design education* (pp. 215–236). Routledge.
- Gray, C. P. (2015). *Signature pedagogies in undergraduate theatre as revealed through assessment: An exploratory study* [Ph.D. dissertation]. Illinois State University.
- Harrison, N., & Luckett, K. (2019). Experts, knowledge and criticality in the age of 'alternative facts': Re-examining the contribution of higher education. *Teaching in Higher Education*, 24(3), 259–271.
- Higgins, M., Madden, B., Berard, M.-F., Kothe, E. L., & Nordstrom, S. (2017). De/signing research in education: Patchwork(ing) methodologies with theory. *Educational Studies*, 43(1), 16–39.
- Katt, T. P. (2014). A learning journey (in progress). A personal biographical ethnography. In E. T. Stringer, M. F. Agnello, S. C. Baldwin, L. M. Christensen, & D. L. P. Henry (Eds.), *Community-based ethnography: Breaking traditional boundaries of research, teaching and learning* (pp. 160–177). Routledge.
- Kiel, E., Lerche, T., Kollmannsberger, M., Oubaid, V., & Weiss, S. (2016). The pedagogic signature of the teaching profession. *Journal of Education and Learning*, 5(4), 202–220.
- Klebesadel, H., & Kornetsky, L. (2009). Critique as signature pedagogy in the arts. In R. A. R. Gurung, N. L. Chick, & A. Haynie (Eds.), *Exploring signature pedagogies* (pp. 99–120). Stylus.
- Kornetsky, L. (2017). Signature pedagogy in theatre arts. *Arts & Humanities in Higher Education*, 16(3), 241–251.
- Levinas, E. (1989). Reality and its shadow. In S. Hand (Ed. & Trans.), *The Levinas reader* (pp. 129–143). Blackwell.
- Macfarlane, B. (2021). Why choice of teaching method is essential to academic freedom: A dialogue with Finn. *Teaching in Higher Education*, 1–13.
- Nabih, H. E. (2010). Process-based learning: Towards theoretical and lecture-based coursework in studio style. *ArchNet-IJAR: International Journal of Architectural Research*, 4.
- Pelias, R. J. (2004). *A methodology of the heart*. AltaMira Press.
- Radinsky, J., Bouillion, L., Hanson, K., Gomez, L., Vemeer, D., & Fishman, B. (1998, April). *A framework for authenticity: Mutual benefits partnerships*. Paper presented at the American Educational Research Association, San Diego.
- Raj, A. G., & Ulanoff, S. H. (Eds.). (2022). *Storying a reflexive praxis for pedagogy. Concept, method, and practices*. Palgrave Macmillan.
- Saberi, H. (2017). Virtue pedagogy and international law teaching. In L. Eslava, M. Fakhri, & V. Nesiah (Eds.), *Bandung, global history, and international law: Critical pasts and pending futures* (pp. 636–654). Cambridge University Press.
- Sawyer, R. K. (2017). Teaching creativity in art and design studio classes: A systematic literature review. *Educational Research Review*, 22, 99–113.
- Shively, J. (2015). Constructivism in music education. *Arts Education Policy Review*, 116, 128–136.
- Shulman, L. S. (2002). Truth and consequences? Inquiry and policy on research on teacher education. *Journal of Teacher Education*, 53(3), 248–253.

- Stevenson, N. (2010). Critical pedagogy, democracy, and capitalism: Education without enemies or borders. *The Review of Education, Pedagogy, and Cultural Studies*, 32(1), 66–92.
- Stringer, E. T., Agnello, M. F., Baldwin, S. C., Christensen, L. M., & Henry, D. L. P. (Eds.). (2014). *Community-based ethnography: Breaking traditional boundaries of research, teaching and learning*. Routledge.
- Taruskin, R. (1995). *Text and act*. Oxford University Press.
- Viramontes, A. (2012). Autoethnographic reflections: Autoethnography as a signature pedagogy of speech communication. *Transformative Dialogues: Teaching & Learning Journal*, 6(1), 1–10.
- Wisker, G. (2014). Nothing wasted: Engaging values and the imagination. How can working with feminist speculative fictions enthuse and engage students with social justice and sustainability in an age of austerity? *Journal of Gender Studies*, 23(3), 302–316.

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Chapter 14

Gamelan: Signature Pedagogy for Creative Collaboration



Alicia Joyce De Silva

Abstract Current research in creative collaboration in music is largely limited to professional groups in the areas of jazz and composition, often in the context of higher education. Little is being done in the area of world music or, in this case, gamelan. In this chapter, I take an autoethnographical approach, as both a gamelan player and educator, to examine how gamelan cultivates the skills and disposition necessary for creative collaboration. Gamelan, with its minimal entry point compared to most other groups/ensembles, and its emphasis on community and playing together, exhibits a non-hierarchical approach to learning—a key feature of creative collaboration highlighted by Barrett et al. (2021). This makes it an exemplar of creative collaboration not just for the music profession but for other professions as well. As collaboration is now recognised as vitally important in many professions, gamelan has the potential to show how collaborative skills can be learnt and cultivated by anyone and, when required, transferred to another context and environment. This chapter also considers how gamelan can be a signature pedagogy for cultivating creative collaboration in music that can be experienced and transferred beyond the music profession.

A Signature Pedagogy for Creative Collaboration?

Signature pedagogy refers to an approach to educating students for a particular profession such that the students acquire not just textbook knowledge, but also the ways of thinking, doing and feeling, typical of experienced professionals in the particular profession—that is, the habits of mind, hand, and heart, as Shulman (2005) puts it. Often, these teaching approaches are distinct for the particular profession, and one may not be able to transfer these to another profession. Using the two professions of medicine and law from Shulman's (2005) article as example, someone trained in law may not have substantial skills and knowledge that are transferable to a medical

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doctor. But what about soft skills that are purported to be transferable? Can we consider a signature pedagogy for a transferable skill?

In this chapter, I propose that it is indeed possible and even desirable to develop signature pedagogies for some transferable skills. I focus on the ability and disposition for creative collaboration through learning the Javanese gamelan, an iconic traditional culture of Indonesia. I draw on my experience as a musician/composer/educator learning and teaching gamelan to share how playing in a gamelan group develops skills in creative collaboration that are useful for musicians but also for any profession that involves a significant amount of collaborative work.

I have structured the chapter like a *gendhing*, a Javanese term referring to a gamelan musical form that comprises sixty-four or more beats per gong cycle, or simply to a piece of gamelan music. I adopt both definitions in this chapter. Like any piece of music, a *gendhing* comprises different parts, beginning first with the *bukâ*, the introduction. This is followed by the main section of the piece proper which may have multiple sections (more on this later). It is in this section that the complexities of gamelan unfold with their different textures, densities (*irâmâ*), and temporal changes. Finally, the piece comes to an end, known in Javanese as *suwuk*. In some cases, it may be a particular section or phrase that is played to end the piece, or it could simply be an indication that the piece is coming to an end.

Each of the above segments corresponds to how I have segmented my learning experience with gamelan—how it began, the development in how I learnt and taught gamelan, the creative collaboration element with and through gamelan, and its possible role as a signature pedagogy for creative collaboration. But before we can discuss how gamelan supports creative collaboration, what exactly is creative collaboration?

What Is Creative Collaboration?

The concept of creative collaboration rose in prominence through John-Steiner's (2000) eponymous book. Its aim was to establish how creativity may not always be a solitary activity, and that there are social elements involved in the co-creation and production of a creative work. This has been further developed to include many different groups that may interact or collaborate for the production of a particular creative outcome. In their systematic literature review of creative collaboration and collaborative creativity, Barrett et al. (2021) identified creative collaboration as the collaborative process that has creativity embedded within. So, if I were to take this framework and put it in context with gamelan, the different musicians that come together to play in a gamelan group are in collaboration for the singular creative output of a gamelan piece.

Besides this broad framework, Barrett et al. (2021) also identified key features of creative collaboration as:

- Non-hierarchical learning.

- The element of “flow”.
- Equal (to some extent) distribution of responsibilities.
- Potential unpredictable outcomes that are determined by the quality of the collaborators.

These are elements that I recognise as part of my learning and playing gamelan experience. In some ways, most research and/or writings about gamelan (and broadly, the world music curriculum) boast of numerous benefits—improved ensembles (which may be considered a form of creative collaboration), memorisation, and even a general sense of improved musicality, to name a few (Bakan, 1993; Haddon, 2016)—to the Western-trained musician as they experience various forms of the above elements.

Though I am drawing from a rather skewed personal perspective of a Western-trained musician/composer/educator in considering how gamelan may be a signature pedagogy for creative collaboration, I propose gamelan as a signature pedagogy for music collaboration and beyond that to other arts professions.

Thus the piece begins.

The *Bukâ*

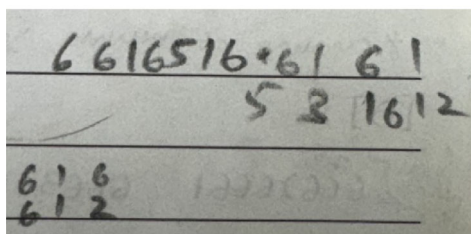
The *bukâ*, the introduction to a piece of gamelan music, can be loosely translated as “opening” where it signals to the rest of the musicians in the group that a particular piece is about to begin. Depending on the performance context and/or nature of the piece, it is often played by a single instrument (usually *bonang barung*, *gendèr* or *rebab*), or sung by the *pesindhèn* (a female singer). The drummer—often described as playing the role of a conductor in a Western orchestra—will play the *kendhang* (a double-headed barrel drum) usually towards the last eight beats of the *bukâ*, signalling to the rest of the group that they are approaching the gong stroke (played by the gong *ageng*—the largest gong in the gamelan ensemble), marking the beginning of the piece. Occasionally, a few other instruments are added, including the *kendhang*, creating a denser musical and textural activity to signal and ease the ensemble to begin.

Musically, the *bukâ* is not the most complex part of the piece. But it can be challenging as things are not what it seems. The music notation may indicate the bare skeleton of what the *bukâ* is, but occasionally, the instruments or singers may perform a more elaborated rendition from the written notation, complicating things for a novice player or learner (see Fig. 14.1).

Anyone who picks up gamelan has to begin somehow. Just like a *bukâ*, this beginning may be simple or complex. It can be as straightforward as attending a class in school (like the students I teach), or a chance encounter. I consider mine to be the latter, and it began with the question: “Would you like to play some gamelan?”

That officially opened up the gamelan world to me. My prior experiences of gamelan comprise simple descriptions from music teachers and informally learning

Buka: 6 6¹65 1¹653 6¹32G Simple *bukå* from a printed notation.



Complex *bukå* of the same piece as above but written for the *gendèr* (an elaborating instrument).

Fig. 14.1 Simple *bukå* versus complex *bukå*

and playing with a *kuda kepeng* (a traditional Javanese dance where the performers straddle a horse-like puppet usually made of plywood) group at the Singapore Malay Village. I was there almost every week, watching, listening, and playing along, picking things up since the repertoire was not complex. Afterall, they were meant to be repetitive, lulling the *kuda kepeng* dancers into a trance-like state.

The distinction between the informal and more formalised, or “official”, moment serves to mark the start of my gamelan journey, and set the environment and consciousness that learning and playing was taking place for me. Both my experience with the *kuda kepeng* group and subsequently the gamelan group may be considered a rather free, relaxed and even ambiguous learning experience compared to the classroom setting that I teach in.

Of course, I said yes without hesitation!

At that point, I was already keen and open to learning about other musical cultures and their ways and perspectives of music making. However, this *bukå* was not a straightforward one. The group preferred someone who had experience playing gamelan since they were getting ready for a performance. I shrugged it off and did not think too much about it as the requirements made sense to me as I took it to mean that there was no need to “teach from scratch”. But about a week later, the final notes of the *bukå* came within earshot—I was able to join the group. My friend had mentioned to the group that I had some musical background in piano-playing, which was viewed as a bit of an advantage.

The gong *ageng* sounds. The practice day finally arrived.

My friend took some time ahead of the practice to share with me the notations of the pieces that were to be used for the upcoming performance, guiding and preparing me for the practice session. The notations intrigued me as this was the first time I knew of notation for gamelan, having only played and learnt by listening and watching when playing with the *kuda kepeng* group. Coming from a Western music perspective and training, where music scores were key to learning and playing of a piece, I knew this would be a good reference for me as I embarked on this new experience.

Though new in the gamelan context, the music notation was not unfamiliar to me as I had encountered similar cypher (numeric) notation through the angklung ensemble (comprising bamboo percussion instruments or rattle that are ethnic to the Sunda region in West Java) during my secondary school days. Along with the notations, my friend explained some sequences in the music, highlighting some transition points and cues—changes in tempo and the use of different *kendhangs*—that I can use as reference, so that I would know what was going on during rehearsals. I tried to remember these clues diligently, pencilling in some notes along the way. In that moment, it dawned on me that I might not be quite so ready for this performance. I was not worried or afraid as, in some ways, I trusted in my Western music training in pitches, pulse and rhythms to be able to adapt and fit in. But it made me wonder or question whether I might be able to manage or cope using the ways that I had been used to. Afterall, they did require someone with experience playing gamelan, and clearly I had none!

I do not recall much of that first session now as it was uneventful and the many *bukås* rehearsed that session were rather straightforward. However, I was constantly on my toes, recalling and referring to the notes that my friend had gone through earlier, making sense of cues from the drummer, making my own mental notes, watching the rest of the players to get a sense of what was about to happen when moments baffled me, and trying to follow the notation known as *balungan*—loosely translated as “skeletal melody”, a concept that I later learnt was different from the notion of main melodies in Western music. I have come to observe and realise that when placed in a new ensemble environment, these are some things I do to make sense of and cope with the situation.

Compared to the rather free and informal experience at Malay Village, this gamelan session came across as rather formal. It was akin to the practices or rehearsals that I was accustomed to when I was playing in my primary school brass band and the angklung ensemble in secondary school. There was a semblance of structure where the group played through each piece, thereafter focusing on sections that were problematic—transitions that were not smooth, or passages that players were unsure of. Everyone seemed like seasoned players who understood what was going on. I did not know it at the time, but later learnt that the players came from all walks of life, and not everyone had any form of music training.

Although I received an “official” invitation to join the gamelan group, an “official” invitation is not strictly necessary. Quite the contrary! Over the years that I played with the group, I witnessed new members joining freely and for many reasons. Some join because of companionship—a friend might have brought them along, and they stayed on simply because they were “hooked” to the music and to the new friends that came with it too! Others developed a curiosity towards the instruments and its culture either from a class or by a chance encounter, and thus continued to delve deeper. Whatever the reason for joining, we shared one common denominator: we had minimal or no real experience playing gamelan. In fact, the “recruitment” pitch that I frequently heard over the years was simply to just come and join us to play!

This “freedom” and sense of fluidity in how and when members joined explained why members of the group came from all walks of life. It also meant that there

is minimal training or introduction to the instruments when they first joined. They would have sat along with the rest of the group to play and learn at the same time (just like how I started). New members who may occasionally be confused or “lost” would be assisted by members sitting nearby in the form of pointing, or even simply reading the numbers aloud as the practice goes on (Tan et al., 2020). In fact, this feeling of being thrown into the deep end of things is often mentioned when musicians write about or share their experience learning and playing gamelan (as well as other world musical cultures).

This “free” and “fluid” way is very unlikely for Western music ensembles. Take for instance a choir. There is usually a prescribed period for auditioning new members to allow them to ease into the group and for everyone to learn pieces together from the start. It is certainly impossible to join a string quartet, even if not a professional group, if one had just started to learn the violin or the cello. Exceptions may be made in school ensembles. Even then, some level of proficiency is expected before the students are able to play together effectively. This usually takes the form of separating the new members from the more seasoned, proficient, senior members. Yet the free and fluid way is the norm for gamelan. It is also this ability of the gamelan group to accommodate a wide range of players’ capabilities in addition to the players coming from all walks of life that makes it a perfect environment to foster creative collaboration.

At a glance, the overall flexibility and openness engenders an environment for non-hierarchical approach to learning that does not come from the expert alone (in this case, the leader of the group), but also from other members (as they point or read aloud segments of the notation) who will have varying levels of expertise and experience. It supports the notion of casual “go with the flow” manner of learning, which I see as a starting point that would develop into Csikszentmihalyi’s idea of flow: “the state in which people are so involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it” (Csikszentmihalyi, 1990, p. 4). This has been a feature of learning and playing gamelan that many, including myself, attest to (Haddon, 2016; Leonard et al., 2013; McIntosh, 2013; Tan et al., 2020).

There are, however, different degrees of flow. In my first encounter of gamelan as shared earlier, there is an element of “flow” in the sense of just allowing myself to be aware, and be part of the whole music making or collaborative experience. Where I have ascribed it earlier to my Western music training of listening to the many different elements, I must to some extent allow myself to be “carried” by that musical experience before I am able to “flow” along. So even though there seems to be an element of the unknowing and subconscious as in Csikszentmihalyi’s notion of flow, this “being on my toes” state is a cognitive state that allows this notion of “flow” to take place. Then there are also those instances where the music, with its repetition and therefore trance-like effect, lulls me into the music, allowing the music to envelop me. In other words, being “in the zone” with the music.

At a recent opportunity to perform with the group, the experience of these two notions of “flow” was reignited, and this led me to some of the following reflections.

It seems that my experience has somehow come full circle—like a gong cycle in a gamelan piece. I found myself experiencing that familiar feeling of being “new” again, as the make-up of the members had changed. Though “new” to the group again, I was no longer unaware of what was going on. I still relied on my musical skills, experience, and knowledge. I was still “on my toes”. However, unlike before, the need to be “on my toes” was no longer about whether I was able to follow and play along with the group, but more to relish the “flow” of playing and performing with the group. It was about being aware of how the different layers and textures come together for a successive outcome, a responsibility that is somewhat equal for everyone, new or not.

In being new again, one key difference surfaced: my playing and learning experience was always in a group, whereas my students’ playing and learning experience were in a more structured, formalised format of a classroom. Though I was aware of this difference, this was not something that was at the forefront of my thoughts. As much as I try to bring the fluid and non-hierarchical learning experience into the classroom with the students, there is an implied hierarchy as I am the teacher/leader, thus negating the natural fluidity of learning and playing gamelan. What implication does this have for teaching creative collaboration in the classroom? Has all my effort come to naught?

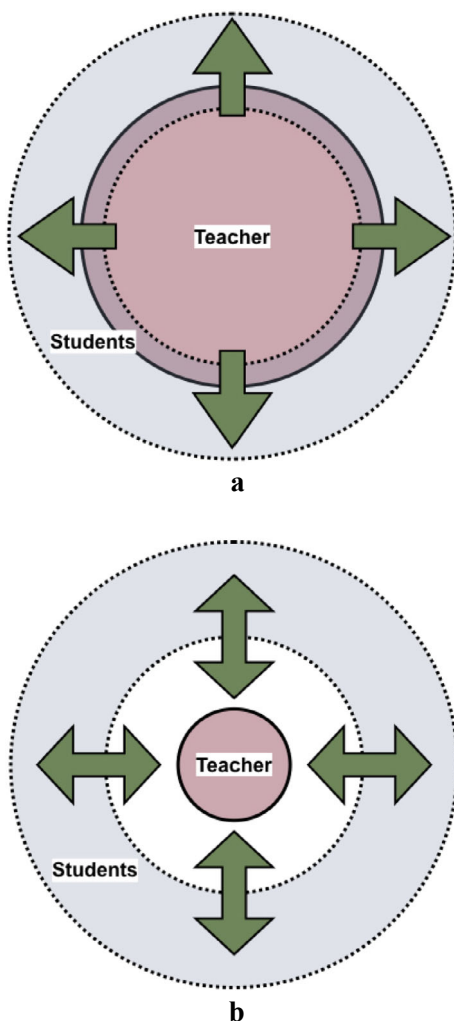
It is true that I will not be able to bring the group experience that I have encountered to the classroom. That renewed gamelan experience has made me realise that even though I try to recreate the group experience as a teacher each time I teach a new batch of students, I am also “new” with this new group of students. I am “new” with them in terms of creating that shared experience and body of knowledge. In other words, I am co-creating a whole new experience with the students. The starting point and distribution of responsibilities may be unequal at the outset, with the teacher above the students in the hierarchy. It is after that initial seed or point where knowledge is shared that the group takes ownership of that body of new knowledge and then shape the quality of the collaboration. Figure 14.2a, b outlines this. Figure 14.2a is the initial moment where the teacher comes from a place of hierarchy, and Fig. 14.2b is the stage where the teacher and student body have that ideal state of shared, or equal, responsibility.

With that, we proceed to the next section of the chapter—the *gendhing*—where the intricacies of collaboration and gamelan unfold.

The *Gendhing*

After the gong *ageng* has been struck at the end of the *bukâ*, the *gendhing* (piece) begins. A *gendhing* has at least two sections, beginning with the *mérong* section. This is followed by the *minggah* which is usually preceded by an *ompak* (like a bridge or transition). Each of these sections has its own colotomic structural rules, which we shall not delve into. This section is divided into two parts: first, on teaching gamelan, and second, on creating a group composition for gamelan.

Fig. 14.2 **a** Teacher begins from the place of hierarchy.
b Teacher and students in the state of shared or equal responsibility



Teaching Gamelan

In my many years of teaching gamelan, I have tapped heavily on my gamelan learning and playing experience, trying to recreate that similar sense of freedom and fluidity that is quite unfamiliar to many of the music students that I teach. I address students' fear of this new instrument and culture by assuring them that they are able to tap on their Western music training to help them as I have done so. However, I do make a point to be cautious about this little advice lest it becomes a Western music theoretical exercise when students learn and play the gamelan.

Across the years, feedback from students is generally one of gratitude for the experience of something so different and of playing multiple instruments. Unlike Western music, gamelan playing does not encourage specialisation in one particular instrument. There were occasional comments from students on the seeming lack of structure or organisation. These moments often lead to self-reflection of the pedagogical approach I take, and where possible, for me to make the necessary adjustments to strike a balance between a semblance of structure, and that freedom and fluidity that I firmly believe in. But no matter how I might strike the balance, I am aware that I will never really replicate that same experience for my students.

That renewed experience that I described earlier made it clear that our learning environment was different. I was learning and playing in an established community where there was a common pool of knowledge and experience that could be shared and disseminated (through playing). The fact that more seasoned members are able to “direct” or “teach” a new member for almost any piece is something that cannot be replicated in a classroom. It is that “pool of knowledge” (and also the cyclical nature of gamelan) that allows the new member to know that there will always be a way back into the music and also to accumulate knowledge of a piece with each playing and learning. In short, I began in an environment illustrated in Fig. 14.2b.

So, how does this *gendhing* go on from here? How do I share from a place of hierarchy as a starting point, encourage the students to be part of this shared body of equal responsibility and knowledge so that in the end, there is a collaborative outcome that is shaped by the joint effort and level of quality contributed by each student? The teacher and student body have to arrive at that ideal state of shared or equal responsibility.

Table 14.1 summarises my experience into four key phases. I show how these phases are mirrored to some extent in my classroom (right-most column). The summary is organised in a somewhat chronological order, with certain experiences that are not mirrored in the classroom subsumed or omitted for now. Table 14.2 then shows these experiences, mapped to the four features of creative collaboration mentioned earlier. This is ultimately mapped to the different habits and structure of signature pedagogy that are important to creative collaboration.

I begin my class by teaching the *balungan*, just like how I began (as described earlier in the *bukâ* section). However, there are two differences between my experience and those that I constructed in the classroom (see Table 14.1). The first is the context or technique which I did not experience fully. This is a necessary step in the classroom as I have to impart that “pool of knowledge” to my students (see Table 14.2). To do this, I usually explain the concept of the *balungan* and demonstrate the necessary techniques for them to play the instruments. Often times, I get the students into small groups of two to three students, encouraging them to support each other in this new “struggle” since all of them have different strengths and abilities. I also highlight to the students that I do not expect them to be proficient at the instrument immediately (e.g. to be able to mute the tone bars with their left hand). Rather, it is something that they should work towards through their whole gamelan experience (usually across two semesters of about 28 weeks). Though this is something instinctive and obvious to me, I have observed that this is not so for

Table 14.1 My gamelan experience and my classroom

Learning phase	My gamelan experience	The constructed classroom experience
1	• Played the <i>balungan</i> (skeletal melody) part • Just play along with the group, not much explanation • New encounter and experience with notation	• Teach the <i>balungan</i> (skeletal melody) part with information and basic techniques required for the instrument • New encounter and experience with notation
2	• Learnt other instruments • Minimal background or contextual information • Instructed and directed with minimal notation as the group learns the pieces together	• Teach the punctuating instruments along with its notations/symbols • Students are encouraged to build on existing experience as they try the <i>balungan</i> and punctuating instruments
3	• Some theoretical information about the different instrumental parts • Making connections with all the information	• Teach the elaborating instruments (<i>peking</i> and <i>bonang</i>) with notations and theoretical information • Application and making connections
4	• Freely play the different instruments according to the needs of the group • Continue to build on existing knowledge and experience • Make new connections and applications	

Table 14.2 Classroom gamelan experience and creative collaboration

Learning phase	The constructed classroom experience	Creative collaboration
1	• Teach the <i>balungan</i> (skeletal melody) • Some contextual/background information and basic techniques required for the instrument • New encounter and experience	Building the common knowledge and experience to cultivate “flow”
2	• Teach the punctuating instruments • Some basic notations/symbols for the instrument • Students are encouraged to build on existing experience as they try the <i>balungan</i> and punctuating instruments	
3	• Teach the elaborating instruments (<i>peking</i> and <i>bonang</i>) • Notations and theoretical information • Application and making connections	
4	• Freely play the different instruments according to the needs of the group • Continue to build on existing knowledge and experience • Make new connections and applications	The (equal) distribution of responsibilities and the unpredictable outcomes based on collaborators

many students over the years of teaching gamelan. Despite some apprehension on the students' part, this phase usually goes by without any hiccup.

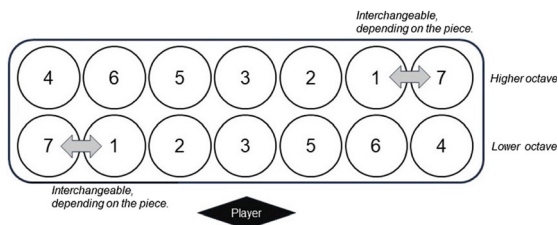
Phases 2 and 3 of the classroom experience are where I deviate from my own gamelan experience (see Table 14.1). I weave some theoretical information (derived from my own experience of Phases 2 and 3) into each phase of the classroom experience, in place of mirroring the experience that I have had (i.e. just telling them what to play). In some ways, this is a combination of Phases 2 and 3 of my gamelan experience, reorganised into specific instrument categories. I feel that there is merit in providing the students this knowledge so that they have a somewhat equal playing field to continue building their “pool of knowledge” and to cultivate the notion of “flow” as part of the collective experience towards creative collaboration (see Table 14.2).

As students embark on Phase 3 of their learning, they begin to realise that things are no longer so simple. This is because the *bonang* part, though relatively simple to understand in theory, does require some time to get used to due to its layout (see Fig. 14.3). It is in this phase that reactions of the students are mixed—some relish the challenge, while others start to panic. It is also in this phase that the class experience somewhat mirrors my experiences playing and learning in the group—a sense of fluidity in the learning, with every student playing his or her part, contributing to the “flow” of the music. Those playing the *bonang* parts (usually pairs of students at a time, so that one can observe and/or assist while the other plays) struggle to work out/play/coordinate the parts on the instrument. Now, the unpredictable outcome of creative collaboration dependent on the level of responsibility and capability of each player becomes apparent (see Table 14.2).

This realisation does not dawn on every student. To ensure that all the students see the implications of their input and contribution, and to prevent any student from “hiding” behind their stronger peers, I split the class into groups of about seven to eight students forming their own little ensembles. By this point, that “pool of knowledge” should allow them to apply and make the connections necessary for similar pieces. This is where they are “thrown into the deep end” and have to figure out amongst themselves how to ensure that the piece they are playing take shape based on their accumulated knowledge. In doing so, the groups eventually ease into Phase 4, where they freely decide on the instruments to play according to the needs of their group.

Fig. 14.3 *Bonang* pattern and instrument layout

Balungan: 6 5 3 2
Bonang: 6 5 6 . 3 2 3 .



Phase 4 is what I consider to be the pinnacle of their gamelan experience, and it is an expectation I make known to the students at the very beginning of the class. However, I must highlight that my own gamelan experience has spanned years. So, to replicate that in the classroom in 28 weeks means that the experience has to be condensed, made manageable, and appropriate within the classroom context. So, in the classroom, Phases 1–3 usually span five weeks. In the remaining time, students are ideally in Phase 4, experiencing other intricacies of playing gamelan that are embedded in Phases 1–4 of my own experience.

Though students are ideally in Phase 4 from the sixth week, there may be students who still struggle with either specific instruments or concepts. All these little “problems” basically make the classroom experience somewhat similar to the group environment that I have learnt and played gamelan in. With periodic introduction of new concepts, the students become more competent and are expected to work through new pieces with relative ease (I still provide some time for students to prepare themselves). There is, however, a limit to what can be done in a classroom. For one, I will not be able to introduce repertoire that requires a larger ensemble that includes the complex elaborating instruments (*rebab*, *gendèr*, *gambang*, *suling*, and *siter*) and singing (*gerongan* and/or *pesindhèn*). So, I introduce these pieces in the form of video and audio samples to give students context beyond the classroom. Along with this, I include a creative component in the form of a group composition. This is a necessity arising from the academy-wide requirement that the students showcase a creative outcome. This is an additional experience for the students that does not have an equivalent in my past gamelan group experience. However, I welcome this opportunity to explore a personal belief that in composing, students come to understand music concepts better, develop a sense of proficiency at the instrument(s), and acquire a sense of ownership of their learning. In the context of my advocacy of gamelan as a signature pedagogy for creative collaboration, this adds another pedagogical dimension to gamelan.

Creating a Group Composition for Gamelan

Composing is largely a solitary or personal affair, until the music is presented to musicians to make it a reality—which Barrett et al. (2021) consider a form of creative collaboration too. But in a group composition, this process is shared and no longer personal. Every member’s ideas and directions will have to be considered. How do students then decide on which ideas to develop? Or do they opt to be more diplomatic, synthesising everyone’s ideas to make a cohesive whole?

As if this is not challenging enough, the project requires the students to respond to a particular stimulus that does not necessarily have a strong or visible relationship to gamelan. This adds another level of complication considering how learning and playing the gamelan is already a very new experience for most of the students. As with all new experiences, some students will be excited to try their hand at creating and composing, while others will be more wary and cautious, as they are not trained and

have not composed anything before. Of course, I assure them, with the emphasis that they do already have some base knowledge, that they can build on. Along with this, I usually offer a few additional pieces of information—some norms of contemporary gamelan pieces that they can explore, or more traditional practices that they can build on. The key point is that they must be the ones with the creative ideas. My role as teacher will be to facilitate the process, and to ensure that they do not do anything culturally inappropriate.

After they are done with their creative output, the students must ensure that they are able to perform their work. Keeping to the intent and direction of Phase 4 of their learning, they must all contribute to ensure that their creative outcome is of an acceptable performance quality. To maintain a semblance of a balanced hierarchy where one person does not seem to dominate (in this instance me as a teacher), I also tell the students that they have to “direct” me as a member of the group if they require me to play the *kendhang* for their creative output. This sometimes comes as a shock to the students as they do not expect to “direct” their teacher, or to even have their teacher perform with them. When I am considered a part of their group, almost an equal, I am thus fulfilling my part as a group member, contributing what knowledge I have to allow the creative outcome to be of a decent quality and standard.

As with any collaborative effort, there will be challenges of various kinds. The emphasis here is that students are engaged in creative collaboration at another level, not just simply coming together to co-create a piece of music. So, the challenges that they encounter, be it in the creative process, gamelan learning and playing, or interpersonal issues of communication and distribution of work tasks, the students are developing the habits of mind, hand and heart necessary for creative collaboration in general.

Gamelan, Creative Collaboration, and Signature Pedagogy

Signature pedagogy refers to an approach of training students for a particular profession such that the students do not just learn content knowledge but also develop the ways of thinking and doing, and the values, dispositions, and attitudes that the professionals are expected to have, termed by Shulman (2005) as habits of mind, habits of hand, and habits of heart.

To cultivate these habits, a signature pedagogy can be characterised by four structures (Shulman, 2005):

- Surface structure: the rather obvious aspect of teaching and learning, for instance, the particular learning space/classroom, types of materials used, and the activities to hone the necessary skills required for the profession.
- Deep structure: the assumptions and abstract structure underlying the surface structure.
- Implicit structure: aspects of teaching relating to values, attitudes, and dispositions considered to be embedded in the pedagogy.

- Shadow structure: aspects that are left out of the teaching, but affect the students' training by their absence.

Through my experience, gamelan makes a good starting point to develop the skills and disposition necessary for creative collaboration, a key facet of the music profession. But collaborative skills are not just for musicians. There is recognition that collaborative skills are useful and transferable to other professions (Gaunt & Treacy, 2020). Thus, gamelan's ability to accommodate players of different abilities and capabilities should be considered a signature pedagogy for the music profession (and beyond) that would allow for the development of creative collaboration, or collaborative skills at large.

Table 14.3 lists the habits and structures of signature pedagogy along with the corresponding learning phases and the features of creative collaboration listed earlier in Table 14.2.

In a gamelan context, the surface structure simply refers to the space where the instruments are, and the instruments themselves (as the materials necessary for learning). The learners come to this new environment to develop the necessary skills (or habits) to play the instruments. To extrapolate this to the broad sense of creative collaboration, the surface structure that is needed would be an unknown or relatively new environment for collaboration. In the context of the group composition, though the environment for collaboration is no longer new, the context of the creative collaboration is new—students are required to respond to a stimulus to create a gamelan composition.

In the previous section, I have described the approaches that I take to teach gamelan, largely mirroring my experiences in learning and playing gamelan. So here, I shall focus on how these approaches support the habits of mind, hand and heart as indicated in Table 14.3. These explanations and rationale for my approach can be considered to be the deep structure of my teaching approach.

The most obvious habit to develop is the habit of hand—the skills necessary for students to play gamelan, or the skills necessary for creative collaboration to take place. Depending on the type of collaboration at large, the skills can be broad. The primary aim here is to engage in the constant act of learning and playing as a routine, such that these habits of hand can be developed and formed.

Along with the habits of mind, hand and heart, I would add the habit of ear since we are talking about a musical outcome. One may argue that this is implied in the habit of hand since one cannot really pick up a musical skill without the implied development of one's hearing, or even the habit of mind since there is an element of thinking involved in the listening. I consider the habit of ear to be distinct because there are unique challenges that come with developing this ability to listen when learning and playing gamelan. This also adds an interesting dimension to collaboration in general.

But first, within a gamelan context ...

I have discussed how gamelan is rather different from Western music in terms of how the learning occurs. One key and rather technical aspect of gamelan is that its tuning is significantly different from that of Western music traditions. Though this is no issue for me, some students have commented that the instruments sounded

Table 14.3 Corresponding structures and habits of signature pedagogy with the learning phases of gamelan

Learning phase	The constructed classroom experience	Creative collaboration	Structure	Habits
1	- Teach the <i>balungan</i> (skeletal melody) - Some contextual/background information and basic techniques required for the instrument - New encounter and experience	Building the common knowledge and experience to cultivate “flow”	Surface and deep	Hand and ear
2	- Teach the punctuating instruments - Some basic notations/symbols for the instrument - Students are encouraged to build on existing experience as they try the <i>balungan</i> and punctuating instruments			Hand, ear, and mind
3	- Teach the elaborating instruments (<i>peking</i> and <i>bonang</i>) - Notations and theoretical information - Application and making connections			
4	- Freely play the different instruments according to the needs of the group - Continue to build on existing knowledge and experience - Make new connections and applications	The (equal) distribution of responsibilities and the unpredictable outcomes based on collaborators	Surface, deep and implicit	Mind and heart

out of tune and even strange and foreign. For those who are greatly affected by this, the process of collaborating in a gamelan becomes more challenging and requires some (re)learning or (re)development of the habit of the ear. Secondly, as mentioned earlier in the chapter, cues are usually given aurally through the *kendhang* and/or other instruments (depending on the repertoire or context of the performance). So, the ability to listen, or more accurately, be sensitive to and recognise these cues, becomes an important aspect for anyone to collaborate effectively in a gamelan context.

As illustration, I recall an instance when I was learning to play the *kendhang* in the gamelan group, an experienced member mentioned that I had “a good ear”. She did not elaborate, so I took it simply to mean that I was able to listen well and play back what was demonstrated since the learning was aurally based with no music notations. As a young learner and musician then, I took it as a matter of course,

considering my Western music training. It is only through many other world music learning experiences, with similar compliments that I began to wonder about this “good ear”. As I see my peers and students struggle, I have come to realise that it is more than simply being able to listen and play back what was shown or taught. This “good ear” is really about the ability to listen, feel (what the Javanese call *rāsā*), and then respond appropriately in your playing. So, it is not just routinised habit of hand.

It is also not about cultivating the habit of mind to think rationally in a certain way. Hence, the habit of ear is a different habit that includes the hearing senses, instinctive mental processing and reacting to it in the music playing.

Can this habit of ear be applied to collaboration that does not have a musical-related outcome? Definitely.

This habit of ear is akin to the active listening aspect of communication, a key aspect of any collaboration to take place. Though I have not highlighted this as a key feature of creative collaboration, it is a known or implied aspect required for all of the identified key features of creative collaboration. One cannot build a common pool of knowledge and experience without communicating. Without communication, there is no “flow” in the work. Nor can there be an understanding of the standard of the outcome, or the equal distribution of work. So, in any creative collaboration (beyond the music profession), the sensitivity that one has or cultivates through understanding aural cues in learning and playing gamelan can be mapped to a sensitivity towards how different parties/collaborators interact with each other. As various industries (not just in the arts) move towards more multi- and interdisciplinary approaches and collaborations, the inclusion of the habit of ear supports the development of communication as key for collaboration.

The habit of mind is how one is required to think in a particular profession. In this case of learning and playing gamelan, one is required to make connections, build on existing (learnt) experiences, as indicated in Table 14.3. I illustrate this with a scenario that usually takes place in Phases 3 and 4. By that point, there is at least one particular form that students are familiar with. So, an instruction that I may give to them when they are working on a new piece is to refer to or recall the previously learnt pieces and find the patterns and similarities that they can apply. This can be in the punctuating instrument part or even the elaborating part (depending on the pace of the class). Some students struggle with this. But a few rounds of this process help students to realise that they are able to take charge of their learning and make that necessary connection (without the teacher at the top of the hierarchy). This also develops a sense of empowerment.

Table 14.3 indicates that the habits of hand and ear are also prevalent in Phase 3 as this is an ongoing process in learning and playing gamelan. This is why I consider the habit of ear as something that ties in or allows the habit of mind to develop. Take the instance of how gamelan pieces usually slow down to end (since its cyclical nature means that the piece can go on for as long as one wants). This concept is something I introduce and teach in Phases 1 and 2, providing students time to develop the habit of hand and ear for it. At the same time, this piece of information is also a knowledge that they have to build on, think about, and make a distinction in time to come when they approach Phase 4 as I introduce a new concept—*irāmā*. *Irāmā* is loosely related

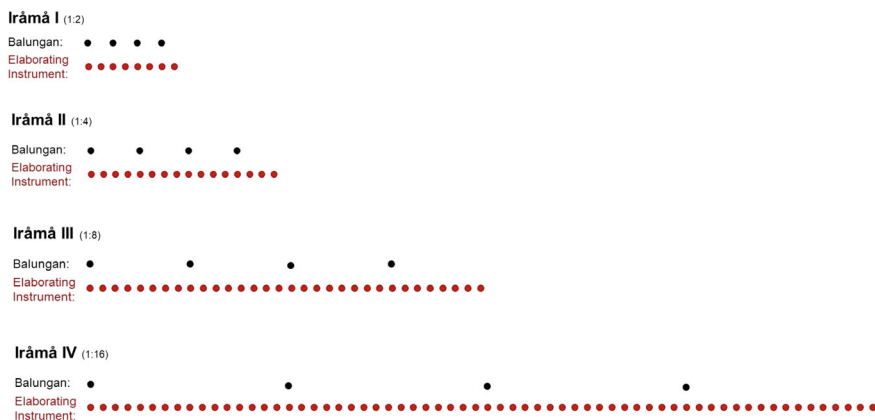


Fig. 14.4 Density relationship between *balungan* and elaborating instrument

to tempo. More accurately, it refers to the density of the elaborating instrument part in relation to the *balungan* part as the tempo changes (see Fig. 14.4).

When teaching students the concept of *irāmā*, the “challenge” lies in the slowing down. Students are now required to discern between slowing down to end, and slowing down to change the *irāmā*. So they will have to tap on both the habits of ear and mind to be sensitive to the different *kendhang* cues or even the context of the piece that they are playing. In this case, they are building on their existing knowledge.

This manner of thinking can be easily applied to creative collaboration at large (just like the group composition that I discussed earlier) since any form of collaboration requires its collaborators to be independent learners, coming together to have that common pool of knowledge and experience, and generating new knowledge with the group that may culminate in a creative outcome.

For any (creative) collaboration to be successful, the collaborators must simply want it to be. This “simply want it to be” is not sheer willpower but something that have to be cultivated through the habit of heart—the disposition, or attitude for creative collaboration.

Using the group composition example discussed earlier, the creative collaboration that the students embark on can only be successful if all of its members want it to succeed. To do so, they need the following traits or disposition:

- Be open and receptive to the ideas of others.
- Be able to communicate with each other clearly.
- Be patient with every member since there may be different working styles and pacing that may affect the progress and direction of the outcomes.

Unlike the other habits mentioned, the habit of heart is harder to teach or cultivate. Though the three traits listed above seem clear enough, it is perhaps more effectively imparted to students as an implicit structure of the pedagogy. Some of the signature pedagogies discussed by Shulman (2005) spanned multiple years. Even my gamelan

learning journey encompassed years. So, in a span of two semesters (28 weeks), it is difficult for this implicit structure to bear fruit in overt results. But if it is about being, or showing how to be, then as a pedagogue I can at least model these traits through my actions. In encouraging the students to be open and receptive in their creative outcome, I show them what it is to be that. By assisting them in their communication, and highlighting their challenges in this area, they cultivate the habit of ear to listen and speak clearly. As I am patient with them when they “direct” me in their work, they (hopefully) learn to be patient with themselves.

I have not surveyed students about their disposition or attitudes towards collaboration. However, I have received responses from some former students that they were glad they had a chance to encounter some gamelan, and be aware of a different world of music making. A fellow music teacher has shared that gamelan changed her perspective of music making and has led her to place more emphasis on group efforts and activities in her music classroom. Though she is unable to use gamelan specifically (due to lack of access to the instruments), her teaching reflects a residual impact of gamelan experience. This appreciation of the value of group work arising from gamelan experience points to the merit of gamelan as a signature pedagogy for creative collaboration.

The Suwuk

All music must end at some point. As we approach the final gong tone that ends the piece, this final section sums up the perspectives I have offered.

Musicians who have encountered gamelan often discuss its merits towards enhancing Western music training and practice. I can attest to that: it changed my worldview of music making and teaching. It has also shaped the way I collaborate with artists across different art forms.

Throughout the chapter, I have shared anecdotes of my gamelan learning and playing experience, along with how I use it in my classroom, attempting to replicate that encounter within the constraints of classroom and school schedule. It was only later that I realised that personal encounters with gamelan that I initially thought was easy (which I sometimes attributed to my Western music training) were not so for some others. The struggles that I did not have, I observed in my students. A “good ear” and even the simple playing of the *balungan* instruments that I thought should come naturally from prior Western music training, did not turn out to be so. These moments of realisation are humbling for me as an educator and a musician, as it made me realise that we do not always hear or experience the same things (with or without music training). This, together with the fluid and free environment in which I learnt and played gamelan, where its members come from all walks of life, and the simple mantra of “just come and play” allows that openness and receptivity (habit of heart) to be cultivated and experienced. This openness has allowed me to embrace a balance between the typical hierarchical surface structure of teaching where the

educator is a key disseminator of knowledge, and a point where there is some sense of equality or joint partnership in the learning and playing.

Anyone and everyone can play gamelan. Right from the beginning, you become part of the collaboration, you play along, cultivating the various habits (hand, ear, mind, heart). Over time you become comfortable, and you do not fumble as much. Though not the master or the leader, your contribution in this collaboration is vital. Afterall, I can play the piano alone. But I cannot play gamelan without the members or collaborators.

The gong *ageng* finally sounds, and the final notes are played. The resonance of the instruments slowly dissipates. The process of creative collaboration—the *gendhing*—has come to an end. For now.

Beyond Gamelan

Creative collaboration is a large part of the music profession as all music ensembles, not just the gamelan, engage in creative collaboration to achieve their desired outcome (Barrett et al., 2021; Gaunt & Treacy, 2020).

A key difference between gamelan and other music ensembles, pointed out earlier in this chapter, is how non-proficient or beginning players with no background in the instrument may participate in the learning and playing, while other music ensembles—string quartet, jazz bands, and the Western orchestra—are unable to accommodate that. In fact, performance of any kind is almost impossible without some level of proficiency. In these ensembles, collaboration or the outcomes of creative collaboration can only occur and be considered successful if all its players are proficient and competent in their instrument and come prepared with their own parts. This preparation usually comes in the form of a specific part score. The learning takes place individually, often in private. It rarely takes place collaboratively or during the collaboration (Brandler & Peynircioglu, 2015). Though notations (a kind of score) are not uncommon now for Javanese gamelan, the lack of a personal instrument (unlike a violin or a flute), and the fact that some instrumental parts require the context of other instrumental parts to make musical sense (Eros, 2008; Haddon, 2016) means that learning and performance preparation can take place only during the actual practice or collaboration itself.

The only other Western music ensemble that comes close to this is the jazz ensemble with its propensity for improvisation (Alperson, 2010; Black, 2017; Seddon & Biasutti, 2009). Like a string quartet or Western orchestra, each player still has to be proficient in their instrument and come prepared. However, the improvisation itself would usually take place during the collaboration. Although, the players may, in the course of their individual practice, improvise freely as part of their practice, this improvisation is not the same as the one played during the creative collaboration. This is simply due to the fact that improvisation is considered to be something that is played spontaneously, ignited through the “flow” of the moment that is part of the creative collaboration in jazz ensembles (Alperson, 2010; Black, 2017; De Bruin,

2016). Or as Black (2017) put it, “within real-time performances” (p. 340). Thus, the improvisation that is played in a creative collaboration context would definitely be different to that played alone as the former would require “teamwork, collaboration, performance and innovation” (Black, 2017, p. 340).

Besides the preparation, how the collaboration comes together also differs between gamelan and other Western music ensembles.

In a Western orchestra, the creative collaboration would require a conductor to coordinate all the different instrumental parts together, shaping the music, giving the collaboration its musical direction. The conductor in this case is the leader who makes all the necessary musical decisions. In smaller ensembles (e.g. string quartets, jazz ensembles), there is usually no conductor present. But this does not mean that it is without a leader. In the case of a string quartet, this role is traditionally given to the first violinist, or in the case of other types of small ensembles, the player with the leading parts. However, there are instances where some ensembles (even string quartets) would consider a more democratic approach where the leadership may be shared amongst the members of the group or adjusted during the rehearsal process so that every player has a voice within the ensemble to articulate their thoughts and musical direction (King, 2006; Rounds, 1999). Though this is similar to the non-hierarchical way of learning that is key to creative collaboration, it is not quite the same in terms of the preparation and learning as it is still largely dependent on the individual’s competence and proficiency. In such instances, the music score is also crucial in guiding the players on the musical decisions that the ensemble takes.

Rounds (1999), in his conversations with and observation of the Lafayette Quartet, detailed how this can be achieved, along with crucial skillsets that are applicable and transferrable for any collaboration.

The Lafayette Quartet is an established group that has collaborated for a very long time. The anecdotes shared are pointers, or signposts that serve to guide younger musicians that would like to embark on their quartet, or even other musical ensemble journey. In institutions that have specific programmes for ensembles, these skillsets are considered part of the pedagogy. However, if pedagogical support is limited, gamelan, with its minimal entry point, becomes a good space for the young musician to start understanding what creative collaboration entails.

As mentioned earlier in the chapter, there is also a leader in a gamelan ensemble. This often lies in the *kendhang* player who often provides musical cues to the players. There are also instances where other elaborating instruments (e.g. the *rebab*, a two-stringed fiddle) may take some form of musical leadership, providing melodic cues that an adept gamelan player may recognise (Brinner, 1995). But unlike Western music ensembles, this is something that is not discussed or decided for the sake of democracy or equality. It is something that is part of the common pool of knowledge that the ensemble has that supports the non-hierarchical learning unique to gamelan and essential to creative collaboration.

Besides the differences between gamelan and Western music ensembles, there are benefits that Western musicians gained through gamelan that can be transferred to their own instrumental practice. Bakan (1993) shared his experience in Balinese gamelan, highlighting the virtues of adapting some of the traditional approach

that could be adapted to Western instrumental teaching and learning that could help improve students' musical skills. Haddon (2016) on the other hand observed how Javanese gamelan made an impact on undergraduate music students who also had their main instrument to learn. Though the aim of the paper was to establish whether learning gamelan led to bi-musicality or dialogical-musicality, the interview data provide insights into the students' experiences and whether the experiences were transferrable to their Western music training and influenced their musical development.

Haddon (2016) categorised the findings into two broad areas: musicianship skills and attitude and approach. A key area highlighted for musicianship skills was the participants' listening skills—the habit of ear. The participants emphasised that they became more aware of what was going on in their own various music ensemble as gamelan heightened their ability to listen to cues and musical textures from other players in the ensemble. The collaborative nature of gamelan primed the participants to have “greater perception, empathy and flexibility in other ensemble contexts” (p. 227) and also fostered a more open approach in ways of learning, practising, and thinking about music—the habits of heart and mind that guide the habit of hand and ear. These are sentiments that are also echoed by proponents of ensemble learning and playing, including the Lafayette Quartet (Black, 2017; De Bruin, 2016; Gaunt & Treacy, 2020; Haddon, 2016; Johnson, 2011; Rounds, 1999).

Besides the musical skills that are transferrable across different music ensembles, there are also leadership and communication skills that are developed (King, 2006; Seddon & Biasutti, 2009). These are skills that are recognised as essential skills that can be applicable across a wide range of professions (Gaunt & Treacy, 2020).

By taking that step to play gamelan with a group, there is almost automatically a sense that one is open and receptive (Haddon, 2016) towards building new knowledge through the habits of hand and ear that come with playing gamelan. In continuing with the gamelan group, the habits of hand and ear continue on to develop the habits of heart and mind, the disposition necessary for any successful collaboration.

To borrow the Balinese concept highlighted by Bakan (1993) and Eros (2008), it is time for us to go with the “flow” and let the hammer (mallet) teach.

Conclusion

Creative collaboration is a large part of the music profession. Barrett et al. (2021) pointed to a few ways, each requiring a level of competency and mastery in one's instrument or area. A string player must be proficient in his or her instrument to be able to collaborate effectively in a string quartet. A jazz musician playing in jazz combos needs to know the basic progressions, in addition to proficiency in the instrument, to be able to improvise. Successful creative collaboration requires all the musicians to be at their peak technically and musically, rarely at the novice level. This can be likened to a jigsaw puzzle where specific pieces go into specific places, together creating a larger whole.

The same can be said of gamelan with its various instruments and specific roles and relationship with each other. However, due to gamelan's unique ability to accommodate novice players, I would liken playing gamelan to finding a balance point or equilibrium, instead of fitting a jigsaw puzzle.

In a jigsaw puzzle, the prescribed image of the puzzle, which can be thought of as the score or lead sheet in the case of a string quartet or jazz combo, serves as direction for the players. This, along with their technical and musical proficiency, allows the puzzle pieces to fit well together. However, in gamelan, the notation, though helpful, is rather vague. Not every piece of information or detail is given. Along with the fact that not all gamelan players begin at a proficient level, this means that the pieces of the puzzle may not fit very nicely. Thus, the players are almost always in a kind of negotiation or adjustment where the more proficient players will have to put more effort to support and assist the less proficient ones. All the parts of the gamelan must come together and find its own place to reach an equilibrium or harmony, with equal contributions to a good outcome.

A musician may be equipped with competency in their main instrument, but that knowledge is not so important to gamelan. No matter the competency, the musician technically begins a gamelan collaboration with an almost clean slate. Though the chapter does provide insights on how some skills in music may help ease the process, this cannot be taken for granted to apply to all musicians.

Beyond an institution or classroom, gamelan players come from all walks of life. They too, begin with a clean slate. This notion of a clean slate is essential to any collaborative work. It does not mean one comes into a collaboration truly empty, but having an open disposition. For example, in an interdisciplinary collaboration, every collaborator should be competent in his or her own field. But if the disposition of the individual collaborators is not one that is truly open, there will be an imbalance of contribution and outcome.

So, in playing and learning gamelan, its fluid, non-hierarchical learning encourages one to be open and receptive since in developing the habits of hand and ear, one is building new knowledge. The habits of hand develop the ability to play, the habits of ear the aural sensitivity. In any collaboration, this would be the act of doing and communicating. As one builds this pool of knowledge, the habits of heart and mind are also cultivated—the realisation to maintain equilibrium. In any collaboration, one may come with varying competence, but all must be willing and open to develop new knowledge for a successful collaboration.

References

- Alperson, P. (2010). A topography of improvisation. *The Journal of Aesthetics and Art Criticism*, 68(3), 273–280.
- Bakan, M. B. (1993). Lessons from a world: Balinese applied music instruction and the teaching of Western “art” music. *Music Symposium*, 33(34), 1–22.
- Barrett, M. S., Creech, A., & Zhukov, K. (2021). Creative collaboration and collaborative creativity: A systematic literature review. *Frontiers in Psychology*, 12, 713445.

- Black, P. (2017). On being and becoming a jazz musician: Perceptions of young Scottish musicians. *London Review of Education*, 15(3), 339–357.
- Brandler, B. J., & Peynircioglu, Z. F. (2015). A comparison of the efficacy of individual and collaborative music learning in ensemble rehearsals. *Journal of Research in Music Education*, 63(3), 281–297.
- Brinner, B. (1995). *Knowing music, making music: Javanese gamelan and the theory of musical competence and interaction*. University of Chicago Press.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper and Row Publishers.
- De Bruin, L. R. (2016). Journeys in jazz education: Learning, collaboration and dialogue in communities of musical practice. *International Journal of Community Music*, 9(3), 307–325.
- Eros, J. (2008). The hammer is the teacher: Taking world music instruction to a higher level as experienced through Balinese gamelan. *Music Education Research International*, 2, 1–10.
- Gaunt, H., & Treacy, D. S. (2020). Ensemble practices in the arts: A reflective matrix to enhance team work and collaborative learning in higher education. *Arts and Humanities in Higher Education*, 10(4), 419–444.
- Haddon, E. (2016). Bi-musicality and dialogical musicality: Influences of Javanese gamelan participation on Western instrumental learning. *British Journal of Music Education*, 33(2), 219–235.
- Johnson, E. (2011). Developing listening skills through peer interaction. *Music Educators Journal*, 98(2), 49–54.
- John-Steiner, V. (2000). *Creative collaboration*. Oxford University Press.
- King, E. C. (2006). The roles of student musicians in quartet rehearsals. *Psychology of Music*, 34(2), 262–282.
- Leonard, K., Hafford-Letchfield, T., & Couchman, W. (2013). We're all going Bali: Utilising gamelan as an education resource for leadership and teamwork in post-qualifying education in health and social care. *The British Journal of Social Work*, 43(1), 173–190.
- McIntosh, J. (2013). 'Seeing the bigger picture': Experiential learning, applied ethnomusicology and the use of gamelan music in adult literacy education. *International Journal of Music Education*, 31(1), 15–25.
- Rounds, D. (1999). *The four and the one: In praise of string quartets*. Lost Coast Press.
- Seddon, F., & Biasutti, M. (2009). A comparison of modes of communication between members of a string quartet and a jazz sextet. *Psychology of Music*, 37(4), 395–415.
- Shulman, L. S. (2005). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Tan, L., Tjoeng, J., & Sin, H. X. (2020). "Ngeli": Flowing together in a gamelan ensemble. *Psychology of Music*, 49(4), 804–816.

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Chapter 15

Codetta: Pedagogies of Evocative Ambiguity



Rebecca Y. P. Kan

To call something ambiguous is not to claim that it is trivial or vacuous. On the contrary, it carries multiple meanings because so few words and sentences will be called upon to resonate with so many life experiences and to serve as vessels of meaning under circumstances that range far beyond those found in the plain meaning of the text. (Shulman, 2012, p. 80)

Abstract Ambiguity is a defining characteristic of artistic practice. Pregnant with possibilities, artistic ambiguity evokes suspension of judgment, creative suspense and searching inquiry. Evocative objects serve as intellectual and emotional tools that encourage students to become more open and receptive to uncertain and thought-provoking ideas, while challenging them to engage with complex concepts and reflective dialogue. Rather than providing clear-cut answers or predetermined outcomes, evocative ambiguity is an enabling constraint that cultivates ways of thinking through others. This codetta creates space to explore pedagogies that support students in transforming potentially alienating encounters into opportunities to make, think and collaborate in creative ways.

Ambiguity is the essence of artistic practice, and perhaps even a defining characteristic of the arts (Gunn, 2016). Ambiguity involves suspending judgement while undertaking further inquiry, where “some perplexity, confusion or doubt” that is “likely to be somewhat painful” (Dewey, 1910, p. 12). Evocative ambiguity is described as a form of ambiguity that works akin to what Manning and Massumi (2014) termed as an enabling constraint. As a disciplinary trait in the arts that evokes student agency and transformative originality, Gunn (2016) calls for the need to explore evocative ambiguities within higher arts curriculum and pedagogy to enhance creativity.

Pedagogies of evocative ambiguity refer to educational approaches that embrace what Shulman (2012) would consider as “a tolerance for ambiguity and an openness

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to alternative interpretations” (p. 79). Rather than providing clear-cut answers or predetermined outcomes, these pedagogies encourage students to explore and engage with complex, uncertain, and thought-provoking ideas. The approach recognises that ambiguity is inherent in many real-world situations to foster critical thinking, reflexivity, creativity and problem-solving skills.

In the context of creative collaboration, pedagogies of evocative ambiguity play a vital role to explain what McLaughlan et al. (2021) would explain as “productive uncertainty”. In De Silva’s chapter, creative collaboration involves working together with a diverse range of performing abilities to create a gamelan piece. When individuals are confronted with ambiguity and uncertainty of new members, they are encouraged to communicate with one another clearly, be open and receptive to creative outcomes, and patiently engage in reflective dialogue (De Silva, Chap. 14).

Embracing ambiguity allows for the exploration of diverse perspectives, the questioning of assumptions, the generation of innovative ideas and solutions, and the discovery of unexpected connections. This process of grappling with ambiguity leads to enhanced creativity as individuals are pushed to think beyond conventional boundaries and consider unconventional possibilities. When individuals work collaboratively in an environment that embraces ambiguity, learning becomes non-hierarchical, building upon common knowledge and experience to cultivate “flow” and unpredictable outcomes that are determined by the composition of the collaborators (De Silva, Chap. 14).

Here, the gamelan is used as an evocative object to generate new meaning. Evocative objects are artefacts representing the world that become a rich source of inquiry (Siegel, 2014). Such objects become the intellectual and emotional tools to imagine possible futures in the design studio (Turtle, 2007). In De Silva’s account of musical practice, gamelan as a signature pedagogy amplifies the space of uncertainty in artistic process.

Beyond evocative objectives alone, pedagogies of evocative ambiguity can conjure up new skills in learners by what Shweder (1991) would term as “thinking through others”. This means that evocative pedagogies facilitate complex and yet constructive pedagogical responses that nurture ways of thinking through others. Restraining the craving for certainty allows us not just to see not only our differences, or the authentic utility of ways of being in the world, but also the limitations and constraints of our own and other modes of learning (Novotny, 2015). In Shweder’s (1991) own words, “‘Thinking through others’ is, in its totality, an act of criticism and liberation, as well as discovery” (pp. 109–110).

By challenging traditional norms in creative practice, gamelan as a pedagogy of evocative ambiguity empowers students to discover their own capacity for agency and leadership. The chapter exemplifies how students can draw upon one another’s strengths, challenge each other’s assumptions and collectively navigate uncertainty to arrive at the production of a creative work. Moreover, it creates a platform for student huddles, where they can not only learn the value of trusting themselves but also support and collaborate with their peers (McLaughlan & Liddicoat, 2017). As Gorlitz (2011) eloquently puts it, “through embracing inconsistencies and evocative ambiguity, we are compelled to bridge the gap to an unavailable source”

(p. 66). This intriguing elusive source refers to the humans who shape and reshape the gamelan ensemble, contributing to the dynamic and ever-evolving process of ensemble-making.

Pedagogies of evocative ambiguity land well on scenarios that rely on the ability to open questions. These pedagogies draw upon the students' prior experiences, imaginations, recollections, and their personal journeys in learning and teaching. Evocative ambiguities are not just pedagogical stances that artist-educators include in their pedagogical toolkit; they also manifest as tangible instances of uncertainty and resilience that students can actively engage with. According to Gunn (2016), pedagogical "evocative ambiguities" should aim to cultivate what Grosz (2010) calls "freedom as the capacity for action" (p. 140). This perspective prompts the crucial question: what factors support students to use potentially alienating encounters to foster their freedom to make, think and collaborate in creative ways?

The realisation of pedagogies of evocative ambiguity is a collaborative effort between the tutor and our students. In this approach, the tutor has the opportunity to incorporate evocative elements, such as De Silva's participation on the *kendhang*, into the learning environment. However, it is ultimately up to individual students to connect with and form deeper meaning from these elements. Opening this space also conjures lived experiences and knowledge to learning that the tutors may not have had, enabling them to re-formulate new narratives about their perception of pedagogy. Moreover, embracing evocative ambiguity has the potential to complexify our perceptions and slow down our immediate and reflexive responses. As Gorlitz (2011) suggests, it can ritard or delay our perceptions, allowing for a deeper engagement with the subject matter. By introducing pedagogical elements that provoke curiosity and uncertainty, tutors can encourage students to critically reflect on their own assumptions and perspectives. As Duchamp observed, the "creative act is not performed by the artist alone" (see Sanouillet & Peterson, 1973). In this context, the students act as "spectators" to bring the creative work into contact with another world (Bordwell, 2019, p. 75). Through this dynamic interaction, everyone discovers new narratives each time they engage in a different scenario.

In conclusion, working with creative evocative pedagogies supports pedagogical understanding (Hinchion, 2020). By incorporating evocative objects or elements, tutors create space for students to connect with their own experiences and knowledge, while also challenging normative approaches to teaching and learning. Pedagogies of evocative ambiguity that are cultivated in collaborative learning environments highlight the importance of embracing diverse perspectives, shared distribution of responsibilities and active participation. By fostering inclusivity within evocative ambiguity, such creative pedagogies promote a sense of shared exploration and inquiry for students to engage with their deeper selves. While Abery et al. (2014) observe that pedagogies that pull on the drawstrings of the heart may be unappreciated at the on-set, awareness of such risks and conjuring such emotional responses bring about learning that engages habits of the heart, mind, and even soul that can be transformative. With De Silva's *suwuk* in mind, we invite you to engage on an uncomfortable, yet quintessential learning, journey that involves risk and uncertainty for both students and tutors.

... to evoke then is
 to re-enact
 to re-constitute
 to re-place
 to re-cover
 something
 in a new temporality.
 Branco (2023)

References

- Abery, E., Leiman, T., & Willis, E. (2014, July 6–9). How risky is transformative learning? Evaluating pedagogy of the heart: Assessment in a first year topic through a lens of risk [Paper presentation]. In *17th International First Year in Higher Education Conference*, Darwin, Australia.
- Bordwell, D. (2019). Picture planes. *October*, 169, 75–86.
- Branco, F. (2023). Evocations—Towards a poetics of documentation. *VIS—Nordic Journal for Artistic Research*, 10. <https://www.researchcatalogue.net/view/1836549/2292898>
- Dewey, J. (1910). *How we think*. D.C. Heath.
- Gorlitz, S. J. (2011). *Malmö Art Academy yearbook 2010–2011* (pp. 66–77). https://www.khm.lu.se/en/sites/khm.lu.se/en/files/yearbook_2010_2011.pdf
- Grosz, E. (2010). Feminism, materialism, and freedom. In D. Coole & S. Frost (Eds.), *New materialisms: Ontology, agency, and politics*. Duke University Press.
- Gunn, V. (2016, December 9). What art school education might tell us about ambiguity and agency in higher education student learning (work in progress) (0320) [Paper presentation]. In *SRHE International Annual Research Conference*, South Wales, UK. <https://srhe.ac.uk/arc/16/0320.pdf>
- Hinchion, C. (2020). Autobiographical memory and future imaginings as a resource for pedagogical understanding in initial teacher education. *The Qualitative Report*, 25(11), 4146–4166.
- Manning, E., & Massumi, B. (2014). *Thought in the act: Passages in the ecology of experience*. University of Minnesota Press.
- McLaughlan, R., & Liddicoat, S. (2017). Boler's pedagogy of discomfort. Examining a turn of the century idea for contemporary architectural education (pp. 231–240). In *Proceedings of the 51st Conference of the Architectural Science Association*, Wellington, New Zealand.
- McLaughlan, R., Pert, A., & Lodge, J. M. (2021). Productive uncertainty: The pedagogical benefits of co-creating research in the design studio. *International Journal of Art and Design Education*, 40, 184–200.
- Novotny, M. (2015). Craft as a memorializing rhetoric. *Harlot: A Revealing Look at the Arts of Persuasion. Craft Rhetorics*, 14(8).
- Sanouillet, M., & Peterson, E. (1973). *The writings of Marcel Duchamp. The creative act*. Da Capo Press.
- Shulman, L. S. (2012). The challenges and opportunities for liberal education in a faith-based university. In E. Davis (Ed.), *A higher education. Baylor and the vocation of a Christian University* (pp. 75–87). Baylor University Press.
- Shweder, R. (1991). *Thinking through cultures: Expeditions in cultural psychology*. Harvard University Press.
- Siegel, J. (2014). *At the wall*. <https://www.publicbooks.org/at-the-wall/>

Turkle, S. (2007). What makes an object evocative? In S. Turkle (Ed.), *Evocative objects: Things we think with* (pp. 307–326). MIT Press.

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Chapter 16

With the Heart, the Mind, and the Sight: Cultivating Creativity in Fashion Pedagogy



Georgette S. Yu

Abstract Creativity is important in the practice of fashion design: a successful fashion designer is assumed to be highly creative. Fashion schools impart skills and knowledge in fashion and guide aspiring students in becoming a creative design practitioner. References to fashion design pedagogy are limited but have the commonality of focusing on design critique, which is a signature pedagogy in the field of design. While pedagogy in fashion is distinguishable from non-design practice, extant literature suggests diverse and varied pedagogy to facilitate creativity. Using a qualitative study, this paper explores teaching practices in creativity through interviews of three fashion lecturers from the School of Fashion Studies at the Nanyang Academy of Fine Arts, University of the Arts Singapore. Through their stories and experiences, values and beliefs on creativity illuminate distinctive and defining teaching practices, a signature pedagogy for cultivating creativity among fashion students studying in Singapore.

Introduction

The semester has ended and my social media notification is filled with fashion shows parading works of this year's graduating students across the world. Not far from me, I watched with anticipation for our very own Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore fashion graduates in a live show on campus, showcasing creative talents and technical sophistication in Singapore. At the beat of the rhythm, the fashion models walked in cues, parading and commanding attention on the garments for the beauty of its form and the intensity of colours as each garment outshone another piece in detail. In between the transition of models, I heard gasp

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around the audience, composed of fashion industry professionals, academics, and parents, followed by the quiet clicking of mobile phone cameras. In that moment, that specific outfit seems to be “The One” deemed worthy to be snapped and shared in the realm of digital space for all to see.

“The One” important piece seems to be more significant than others, picked exceptionally, and particularly special. In the movie, “The One” invites an important revelation, sending the protagonist Neo in *the Matrix* to gain the ability to dodge the bullet and fulfil the prophecy to end the war and bring freedom. Similarly, in *Star Wars*, the prophecy identifies Anakin Skywalker as the “Chosen One” destined to bring balance to the force. Down the fashion runway, the prophecy could be sensing, knowing, and believing the one gifted fashion designer with creative excellence, breaking through the “Big C” of creativity. However, a prophecy can be as ambiguous as the nature of creativity.

With earlier conceptions of creativity believed to be the work of a genius, creativity in fashion is inherently mysterious but crucial. Creativity is vital to the practice of fashion design and imperative to the success of fashion designers in a rapidly evolving and complex landscape of the fashion industry (Bye & Sohn, 2010; Cerimedo, 2010; Jennings, 2011; Kawamura, 2005; Loschek, 2009). In the book *Fearless: The new rules for unlocking creativity, courage, and success*, fashion designer and brand owner Minkoff (2021, p. 20) credited her success to creativity and the process of “not doing things the same way that they have always been done just for the sake of playing it safe”. She put forward the significance of embracing change and novelty to be creative, while acknowledging a person’s creative potential is limitless and can be nurtured. However, cultural differences can have varying theories on creativity (Niu, 2019). To some extent, contextual differences can influence the pedagogy in cultivating creativity in education. Thus, this study examines the pedagogy of creativity in a fashion school of a local art institution in Singapore through interviews of three lecturers Lin, Kay, and Tan.

In this study, the three participants interviewed have been teaching at NAFA with varying lengths of two years to more than twenty years in fashion design studio practice for higher education. A design studio practice replicates professional experiences in design education while encouraging creative exploration and innovation in students. Through the interview, their stories and experiences, values, and beliefs on creativity illuminate distinctive and defining teaching practices, a signature pedagogy (Shulman, 2005a) for cultivating creativity among fashion students studying in Singapore. This study illustrates three constructive approaches distilled from the interviews, supplementing the facilitation of creativity and distinctive to the NAFA School of Fashion Studies. These are: (1) empowering fashion students to discover their authentic selves, (2) cultivating critical thinking through questioning, and (3) guiding students towards the way of seeing fashion.

Empowering Authenticity in Creative Practice

Lecturer Lin embarked on a transformative journey of becoming a fashion designer after experiencing a personal conflict. Reflecting on her life and personal achievements, she felt strongly about making choices that would be more fulfilling. Diverging from her established academic path, she pursues a profession in fashion design, fully embracing her interest in creativity. This personal transformation exemplifies her belief in being honest to oneself, being authentic, that consequently shapes Lin's creative practice and her teaching approach in fashion design.

Authenticity is widely discussed in creative practice alongside concepts of individual expression, self-identity, and distinctiveness (Bai, 2022; Duffy, 2017). In fashion, De Wet (2016) believes a successful fashion designer is not only creative but needs to be authentic. Being authentic, like creativity, is valued for transforming distinctive identity and individuality in fashion and to establish genuine connections with consumers (Pang, 2022). Emerging young Chinese designers Angel Chen and Kate Han exemplify authenticity by being unafraid and unapologetic in representing their true personalities onto their brands (Bai, 2022). For Angel Chen, keeping to her unique rebellious persona finds resonance with the young Chinese consumers. However, reaching this level of authenticity and integrity as a designer is a journey influenced by diverse personal experiences in becoming a fashion designer. Taking this into account, Bai (2022) identifies pivotal moments in the designers' journey, such as studying in London and gaining experiences in fashion house of designer brands like Vivienne Westwood, John Galiano, and Issey Miyake. For Lin, her journey closely mirrors the passage to fashion design. Her experiences learning about fashion extend beyond gaining technical skills in design; it also provided her with the opportunity for self-discovery, gaining deeper insights into her values, strengths, and motivation. She shares,

I got accepted to Central Saint Martins and I studied there for my BA. [I] then take my Master's course, as well. In between, I interned for Raf Simmons and some other British designers ... Right after I graduated, I started doing a little bit of my own business. And, I got pretty good recognition.

[In school], I was experimenting and making mistakes and learning from my mistakes ... You know, it was like there was no set rule kind of ... like, you have an end goal, but you kind of have to find your own steps to get there, you know. So I really enjoyed that like charting my own path.

These experiences contribute positively to her becoming a confident and inspired fashion designer. Important to this trajectory are the interactions she encountered along the way. While in school, the environment nurtured openness and encouraged individuality in learning, whereas at work, it was a space for dialogic exchanges with the creative director, whom she described as a "curator". A curator, according to Persohn (2021), is involved in the process of sense-making with deep understanding of the subject matter while likening the communication to be "fascinating conversation ... to elicit passionate, even extreme opinions" (Farver, 2001 as cited in

Persohn, 2021). Lin expresses admiration for such open conversations at work and strives to embody honesty when collaborating with others.

The team will always like, they will not [be] politically correct [to] each other. It was very refreshing, because they were just like, challenge each other's ideas, and if they didn't like something, there's no bullshit, you know, they don't filter. And they did that in the office meeting room, and when they came out, even if they have a very heated argument or something, they don't hold grudges, and they go, hey, let's go for lunch. Ideas are about ideas and relationships are relationships, and that's something that is very unique.

When I choose to work with my, my photographer, we don't filter it. We just say we don't like some things ... very straightforward.

Lin upholds the kind of honesty and directness in communicating as necessary to thrive creatively in fashion, advocating for fashion designers to convey "their own voice". This voice, as she believes, expresses unique viewpoints that are productive and unafraid to challenge the status quo. In other words, as fashion designer Marc Jacob points out to be authentic is being "free from validation and permission of absurd conservatism and societal norms" (Phelps, 2024). To delve into further on the notion of "the voice" and its role in promoting creativity in fashion,

coming up with something that is like, not just a copy of Rei Kawakubo, or a copy of Yohji Yamamoto, or like Walter Van Beirendonck, but it's actually like, their own voice. And they're not trying to emulate someone, that to me is a creative piece of work.

So you see, some students, they can be very, they can have like, kind of, at the end, like a product that looks good, you know, "fashion". But if they haven't found their voice, or they haven't done self-reflection, where they go in and they process idea and might come up with something that is uniquely theirs, [then] I don't consider that a good work. I don't consider that a creative work.

Her teaching philosophy in fostering creativity is to nurture authenticity in students. Her approach mirrors the positive transformation she experienced in fashion, that is, being direct, open, and motivating individual uniqueness. As she interacts with students in the design studio, she strives to create a safe space for "unfiltered" interactions, summoning their courage to embrace vulnerability and to create with confidence. Entering her class, you can expect lively discussions on students' work and their personal interests in fashion. This is how she motivates students to cultivate "their own voice". Her approach would be,

I would not filter my words ... [I would say] eh, this one is like rubbish, you know, and [students] would laugh and they would get it. And to me, I wanted them to just be like more thick skinned. You know, like, not care about what you think is the right thing to do, but just to try it and just do it ... I kind of feel like every student has their own style, very innately like what they like, look at the way they dress ... So, I asked them like, hey, why don't you tell me? [S]how me what face you like [to draw] and I can illustrate that for you on the visualizer. I would [then draw] the picture of the face, and I'll analyse it on the spot. [It'll] be like, oh! you know, what's interesting about this, the eyes are a bit longer or a bit wider, but then it still looks proportionate. It looks right because it follows the natural proportions of a face. And then I'll say, you know, if you move the eye a bit too high, and then I'll illustrate that looks weird, right? So I'll continually teach them that. And then I'll show them different styles like one student will have a bit more like a cartoon style, a bit more realistic. And, I could constantly illustrate all that to them.

At the end of 12 weeks. I made them display their first, second and third projects ... And, each student improved, like tremendously, and every student had their own unique style. [In] each class, I made it an open critique, so they could come and look at each other's work. And like everyone was super, super inspired and impressed.

Her unconventional approach nurtures originality and creativity in each student by guiding them to discover their inner voices, “find[ing] their voice and ... facilitat[ing] them to execute it”. She demonstrates and empowers authenticity in class, which requires delving deeper within to address the emotional dimensions of creativity on individuality, fears, and vulnerability. In this way, the voice becomes the bridge that conveys what is within the heart, thus, nurturing habits of the heart in fashion design (Shulman, 2005a).

Encouraging the Critical Mind

Kay's teaching portfolio encompasses a diverse range of fashion modules, including textile innovation, fashion design, visual merchandising, and marketing. With a wide array of interests that complement her teaching expertise, Kay's inquisitive mindset has thrived since childhood. Growing up in an environment of artists and imaginative parents, pursuing her teenage dream of becoming a fashion designer was inevitable. More than ten years later, she continues to hold a deep admiration for imaginative and creative minds as she builds her business. When asked about a designer she finds creative, her reply,

Martin Margiela ... How did he even think of these ideas? Like, the candy wrapper bag, like who would think of making a bag looking like candy wrapper. So, to me, that is creative!

The origin behind creative ideas remains a mystery. The study of cognitive science seeks to demystify creativity by uncovering underlying mental functions and thought processes. Early studies have contributed to understanding of the various forms of thinking in the creative process, including both convergent and divergent thinking (Guilford, 1967; Smith et al., 1995). Using a visual graphical representation, Goldschmidt (2016) illustrates that in a creative process, the mind constantly shifts between logical reasoning to exploration, requiring different modes of thinking. Other examples, like De Bono's method, employ lateral thinking to incorporate multiple perspectives in idea generation. In the field of fashion, Dieffenbacher's (2020) observation of ten creative fashion student designers brings to light the strategies and thoughts behind creating a fashion collection. Some strategies suggested are brainstorming, mind mapping, free association, doodling, journaling, and more.

Delving deeper into these strategies also unveils the rationale behind the educator's intention and approach to creativity. In the interview, Kay discusses her thoughts in guiding students in using some of these techniques like mind mapping, brainstorming, and design critiques. Specifically, she considers mind mapping essential for helping

students to visualise the breadth and connections of their ideas, but more importantly, it is to bring to attention topics that might have been overlooked. In the same way, in incorporating brainstorming activities in class, her goal is not only to generate more ideas but also to uncover alternative perspectives that can enrich existing ideas. To illustrate this,

I'll make them write a keyword, one keyword on one piece of paper, and they pass these papers around the class. So, the other students, when they see a word like "feminine", they will write down what [they] think of "feminine", whether it's pink, whether it's lace ... And when we [have] the papers back to each group. [I'll ask] ... look for ideas that you never thought of when it comes to "feminine" or whatever their word is. And that kind of forces them to think outside the box ... to really show them that an idea or concept can be much more than what you originally thought.

[In similar way], I find the critique very useful. And I have found that since I was a student ... I mean, fashion and the creative arts, they are so varied, there are so many different perspectives. And, if you just constantly listen to one person's ideas, and one person's suggestions, you lose out on potentially more ideas or expanded scope of ideas. So in that way, I find it useful as a student to have listened to a panel of opinions ... Which is why ... I like to do peer review as well, they might find something that could be improved, or find something that I missed out, which I think is very important for students. So that they have like a complete 360 perspective on their work.

Kay's facilitation in class reflects her belief that creativity is not just about originality but also the ability to think of alternative ideas and incorporate differing perspectives. Her belief in creativity aims to encourage students to think critically in their design process. Building on this foundation, her approach integrates logical reasoning and creative thinking in guiding students "to think outside the box". According to Sternberg's (2018) *Triangular Theory of Creativity*, creative individuals tend to value unconventional and unpopular ideas, turning them into successful innovations. They also tend to be aware of preconceptions and assumptions that may influence their ideas. To cultivate this mindset to students, Kay emphasises on the importance of being curious and having depth of subject knowledge in her teaching. She guides student in their creative process by questioning to challenge their assumptions and reasonings and encourage intellectual exploration. She shares,

I've always believed that questioning and expanding your scope, kind of, leads you down a path of more knowledge and therefore, hopefully more creative ideas. [In class], I feel like if you tell them, [for example], to go and see what a butterfly is, it's that, that is all that they will do. But whereas if you ask questions, they tend to ask questions in their research as well, which again, expands the scope of research ... I try to let them be in terms of creativity but I come in from [the perspective of] feasibility. [Asking them] can you construct this? Can you make this? And yeah, on commercial aspect ... You think it's very nice. But will the consumers think it's very nice?

Similar to the method of Socratic questioning, Kay engages in dialogue to probe and prompt students with good habits of the mind (Shulman, 2005a). By way of her questioning, she encourages a critical mindset to explore alternative thoughts and ideas throughout the creative process. To sum up,

I don't consider myself the most creative person. But I do think that I can present sufficiently creative and sometimes alternative ideas to design ... I try to find in between of what is not

available, and what I think consumers will be willing to accept ... I would like [the students] to remember that no idea is a bad idea ... And that with creativity, and with a good enough creative process, every idea, every theme, every concept can be explored and expanded until you arrive at a creative result.

Showing the Way of Fashion

The world of fashion dazzles with imagery of shapes, colours, and textures, creating a captivating visual display of talent and masters of the arts and crafts. Fashion is where creativity flourishes, providing the stage for creative expression and visionary talent. With over twenty years of experience in teaching and practice in fashion, Lecturer Tan admires the beauty and creativity that define the industry. Fashion is where he finds comfort and belonging. He recalls with appreciation,

I grew up every school holiday that I had, from primary school to secondary school ... to help out in the family business of garment factory. Not exactly my direct family, but I enjoy going there for fun and also making some pocket money when I was a student ... I was able to play with industrial sewing machines since I was eight years old. I'm not saying that I'm an expert at sewing but I have no fear dealing with industrial sewing machines. I mean, because of that sound ... the motor sound, that sound, especially like the buttonhole making machine ... that can sound scary to some people, but to me, that is background noise.

Evoking the senses as he recalls the past, he vividly painted with words a picture of the moment he came to know as fashion. He framed his thoughts as he saw them, like Renaissance paintings, drawing on perspective to capture the details and depth in closeness to reality. As Roman architect Vitruvius declares, “beauty is produced by the pleasing appearance and good taste of the whole, and by the dimensions of all the parts being duly proportioned to each other”. And in seeing fashion in perspective, Tan notices the entirety and the nuances, establishing good practices in fashion to creative achievements. He explains,

I also realised including myself, late bloomers, you might not do well in school, but once you go out and you see the real world and you have experience in the industry, right, you are able to find your own pace and your own path. And, if you are, if you have that kind of realisation, you are able to grow, you're able to progress you're able to develop in your, so called, your forte, your strength.

In the book *Acts of seeing: Seeing as a methodological tool in fashion design* by Malmgren de Oliveira (2018), “seeing” extends beyond mere sight to include conceptual processes like imagination, discovery, and idea generation, which are essential for creativity in fashion design. The mental processes underlying the vision connect design challenges to design solutions, facilitating the emergence of ideas (Cross, 2006). To see is to engage in dialogue with the medium of design, recognising, detecting, and discovering, thus becoming consciously aware, while also understanding and deriving meaning (Schön & Wiggins, 1992). An example of the engagement with the materiality, Tan shares his experience,

I remember it was my first-time touching a pleated Issey Miyake, I stood there and played with it like a toy. You pulled the pleat apart and then after that you let go of your hands and everything shrunk back to the original size. I realised when I pull the print, the print was printed in the expanded version. So, that make me realise oh actually everything was made in ... extra-large, the print was made extra-large and then when they pleated, it went back to the original size. And I stood there with my mouth open, I was like, oh my god ... And that's where I consider him a genius. I was like, who would have thought of that right, to go and do that kind of method? [A] mathematical calculation for fashion!

In the above example, “seeing” serves as a pathway to immerse oneself behind the knowledge of creativity in fashion, being curious and willing to explore in detail the technicalities or aesthetics of fashion. In other words, observing is mere noticing “things”. Engaging in the act of seeing involves scrutinising, discerning, judging, and making connections. Like a high-resolution camera, capturing the finer details requires exposing those details to light. However, akin to a camera’s viewfinder, the human eye has limitations in what it can see because of “the way we see things is affected by what we know” (Berger, 2008). In light of this, refining the vision goes hand in hand with nurturing the skills and knowledge in fashion. Guiding students to be active observers exposes them to greater and deeper understanding, paving the way to professionalism in fashion design.

I could see that they are not at that level where they realise design can be valuable, the exposure is not wide enough yet ... I think having a lot of this exposure is really, really important for designers, because it actually opened up your horizon.

[In class], if I throw out some designer name [to students], do they get it? Or they don't get it? If they don't get it, then I was like, okay, so we need to do some of education, please go and look at this.

To cultivate the habits of sight, Tan recommends the following: (1) immerse in design, (2) connect with the information, and (3) make it personal. First, Tan recommends, “seeing” that is recognising and discovering the world of fashion through design objects, films, prints, and digital publications. These serve as a source of knowledge and gateway to the larger world of fashion. He reiterates “to see what’s happening in the world” and to discover.

Access to all these designer goods is like a playground for me. I was able to walk into a departmental store and touch anything and try anything I want ... It's things that I admire, I understand why their fabrication is of a certain quality. [And], every free time I have, you will see me standing in front of magazine store to go through almost every title, whether it's a design related or fashion related, and those are the things that make me, give, okay, it provided an outlet for me to see what's happening in the world.

The second approach involves connecting the dots. The richness of information is redundant if it is not useful. Making the information practical, relevant, and applicable, it becomes valuable. Through the eyes, the mind can be activated and utilise the information in your own creative practice. Tan demonstrates how information can be relevant:

If they can do it there, how can I do within the limited resources that I have here? And then that kept me thinking about, you know, what are the possibility of me doing something on

that scale? To reach that level? So, this kind of evaluation, I think, is very important because it also tells you where your limitations are, then you go and do something about it ... You need to be a sponge to constantly know what is happening globally, you need to know the direction or how the industry is moving? And that will help where we are ... and see how we can be at that level or how we are already at the level but how do we reach out to more people?

The last approach emphasises the effort that is very personal. While the aim is to encourage students to observe closely to learn and discover more about fashion, in the process, the students could and should uncover and gain deeper insights into themselves. Tan emphasises the advantage of “extremely, constantly absorbing things to increase your value”, by gaining confidence and mastery in the craft. Thus, “seeing” prompts a self-discovery in light of one’s awareness of the broader reality of the fashion world.

You also realise if somebody [can] do it at that level, why are you not there, then you will know, [with] some self-evaluation, like, okay, how else can I improve? What else can I improve not to be at a level or why am I, why do I not have that kind of so-called knowledge and skill? You don’t know if you’re at that level or not until you do a lot of self-discovery and self-evaluation. I mean, then you realise whether you are on par with a so called design guru, or you’re at a certain level below or something else, yeah. So, this kind of evaluation, I think, is very important because it also tells you where your limitations are, then you go and do something about it, or you don’t ... or how else can you be?

There is a sense of excitement to see beautiful clothes parading down the fashion runway, but as a designer, the adventure only just started to where your eyes may lead you, scrutinising the little details to the next big idea. Nurturing creativity in fashion, as Tan suggests, “you need to allow that kind of process and space for self-discovery, whether during the time with you in school or outside, you need to allow that to happen”.

Concluding Remarks

The stories and experiences shared by the three fashion lecturers provided valuable insights in the teaching practices in a design studio class in fashion. And through their own creative practice as professionals, they highlighted the values of fashion within the industry. Their narratives offer unique approaches to fashion pedagogy, preparing students to become fashion designers in a field that demands creativity. With the heart, the mind, and the sight, it is not choosing one over the other, but rather it is meeting of all three in unity within an individual’s creative process. However, this raises the question: What exactly are students learning when creativity itself is so subjective and ambiguous? Is there truly a formula that can be as precise as mixing a gram of flour with a teaspoon of sugar to achieve creative excellence, when creativity embraces the unexpected and unpredictable?

Soon, another semester will begin, welcoming a fresh batch of aspiring fashion students eager to gain the knowledge to become fashion designers. They will regularly practice drawing, making, and creating, gaining practical skills and experiences that can be both uncertain and filled with exciting possibilities. Through these experiences, students cultivate creativity and adopt the practices of fashion designers, learning to see and think in the way of fashion, and to feel what is right for fashion. In a profession characterised by uncertainty, “it is insufficient to learn for the sake of knowledge and understanding alone; one learns in order to engage in practice ... so that they can contribute to skilled professional practice. But a true professional does not merely practice: he or she performs with a sense of personal and social responsibility” (Shulman, 2005b, p. 18).

References

- Bai, Y. (2022). Projecting authenticity with cultural heritage: Chinoiserie of contemporary Chinese fashion designer brands. In Y. Bai & Y. Zang (Eds.), *Fashion in 21st century China: Design, education, and business* (pp. 15–33). Springer.
- Berger, J. (2008). *Ways of seeing*. Penguin.
- Bye, E., & Sohn, M. (2010). Technology, tradition and creativity in apparel designers: A study of designers in three US companies. *The Journal of Design, Creative Process & the Fashion Industry*, 2(2), 199–222.
- Cerimedo, C. (2010). *1000 ideas by 100 fashion designers*. Rockport Publishers.
- Cross, N. (2006). *Designerly ways of knowing*. Springer.
- De Wet, A. J. C. (2016). Both sides of the coin: A teaching strategy to facilitate an alignment of the creative design purpose of a fashion designer and the requirements of the consumer. *Journal of Family Ecology and Consumer Sciences*, 44(1), 46–57.
- Dieffenbacher, F. (2020). *Fashion thinking: Creative approaches to the design process*. Bloomsbury Publishing.
- Duffy, B. E. (2017). *(Not) getting paid to do what you love: Gender, social media and aspirational work*. Yale University Press.
- Farver, J. (2001). Reflections. In C. Kuoni (Ed.), *Words of wisdom: A curator's vade mecum on contemporary art*. Independent Curators International.
- Goldschmidt, G. (2016). Linkographic evidence for concurrent divergent and convergent thinking in creative design. *Creativity Research Journal*, 28(2), 115–122.
- Guilford, J. P. (1967). Creativity: Yesterday, today and tomorrow. *The Journal of Creative Behavior*, 1, 3–14.
- Jennings, T. (2011). *Creativity in fashion design: An inspiration workbook*. Fairchild Books.
- Kawamura, Y. (2005). *Fashion-ology*. Berg.
- Loschek, I. (2009). *When clothes become fashion: Design and innovation systems*. Berg.
- Malmgren de Oliveira, S. (2018). *Acts of seeing: Seeing as a methodological tool in fashion design* [Doctoral dissertation]. University of Borås.
- Minkoff, R. (2021). *Fearless: The new rules for unlocking creativity, courage, and success*. HarperCollins Leadership.
- Niu, W. (2019). Eastern-western views of creativity. In J. C. Kaufman & R. J. Sternberg (Eds.), *The Cambridge handbook of creativity* (pp. 448–461). Cambridge University Press.
- Pang, C. L. (2022). Terroir in a dress. Understanding Antwerp-style fashion. *The Journal of Cloth and Culture*, 20(2), 237–240.
- Persohn, L. (2021). Curation as methodology. *Qualitative Research*, 21(1), 20–41.

- PHELPS, N. (2024, July). Marc Jacobs: Fall 2024 ready-to-wear. *Vogue Runway*. <https://www.vogue.com/fashion-shows/fall-2024-ready-to-wear/marc-jacobs>
- SCHÖN, D. A., & WIGGINS, G. (1992). Kinds of seeing in design. *Creativity and Innovation in Management*, 1(2), 68–74.
- SHULMAN, L. S. (2005a). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- SHULMAN, L. S. (2005b). Pedagogies of uncertainty. *Liberal Education*, 91(2), 18–25.
- SMITH, S. M., WARD, T. B., & FINKE, R. A. (1995). *The creative cognition approach*. The MIT Press.
- STERNBERG, R. J. (2018). A triangular theory of creativity. *Psychology of Aesthetics, Creativity, and the Arts*, 12(1), 50–67.

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Chapter 17

Codetta: Pedagogies of Creative Uncertainty



Rebecca Y. P. Kan

Professions are fields in which people make decisions and act under conditions of unavoidable uncertainty. And so the very uncertainty that is essential to the pedagogy is also socializing future professionals to the conditions of practice. (Shulman, 2005a, p. 18)

Abstract Pedagogies of creative uncertainty are rooted in the inherent unpredictability of what takes place in studios of the visual arts and conservatories of the performing arts. These spaces embrace uncertainty, serendipity and happenstance as integral aspects of arts education. Creative solutions are intentionally incomplete, reflecting the fluidity of a space that can even serve as a socialising model for handling the conditions of practice. This codetta presents four practical approaches to navigate the tensions between certainty and uncertainty in professional practice, focussing on the curriculum, learning spaces, artistic practice and the role of the arts educator.

Uncertainty is a fundamental aspect of professional education, characterised by elements of indeterminacy, undecidability and incommensurability (Brownlie, 2009; Mallin, 2009; Todd, 2012). It often arises from unpredictable practice environments or inadequate information for decision making, breeding psychological conditions of fear, lack of conviction, or doubt (Carabine, 2013; Kirch, 2009). Additionally, the shifting sands of political, institutional, technological and societal upheavals further complicate the ability to assign definite probabilities to possible outcomes (Bar-Anan et al., 2009; Fox & Ulkūmen, 2011; Rosen et al., 2014).

The conditions of professional practice described by Yu in Chap. 16 shine light on a pervasive uncertainty in arts and design. Uncertainty arises because practitioner-educators can never be absolutely sure of how learning is progressing, how knowledge is received and how teaching will have its desired effects on students (Floden &

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Clark, 1988; Shulman, 2005b). Uncertainty is also an inherent quality in the design space, which is concerned with ill-structured or wicked problems that can be clarified and understood only through speculative attempts to solve them (Buchanan, 1995; Caldwell et al., 2016; Tracey & Hutchinson, 2016). For other creative practitioners, there are also moments of “productive stupidity” (Schwartz, 2011), when it “feels as though nothing is happening, when there are no ideas, and when nothing is being created” (Carabine, 2013, p. 36).

Therefore, circumventing designer’s block or creative paralysis requires focussing on pedagogical signatures that foster an attitude of positive or productive uncertainty in a neophyte’s transition to professional practice (Stables, 2020). This is especially important with students who, as novices, may not have developed the critical judgement to determine a “successful” or “good” artwork or design (Belluigi, 2018). Since one of the most crucial aspects of professionalism is the ability to make complex judgements and decisions “under conditions of uncertainty” (Gardner & Shulman, 2005, p. 15), one must learn to embrace it.

Uncertainty is relevant for learning situations because it stimulates critical reflection and fosters creative collaboration. As “the core of life” (Britzman, 2009, p. ix), uncertainty is a necessary ingredient for profound learning in the arts. Uncertainty renders studio environments surprising and exciting, raising the stakes for both students and artist-educators alike (Lüdert, 2021; Shulman, 2005c). But experiencing uncertainty alone does not prepare students for contemporary professional life. Rather, guiding them to learn from the consequences of failure or their actions develops new understanding and better routines (Gardner & Shulman, 2005). Negotiating with uncertainty consequently enables students to “make better decisions about how to achieve desirable objectives, [rather than] to learn how to adapt to a force that is not of their making” (Furedi, 2008 in Joosten, 2013, p. 550).

Pedagogies of creative uncertainty can be explored from four facets:

- (1) What can be done in the curriculum to cultivate creative uncertainty in the learning experience?
- (2) How can we socialise future professionals to uncertain conditions of practice?
- (3) What coping strategies can educators adopt?
- (4) How can creative uncertainty shape identity and agency in arts and design education?

Here, we present four practical approaches to cultivate creative uncertainty in arts education:

Firstly, we could structure our curriculum to better respond to the realities of the professional environment and unknown futures. A curriculum for a hyper-complex world should provide opportunities for students to experience the uncertainties they will likely face after graduation. Since the institution cannot fully expose students to the processes of professional performing or visual artists, offering non-credited extracurricular experiences beyond the university would help cultivate professional uncertainty in a safe space (Spronken-Smith, 2013). This is an “in-between space of learning” that is latent with potential for creative fermentation and construction.

Dwelling in a state of an in-between allows students to explore other learning experiences that expose their vulnerability and creative uncertainty (Kan 2025). Persisting in this space would encourage students to develop personal strategies that lead to “adaptive uncertainties”. Such signature learning experiences would serve as an educational vehicle for students to work out who they are and how they fit in, to thrive in an uncertain world.

Secondly, learning spaces should be designed to help students become comfortable with uncertainty (Capobianco & Ríordáin, 2015). Simulations are known to expedite the unknowns of learning and reduce uncertainty through situated experiences for emerging professionals. Another effective practice is public performance, marked by “uncertainty, visibility, and accountability—characteristics that raise the emotional stakes” (Shulman, 2005c, pp. 56–57). In this social environment, students present their work to peers and tutors for discussion, review and assessment. As the lecturer Kay notes, “if you just constantly listen to one person’s ideas, and one person’s suggestions, you lose out on potentially more ideas or expanded scope of ideas” (Chap. 16). Supporting a student-centred approach emphasises dialogue, peer engagement and peer learning that creates a community of practice and design culture (Shreeve, 2015). As students expose their work to public critique, mistakes, decisions and consequences are visible and sometimes awkward. While peers watch each other struggle and succeed, a safe environment for productive uncertainty fosters trust and professional cohesiveness, which allows the community to accept and perceive uncertainty as less threatening (Frederiksen, 2014; Hartner-Tiefenthaler et al., 2018).

Thirdly, pedagogies of creative uncertainties should address the inherent tensions between certainty and uncertainty, central to professional practice. According to Peat (2006), “true creativity appears when we stay within the tension of a question or an issue and do not rush to assuage our insecurity with easy solutions”. Viewing pedagogies [of fashion] through the lens of creative uncertainty opens avenues to support students in navigating creative tensions and developing capabilities to engage with challenges. In the design studio, Lin (in Chap. 16) strives to create a safe space for “unfiltered” interactions, where feedback can be perceived as an attribute of the process and not an attribute of the educator (Tauritz, 2016). Similarly, Kay promotes through questioning, encouraging students to find “their own [inner] voice”. Drawing from the artistry of other fields in professional education, other coping strategies include investing time to identify areas of uncertainty (Kirch, 2009), finding critical friends who take a proactive role to improve professional practice (Stenhouse, 1981), acquiring expert knowledge to counter-balance the lack of information (Zong & Demil, 2015), improving collaborative social interactions between teams (Hartner-Tiefenthaler et al., 2018), and fostering awareness of other perspectives (Davey, 2016; Palumbo-Liu, 2009).

Lastly, educators can better illuminate the intrinsic value of creative uncertainty. The prefix *un-* does not only denote negation—it also connotes an otherness and difference that compels us to shake assumptions, preconceptions and predictability (Davey, 2016; Leggo, 2013). Art making is constantly a process where we do not, as yet, know if we will successfully achieve what we set out to learn (Carabine, 2013). Embracing creative uncertainty can thus be a cornerstone of pedagogies in arts and

design. Leading our students to engage in this “quest for uncertainty” means “to make the smooth places rough before they can be trusted to be smooth again” (Shulman, 2012, p. 84). This does not mean that educators have to intentionally create uncertain conditions for students. Instead, fostering self-evaluation and aligning standards with professional norms promote the development of professional judgement under environments of creative uncertainty. As described by Yu (Chap. 16), fashion-educator Tan cultivates such epistemic optimism through “habits of sight” that “involve scrutinising, discerning, judging and making connections”. Students who challenge their certainties, instead of evading discomfiting truths, learn to negotiate a sense of adaptive anxiety that may eventually lead to attitude changes and identity formation.

Acknowledging creative uncertainty as a pedagogical signature not only prepares students for an increasingly complex and persistently strife-torn world but also promotes “the development of critical judgement under unpredictable conditions” (Shulman, 2007, p. 17). Through pedagogies of creative uncertainty, students will come to understand that “the only certainty is uncertainty, and the only expectedness is unexpectedness” (Leggo, 2013), empowering them to act, think, perform, perceive and discern more effectively. As it may take time for students to recognise the benefits of engaging with creative uncertainties, providing more opportunities to manifest truth, confront fears and build resilience is vital (Barnett, 2012; Joosten, 2013). By fostering educational environments that embrace uncertainty, we equip students not just to tolerate chaos, rejection, or failure, but to thrive through them, thus cultivating their development as competent and adaptable professionals in an ever-evolving world. In pursuit of professionalism and mastery in arts and design education, we take on the mantle of Shulman (1999, p. 15),

We will never fully remove the uncertainty from teaching any more than we can from such other professions as clinical medicine, architecture, economic planning, or clinical social work. But as a profession, we can grow much wiser about how to anticipate and deal with uncertainty.

References

- Bar-Anan, Y., Wilson, T. D., & Gilbert, D. T. (2009). The feeling of uncertainty intensifies affective reactions. *Emotion*, 9(1), 123.
- Barnett, R. (2012). Learning for an unknown future. *Higher Education Research & Development*, 31(1), 65–77.
- Belluigi, D. Z. (2018). The importance of critical judgment in uncertain disciplines: A comparative case study of undergraduate fine art visual practice. *Arts & Humanities in Higher Education*, 17(3), 305–322.
- Britzman, D. P. (2009). *The very thought of education: Psychoanalysis and the impossible professions*. State University of New York Press.
- Brownlie, D. (2009). Tales of prospects past: On strategic fallacies and uncertainty in Technology Forecasting. *Journal of Marketing Management*, 25(5–6), 401–429.
- Buchanan, R. (1995). Wicked problems in design thinking. In V. Margolin & R. Buchanan (Eds.), *The idea of design* (pp. 3–20). MIT Press.

- Caldwell, G. A., Osborne, L., Mewburn, I., & Nottingham, A. (2016). Connecting the space between design and research: Explorations in participatory research supervision. *ACCESS: Contemporary Issues in Education*, 36(1), 44–56.
- Capobianco, B. M., & Ríordáin, M. N. (2015). Navigating layers of teacher uncertainty among preservice science and mathematics teachers engaged in action research. *Educational Action Research*, 23(4), 581–598.
- Carabine, J. (2013). Creativity, art and learning: A psycho-social exploration of uncertainty. *International Journal of Art & Design Education*, 32(1), 33–43.
- Davey, A. (2016). International students and ambiguous pedagogies within the UK art school. *The International Journal of Art & Design Education*, 35(3), 377–383.
- Floden, R., & Clark, C. (1988). Preparing teachers for uncertainty. *Teachers College Record*, 89(4), 505–524.
- Fox, C. R., & Ulkúmen, G. (2011). Distinguishing two dimensions of uncertainty. In W. Brun, G. Keren, G. Kirkeboen, & H. Montgomery (Eds.), *Perspective on thinking, judging and decision making* (pp. 21–35). Universitetsforlaget.
- Frederiksen, M. (2014). Trust in the face of uncertainty: A qualitative study of intersubjective trust and risk. *International Review of Sociology*, 24(1), 130–144.
- Furedi, F. (2008). *Wasted. Why education isn't educating*. Continuum.
- Gardner, H., & Shulman, L. S. (2005). The professions in America today: Crucial but fragile. *Daedalus: Journal of the American Academy of Arts & Sciences*, 134(3), 13–18.
- Hartner-Tiefenthaler, M., Roetzer, K., Bottaro, G., & Peschl, M. F. (2018). When relational and epistemological uncertainty act as driving forces in collaborative knowledge creation processes among university students. *Thinking Skills and Creativity*, 28, 21–40.
- Joosten, H. (2013). Learning and teaching in uncertain times: A Nietzschean approach in professional higher education. *Journal of Philosophy of Education*, 47(4), 548–563.
- Kan, R. Y. P. (2025). In the cleft of a rock: Experiences in the in-between space of learning among undergraduate arts and design students. *Higher Education Research & Development*, 44(1), 253–267.
- Kirch, S. A. (2009). Identifying and resolving uncertainty as a mediated action in science: A comparative analysis of the cultural tools used by scientists and elementary science students at work. *Science Studies and Science Education*, 94(2), 308–335.
- Leggo, C. (2013). Wondering aloud & wandering allowed: Ten gestures toward a foreword. In A. Sinner & A. Sinner (Eds.), *Unfolding the unexpectedness of uncertainty: Creative nonfiction and the lives of becoming teachers* (pp. xi–xvii). Brill.
- Lüdert, J. (Ed.). (2021). *Signature pedagogies in international relations*. E-International Relations Publishing.
- Mallin, E. S. (2009). On game playing and the uses of uncertainty. *English Language Notes*, 47(1), Spring/Summer, 125–134.
- Palumbo-Liu, D. (2009). Uncertainty. *English Language Notes*, 47(1), Spring/Summer, 81–90.
- Peat, F. D. (2006, November). From certainty to uncertainty: Thought, theory and action in a modern world. In *General Assembly of the World Academy of Arts and Sciences*, Croatia.
- Rosen, N. O., Ivanova, E., & Knäuper, B. (2014). Differentiating intolerance of uncertainty from three related but distinct constructs. *Anxiety, Stress & Coping*, 27(1), 55–73.
- Schwartz, M. (2011). The importance of stupidity in scientific research. *Seismological Research Letters*, 82(1), 3–4.
- Shreeve, A. (2015). Signature pedagogies in design. In M. Tovey (Ed.), *Design pedagogy: Developments in art and design*. Routledge.
- Shulman, L. S. (1999, July/August). Taking learning seriously. *Change*, 11–17.
- Shulman, L. S. (2005a, February). *The signature pedagogies of the professions of law, medicine, engineering, and the clergy: Potential lessons for the education of teachers*. National Research Council Center for Education.
- Shulman, L. S. (2005b). Pedagogies of uncertainty. *Liberal Education*, Spring, 18–25.
- Shulman, L. S. (2005c). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.

- Shulman, L. S. (2007). The many faces of engagement. Keynote address presented at the *13th Annual Conference of the Coalition of Urban and Metropolitan Universities*, Baltimore, Maryland.
- Shulman, L. S. (2012). The challenges and opportunities for liberal education in a faith-based university. In E. Davis (Ed.), *A higher education. Baylor and the vocation of a Christian University* (pp. 75–87). Baylor University Press.
- Spronken-Smith, R. (2013). Toward securing a future for geography graduates. *Journal of Geography in Higher Education*, 37(3), 315–326.
- Stables, K. (2020). Signature pedagogies for designing: A speculative framework for supporting learning and teaching in design and technology education. In P. J. Williams & D. Barlex (Eds.), *Pedagogy for technology education in secondary schools: Research informed perspectives for classroom teachers* (pp. 99–120). Springer.
- Stenhouse, L. (1981). What counts as research? *British Journal of Educational Studies*, 29(2), 103–114.
- Tauritz, R. (2016). A pedagogy for uncertain times. In W. Lambrechts & J. Hindson (Eds.), *Research and innovation in education for sustainable development* (pp. 90–105). CoDeS.
- Todd, S. (2012). Practicing in the uncertain: Reworking standardized clients as improv theatre. *Social Work Education*, 31(3), 302–315.
- Tracey, M. W., & Hutchinson, A. (2016). Uncertainty, reflection, and designer identity development. *Design Studies*, 42, 86–109.
- Zong, Z., & Demil, B. (2015). From uncertainty to ambiguity: A discursive approach of emerging field. *International Management*, 20(1), 163–175.

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Chapter 18

“Designing” Graphic Designers: Perspectives from Design and Education



Joyce H. L. Koh and Choong Kheng Tan

Abstract In this chapter, we discuss how current trends in industry and higher education are influencing the Bauhaus approach to studio-based training that has been foundational to higher design education since the 1960s. Through a collaborative autoethnography, the authors, a graphic design educator and an instructional designer, reflect upon their conversations throughout a semester-long project involving the redesign of a design studio course to enhance design thinking with respect to graphic design. This chapter explores how their design pedagogies emerge and the disciplinary perspectives they bring to design pedagogy through an example of how self-analysis rubrics were developed and integrated as thinking scaffolds to support heutagogy or student-self-directed learning. The chapter discusses how design pedagogies are shaped and externalised through the collisions among designer identity, educator identity, and contextual demands such as curriculum, students, and societal trends. The implications for higher design pedagogies are discussed.

Design Thinking and Design Pedagogies

Design can be understood as the act of conceiving and making. It is a natural human capacity as history is replete with examples of how we have developed tools, things, ideas, and processes to improve our lives. Professional designers do not design haphazardly but methodically. They are trained to be fluent with using disciplinary-specific processes and methods to analyse, conceptualise, and create solutions with respect to user needs. Nevertheless, expert designers can also adapt design processes according to the design situation on hand (Dorst & Reymen, 2004). What constitutes design has not changed but the practice of design has been evolving. During medieval times, design was considered the craft of artisans such as carpenters and masons who

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needed to be certified by trade guilds in order to practice. It became a form of applied art in the seventeenth century when institutions such as the *Académie des Beaux-Arts* undergirded the design of products with theories of arts and aesthetics (Harwood, 2007). The Bauhaus approach was developed amidst rapid industrialisation across the world wars and became foundational to contemporary design education. Design became a channel for benefiting society through products that are useful and aesthetically pleasing, while design studios served as laboratories for experimenting with how products could be effectively designed for mass production (Faerm, 2022). Industrialisation also separated the thinking and the making aspects of the design process. As the designer role shifted towards conceptualisation (Redström, 2020), how the designer thinks and reasons became a critical determinant of design quality.

The need to articulate designers' thinking processes or design thinking was motivated by the shift towards using scientific methods as the yardstick of disciplinary rigour. Design thinking captures the designers' reasoning when solving design problems but the need to understand design thinking was not apparent to researchers before the 1960s. For a period of time, design disciplines such as Engineering and Architecture were treated as mere applications of the hard sciences with no real methodology of their own (Schön, 1992). The 20-year period termed as the Design Methods Movement starting from 1962 was one where design scholars sought to clarify why "doing design" is not "doing science" (Langrish, 2016). In his book titled "The Sciences of the Artificial" (Simon, 1996), Herbert Simon termed design as such because designers create that which not yet exist, whereas science involves studying and explaining natural phenomena. Scientific methods are also different from design methods. Scientists set up controlled experiments to test hypotheses about observable natural phenomena whereas designers develop clarity about what they are creating by exploring, prototyping, and testing ideas iteratively (Simon, 1996). Technical rationality underpins scientific processes, legitimising that which can be observed and proven whereas design thinking is characterised by implicit knowledge and intuition (Schön, 1992). The Design Methods Movement fostered recognition of design as a unique profession to those without and strengthened professional identities within (Cross, 1993). However, design practices continued to evolve with technological, commercial, and societal developments. Today, the boundary of design disciplines has and is still expanding beyond those involving physical products and built environments. The proliferation of computer infrastructure brought about new disciplines such as user-experience (UX) design, giving rise to demand for Web and computer interface designers, and the uptake of user-centred design thinking approaches for product and service innovation in business corporations (Brown, 2008; Ritter et al., 2014; US Bureau of Labour Statistics, 2023). The dynamic range of design activities makes it difficult to arrive at a uniform definition of design thinking among disciplines (Kimbell, 2011). Consequently, a "common core" about the nature and philosophy of design and design thinking is noticeably missing in higher design programme curriculums (Wrigley & Mosely, 2022).

Developments in industry are also nudging design educators to review their pedagogies. The increasing complexity of design problems has made higher design institutions incorporate more interdisciplinary learning, problem-based learning, and

industry-led project work to enhance students’ industry readiness (Faerm, 2022). In recent years, higher education disciplines outside of design have also begun teaching design thinking, especially after Tim Brown’s work became popular in the business industry (Brown, 2008). There is a wider range of students taking design programmes but not all having definitive aspirations about practising as design professionals (Pontis & van der Waarde, 2020). However, studio-based learning and the master-apprentice mode of instruction remain signature pedagogies in higher design programmes. During medieval times, masters of trade guilds were custodians of craft standards, and apprentices were certified for practice by living, observing, and working closely with their masters across a prolonged period of time. In the seventeenth-century art institutions, students watched and practised craft at the studio workshops of their teachers. These vestiges of the past as well as the Bauhaus tradition of creative exploration remain core to today’s studio cultures of learning (Faerm, 2022). Students work under the tutelage of design educators who would conceptualise design projects, model craft skills, and challenge students’ thinking and reasoning through desk crits and one-to-one project guidance. However, today’s design studios are also seen as communities of practice. Public crits train students to be community members who actively contribute by giving and receiving feedback. Students can also draw upon community support through informal collaboration with peers (Crowther, 2013). In recent years, design educators have started questioning if existing design pedagogies are adequate for preparing future-ready designers. In particular, studio-based learning is seen as being too instructor-centric and craft-focused, sometimes to the extent of propagating imitative learning when design educators are strongly biased towards specific ethos or approaches (Noël, 2020). Nevertheless, discussion and empirical investigation of alternative design pedagogies have been more forthcoming in disciplines such as architecture and fashion design, whereas there is a paucity of research from 2D disciplines such as graphic design, which is a visible gap in design education literature (Swanson, 2020).

Study Focus and Methodology

It is in this context that the authors sought to examine how graphic design educators could formulate design pedagogy. If different forms of professional know-how are considered as distinct languages (Gibbons et al., 2008), design education would then be a bilingual practice because it draws upon craft and educational languages. Therefore, in this study, we used collaborative autoethnography between a graphic design educator and an instructional design educator to examine and exemplify how graphic design pedagogy could be constituted through appropriating two design languages. Collaborative autoethnography is a methodology that facilitates two or more researchers to interrogate a phenomenon together (Chang et al., 2016). It is a variation of autoethnography which involves a researcher using a combination of autobiography and ethnography to examine a phenomenon. It is autobiographical as researchers draw upon their personal experiences, thinking, and pertinent artefacts as

data for personal storytelling. It involves ethnography as it seeks to understand how the story evolved within the researchers' larger social contexts. An autoethnographic approach allows for the analysis of graphic design pedagogies to be rooted in its implementation context so that the influence of industry trends, student profiles, and institutional policies on the day-to-day learning and teaching experiences may be captured (Chang, 2016).

Context

This study is based on an Art and Design Studio class that was undertaken by 11 students in the Diploma in Art Teaching programme at Nanyang Academy of Fine Arts (NAFA), University of the Arts Singapore. This interdisciplinary diploma programme prepares students for creative roles in art teaching by drawing upon perspectives from the disciplines of fine arts and design. Different segments of the class are dedicated to the creative processes of each discipline and the second author (CK) is responsible for the segment on design methods. How this group of students could attain adequate depth for graphical design thinking in an interdisciplinary curriculum was the pedagogical issue that CK brought to a Circle of Practice in Design Thinking facilitated by the first author (JK). This Circle was a nine-month professional development programme to enhance design lecturers' understanding and teaching of design thinking through workshops, engagement with design thinking literature, co-reflection with peers, and an individual pedagogical project. This study traces the conversations between the authors that occurred throughout the Circle of Practice programme as CK worked on her project to help Art Teaching students strengthen graphical design thinking. These conversations took place through reflection activities, class discussions, a lesson observation, and design discussions held face-to-face and via Microsoft Teams chat. Through collaborative autoethnography, we incorporate self and collaborative interrogation from the perspectives of design practitioner and educator. Given the general paucity of literature on graphic design education, this study allows the authors to draw lessons through the emerging synergies and tensions between craft and educational perspectives.

Data Collection and Analysis

Following the procedures outlined in Chang et al. (2016), this collaborative autoethnography began with self-interrogation to elicit the personal perspectives of each researcher. Several data sources were used to externalise the inner perceptions of the authors. For CK, her perspectives as a graphic design educator were elicited through the reflections she posted about her beliefs relating to design and design teaching, her perceptions of students' learning challenges, her design proposal drafts, and a video recording of her project implementation, completed as part of the

Circle of Practice programme. JK’s interpretation of how CK designed her teaching strategies from an educational perspective was elicited through field notes made while observing CK’s class, her comments on CK’s design proposals and project presentation throughout the Circle of Practice programme. After the Circle of Practice programme ended, critical dialogue was fostered through several additional reflective conversations between the authors to elicit recall of their experiences, probe and clarify each other’s perspectives, and critically thematise the lessons learnt.

“Designing” Graphic Designers—Lessons Learnt

It Is Not About Having a Design Thinking Process

The user-centred design thinking process that is popularly used in business comprises five steps—empathise with users, define the problem, ideate, prototype possible solutions, and test the solutions (Plattner et al., 2009). It is suggested that this design thinking process improves business outcomes because it has a humanistic perspective that enables businesses to better understand customers, whereas craft-driven processes tend to be artefact-focused (Brown, 2008). Is this necessarily so?

- CK: Competent graphic designers have domain expertise, for example, with illustrations or editorials. They are also good project managers and are well-informed of innovations in the industry. Therefore, to me, graphic designers’ design thinking involves using different methods to think critically as they carry out different processes for graphic design so that they can solve problems and attain desirable outcomes that are beyond client expectations. We too have the idea of Empathy in our processes, but we call it Research (Bowers, 2011; Frascara, 2004). Upon receiving the project brief, the investigation begins. Research is where we use quantitative methods and qualitative ones such as interview, observation, focus group study, and visual audit to define the hypothesis and make a proposal for the outcome needed by the project brief. At the studio, we will ideate through visual exploration, whereas some parts of Prototyping and Testing would happen during public crits. I have tried using the user-centred design thinking process (Hasso Plattner Institute of Design at Stanford, n.d.) with my class for one semester but found it a bit simplistic and ambiguous because it lacks the details which can be crucial to the graphic design process.
- JK: The attractiveness of this design thinking process is how it begins design with a decisive user-focused perspective through the word “Empathy” (Hasso Plattner Institute of Design at Stanford, n.d.). If I were to look at the processes for lesson design, this element is not necessarily absent because teachers also begin designing lessons by understanding students’ learning problems through what we term as Analysis (Morrison et al., 2013). The business-driven notion of Empathy cannot be directly appropriated into an educational context because business corporations empathise with and satisfy customer needs.

In higher education contexts, Empathy will have to embody different perspectives because curriculums could be dictated by different stakeholders including government, professional accreditation bodies, industry needs, and institutional boards of studies. Teachers certainly empathise with students' learning difficulties but giving students what they want the way they want it may not eventually help them to achieve beneficial learning outcomes. When applied to instructional design, the user-centred design process also does not fully capture technical aspects pertaining to analysing learning needs and formulating learning objectives, instructional strategies, instructional materials, and assessment strategies (Morrison et al., 2013).

Start with a Design Frame

Design problems are wicked problems (Rittel & Webber, 1973) that are open to interpretation and multiple possible solutions. It is not possible for designers to fully understand wicked problems before prescribing a solution. Therefore, designers often need to adopt design frames, that is, worldviews, perspectives, or concepts to help them interpret design problems (Dorst, 2011). The formulation of design frames helps designers to begin working on design problems. In our case, CK's reflections of her teaching experiences with this group of students and my observation of her lesson helped us to inch towards a design frame.

- CK: The Art Teaching diploma requires students to integrate art and design perspectives to their practice. Compared to students majoring in visual communication, these Art Teaching diploma students do not have as much exposure to graphic skills and design practice in their curriculum time, and not everyone has the same intrinsic motivation for the design-specific aspects of the curriculum. Therefore, design studio can be hard for them because design practice is not only about making good-looking products. They must be able to rationalise and justify their design choices with graphic design theory and vocabulary.
- JK: I can see the dynamic that CK observed during lesson observations. Whenever students were prompted for their design rationalisation, their application of graphic design vocabulary did not come naturally. Students need to enhance what is described in literature as graphic thinking (Gillieson & Garneau, 2018). Teachers' design frames are multidimensional (Koh & Chai, 2016). In this case, the nature of the curriculum and students' profile had the greatest influence on the development of this design frame but there were other implicit expectations.
- CK: I was fortunate to witness and train under the legacy of the Bauhaus format of art and design education where students completed foundational studies of materials before moving into their major. When I was in school, user-centredness, as described in existing design thinking models may not be the main focus of a Bauhaus-inspired system because the studio is seen as a site for experimenting with materials and technologies and making prototypes. I would say that Steve Jobs of Apple computers changed the idea of design. Rather

than say “I have these technologies and you use this”, it is now “I am telling you what you will need and I’m going to design it for you”. The spirit of wanting to be attuned to the customer has strengthened since the Bauhaus era. My industry experiences tell me that students need much more—how would they address client needs while managing and interacting professionally with them are also important. My aspiration for students is for them to realise that education is the process of absorbing knowledge and developing life skills to cultivate a healthy soul and be happy with serving the community. They must also be ethical practitioners. Especially with easy access to tools like ChatGPT, one can copy almost anything nowadays! Therefore, enhancing the quality of students’ design thinking is essential for good problem-solving.

To What Extent Can We Change?

Teachers’ teaching philosophy and beliefs shape their teaching actions (Schaefer & Clandinin, 2019). Understanding this aspect helps unravel the kinds of pedagogical change that a design educator would be comfortable with.

- CK: As a graphic design educator, my teaching philosophy is about empathy—not “put yourself in the students’ shoes”, but that students need to put on their designers’ shoes and think of how they could improve their design capacity. Therefore, I focus a lot on questioning and exploration, directing students to obvious mistakes so that they could slowly learn to develop a critical eye for visual outcomes. I also emphasise peer feedback where I gather students to critique each other’s visuals. They need to respond to my questions through analysing the relationship between elements and form, learn to make independent judgments, and give suggestions of alternative design solutions to their peers. I teach this way so as to share not only knowledge and skills but also life and industry experiences. Sharing is not one-way. When students trust me enough, they will also share their experiences with me. This in turn allows me to encourage them, inject hope and optimism, motivate them to make creative attempts, thereby fostering a positive disposition that “I can make it”. Students must be treated fairly with compassion, and we should not be judgmental about their design ability. But students should also not take advantage of the system and make unreasonable requests. This dynamic of studio-based teaching has helped me to have great rapport with students at a personal level. However, I am still not satisfied with the depth of their graphic design thinking. Some students are in avoidance about using visual design vocabulary, and others procrastinate.
- JK: CK’s current teaching approach is strongly aligned with the higher design studio-based culture and her own professional Bauhaus-focused training. It offers students many opportunities for guided feedback in a master-apprentice format to sharpen how they conceptualise different aspects of graphic design. I observed her personally critiquing each students’ interim design work,

modelling how she would apply different graphic design principles to evaluate and improve design outcomes. In fact, CK valiantly persisted with different ways of stimulating students' participation during class, whether by questioning, hinting, doing mini lectures, or sharing real-world examples to inspire their application of graphic design principles. Her enthusiasm inspired some to participate, but there were others who remained lukewarm. As an instructional designer who examines instructional activities and systems, I wonder how the instructional experience could be re-structured or re-orchestrated to help students overcome what CK perceived to be avoidance and procrastination. That is why, following the lesson observation, I asked CK: What if we moved away from teacher-led discussions? What if we designed some class activities to help students practice critiquing with graphic design principles before they worked on their own projects? What if students did peer critiques in groups and presented these to the class? What if we used a rubric to prompt their application of graphic design concepts? What if we added more self-directed learning exercises?

- CK: As we discussed different ideas after the lesson observation, I found that not all aligned nicely with the design studio culture of creative exploration and crit. However, I thought to myself—why can't we give students something to help them be more self-directed about how they are applying graphic design concepts beyond class? After all, I can't be constantly reminding them 24/7. Yet, a rubric seems highly prescriptive. Would we end up telling students exactly what to do? Wouldn't that be spoon-feeding rather than encouraging creative thinking?

Continue Experimenting and Learning

The development of the pedagogical solution was a design project that underwent several rounds of ideation, prototyping, and testing. While we did not officially outline any "design frame", this process subtly made us challenge and adjust our framing of the design problem, giving us new perspectives about the students and our craft in teaching. In CK's first proposal, she suggested:

- CK: I will introduce mini learning tasks with self-directed learning resources during class. Students will be asked to select two videos from a list to revise their digital skills with Adobe InDesign and Illustrator and the concepts of typography that were covered in their first year. They can select this according to their perceived weaknesses, project needs, or interest in the video content. As they work on their projects, they will be reminded to apply what they have learnt.
- JK: Design studios generally comprise teacher demonstrations or critique and students' individual creative exploration during project work. Structured collaborative exercises and self-directed learning with rubrics to influence thinking do not appear to fit nicely within the typical *modus operandi* of design studios, but I am seeing some pedagogical change in this first proposal. CK is

starting to think about extending the master-apprenticeship dynamic beyond herself. My feedback to CK was that the mini-tasks focus on reviewing technical and theoretical content whereas we might be missing the instructional processes for supporting students to transition to thinking about these aspects in relation to their design products. I also suggested that she consider how many opportunities would students have to practice “graphic design thinking”? Would one cycle be enough? What about studio cultures of peer feedback, lecturer feedback, and reflection? How would these be embodied as we consider new ways of teaching?

In the second attempt, we became more specific as the design framing developed towards creating some sort of rubric.

- CK: How can I better support the thinking aspect during graphic design? I attended a professional development programme by Project Zero whereby the first step of doing so involved using different ways to help students make their thinking visible to themselves. In 2023, I tried using the What Makes You Say That (WMYST) thinking routine (Project Zero, 2019) to help students develop the thinking dispositions for describing the artefacts they created and to generate prompt questions to reason and explain. I started to modify this routine into a self-analysis rubric by adding more probes that are related to graphic design principles and graphic design effects. I hope this checklist will help students to reflect more deeply about their weekly progress. Rather than simply describing what they would like to change in their product, the rubric should help them to engage with graphic design concepts and vocabulary while making these decisions.
- JK: From the student point of view, studio-based learning experiences can seem extreme—they are highly guided during teacher modelling and then expected to wrestle individually with their project work thereafter. I observe that teachers in the creative disciplines tend to be sceptical of thinking supports for fear that these may undermine individual creativity and lead to cookie-cutter products. My experiences with teaching instructional design show that designers need to wrestle with design thinking in order to learn, but the intensity of this process can be challenging and frustrating to beginning designers (Hargrove & Rice, 2015). Thinking scaffolds like what CK has proposed can serve as a gentler way of introducing students to this “wrestling”. Seeing rubrics as a means for making thinking visible rather than a standardised checklist is a critical design frame to arrive at. How then might the rubric be designed to bolster the expected levels of creative emergence from students while avoiding prescription? This, to me, is the challenge.
- CK: In my first version of the rubric, I integrated the graphic design vocabulary into the WMYST thinking routine (see Table 18.1). Students had to fill out two columns in the rubric prior to class. The left column is “Observing and Describing”. They had to study their design closely to articulate the logic and rationale underlying the use of design principles they used. In theory, they understood the meaning of each design principle,

Table 18.1 First version of rubric

		Stage 1—Self-analyse your cover page design	
		<i>Observing and describing</i> What do you see? Use the box below to identify the design principles applied in your cover page that are successful or less successful and why	<i>Questioning and investigating</i> What do you want to explore? How would you enhance the composition to align with your design concept to reflect the essence of your final project?
No.	Design principles		
1.	Hierarchy/emphasis		
2.	Proximity/scale and proportion		
3.	Symmetrical balance		
4.	Asymmetrical balance		
5.	Radial balance		
6.	Movement/rhythm/repetition		
7.	Figure and ground		
No.	Graphic interpretation		
1.	Integration		
2.	Superimposition		
3.	Translation		
4.	Positive/negative		
5.	Overlays		
6.	Visual contrast		
7.	Visual tension		
No.	Visual elements		
1.	Type		
2.	Dots		
3.	Lines		
4.	Form/shapes		
5.	Colour		
6.	Texture		
7.	White space		
8.	Images/illustrations		

but when it came to application, they could not identify how to link the theory with their actual practice logically and rationally. In the left column “Question and Investigate”, students had to question and propose the appropriate design principles they wished to explore in order to enhance their composition to convey their intended visual concepts.

When first introduced to the students, students could not understand what exactly should be pinned down in the rubric. Some even asked how many words to write and if this applied to just one or all of the design principles. They also faced difficulties with identifying their own design issues because they were not sure what question to ask to decide on the design principles to further explore. This first experience of working independently with the rubric forced students to learn to observe and analyse closely how using design principles could enhance the visual aesthetics and how they better conveyed their design concepts. I tweaked the prompts in the column of the rubric so that these were more explicit about what I wanted students to evaluate and consider about their design (see Table 18.2). This guided them to make iterative review and refinement of their design (Table 18.3).

- JK: Crafting an appropriate rubric is not straightforward in this case because graphic design knowledge is highly tacit and personal, especially for experienced practitioners who are fairly automatised in their practices (Bohle Carbonell et al., 2014). There are textbooks of graphic design theories but no textbook giving you the specific answer to your design problem. These “tricks of the trade” are usually not documented officially but may emerge during crits as the teacher shares possible ways of looking at design problems. I feel that rubric creation forces design educators to dig deep within their repository of professional expertise as they wrestle with making their tacit heuristics of practice explicit. In addition to crits, rubrics can be an excellent way of expanding the mechanisms of cognitive apprenticeship (Brown et al., 2000). The design educator also benefits from having to make their thinking of tacit craft practices visible, thereby improving the clarity of their instructional message to students. This tweak to CK’s teaching processes had positive results.
- CK: I was half afraid that adding this self-evaluation bit would make the students retreat and not come to class this semester. However, they all kept coming and trying to improve their design practices bit by bit. They realised that this more disciplined way of thinking can actually be quite enjoyable, and they became more confident about it through multiple rounds of practice. Not only were they learning something, they were seeing its value through observable improvements to their products. Even for the weaker students, I was pleasantly surprised that they managed to solve design problems on their own. The atmosphere of crits in class has also become very vigorous and vocal, but also supportive. Some students looked as if they were going to collapse in tears but what doesn’t kill you makes you stronger. The support they got from

Table 18.2 Second version of rubric

		Stage 2—Self-evaluate the analysed cover page	
		<i>Reasoning</i> What do you think about the second version? Provide a rationale for why the second version is successful or not successful	<i>Exploring viewpoints</i> What do you want to explore further? What are other ways to enhance?
No.	Design principles		
1.	Hierarchy/emphasis		
2.	Proximity/scale and proportion		
3.	Symmetrical balance		
4.	Asymmetrical balance		
5.	Radial balance		
6.	Movement/rhythm/repetition		
7.	Figure and ground		
No.	Graphic interpretation		
1.	Integration		
2.	Superimposition		
3.	Translation		
4.	Positive/negative		
5.	Overlays		
6.	Visual contrast		
7.	Visual tension		
No.	Visual elements		
1.	Type		
2.	Dots		
3.	Lines		
4.	Form/shapes		
5.	Colour		
6.	Texture		
7.	White space		
8.	Images/illustrations		

Table 18.3 Third version of rubric

Stage 3—Self-checklist of the publication				
No.	Checklist	Yes	No	Self-check and final evaluation of the publication
				• Final check to ensure the elements are in place with logical rationale • Indicate the design principles and graphic integration in the publication
1.	Cover page • Indicate the design principles and graphic interpretation in the composition			
	– Design principle			
	– Graphic interpretation			
2.	Contents of publication • Refer to the Adobe InDesign course site • Indicate design principles and graphic interpretations in the layout and composition			
	– Content page/spread			
	– Chapter/section (page or spread)			
	– Parent pages			
	– Margin/column/grids			
	– Page numbering			
3.	Typefaces • Use the typefaces recommended in the lecture notes			
	– List all the chosen typefaces for the publication in the Remarks column			
4.	Character style • Refer to the Adobe InDesign website			
	– Headers			
	– Sub-headers			
	– Body-text			
	– Others			
5.	Graphic elements • Use only the essential elements sparingly			
	– Type			
	– Dots			
	– Lines			
	– Form/shapes			
	– Colour			
	– Texture			
	– White space			
	– Images/illustrations			

(continued)

Table 18.3 (continued)

Stage 3—Self-checklist of the publication				
No.	Checklist	Yes	No	Self-check and final evaluation of the publication
				• Final check to ensure the elements are in place with logical rationale • Indicate the design principles and graphic integration in the publication
6.	Typographic studies • Indicate design principles and graphic interpretations in the type configurations/relationships			
	– Typography configuration			
	– Type semantics			
	– Text as images			

teacher and peer feedback helped them to be resilient, bouncing back to design challenges with more ideas.

JK: I am observing that the thinking scaffolds facilitated a different studio atmosphere, even though it was used in a self-directed manner. It reduced “procrastination” and “avoidance” by activating design thinking and energising learning. This is the attitude of learning that is important for students to carry over to their professional lives. Successful designers need to be curious and happy to learn ... after all, we won’t always be asked to design what we like or what we are familiar with. Where would this design journey take us next?

CK: When teaching design studio modules, I hesitate to conduct one-on-one consultations during class hours because some students may end up chatting with each other or watching videos on their laptops while waiting for their turn. As a design educator, I can better maximise students’ learning by implementing more effective teaching methods. In this case, I strive to help students develop design self-awareness as they are made to independently analyse their design processes and identify areas for improvement critically.

When I was at university, I recall that the professor would have us pin up our work for everyone to make close observations and give critical comments. We were taught to analyse every element, including dots, lines, text, and images, and to rationalise the juxtaposing relationships. The studio setting reminds me of one of the images I came across in a book on Bauhaus. The image showed Josef Albers and his students in a studio discussing different paper sculptures created by the students. It wasn’t until later that I realised how much I appreciated those lively critiques and discussions I had at university, which were the foundation of Bauhaus teaching. Looking back, I don’t ever recall a dull moment at studio sessions.

As a teacher, I discovered more tools and methods to facilitate critiques and discussion through the Thinking Routines course conducted by Project Zero. I

pilot tested them in a Graphic Design module in 2016, and students had positive comments about them in their reflections. Most importantly, students’ design products showed that it enhanced how students applied design theory and graphic skills to their projects. While the teaching methods for a graphic studio do not drastically change, I have found that these Thinking Routines need to be continually adapted and integrated with rubrics that outline considerations specific to graphic design. I have also appreciated that rubrics are not cast in stone but need to be tweaked according to the requirements of different project briefs, student profiles, and programme needs. For these Art Teaching students in an interdisciplinary programme, the rubrics spoke to their need for more scaffolding with integrating design theory. By the end of the semester, the design outcomes produced by the students demonstrated deeper considerations of personal aspirations and aesthetics. While engaging students in classroom critiques and discussions remains the core of my personal design pedagogy, I have found new ways of supporting this through the use of rubrics. How to modify rubrics to maximise learning according to different project and course contexts is an area that I can further explore.

Discussion

This collaborative autoethnography examined how a graphic design educator developed new pedagogies to enhance the graphic design thinking of Art Teaching students. The findings exemplify how industry trends, changing student profiles, and interdisciplinary approaches could influence higher design educators’ pedagogical approaches (Pontis & van der Waarde, 2020). Studio-based learning remains core but design educators are challenged in terms of heutagogy or methods for supporting learner agency in their teaching (Hase & Kenyon, 2007). Since design curriculums already demand and reward individual creative exploration, heutagogy was used in this study to help students optimise their agency towards improving design thinking. This was not a new problem for the second author who was already exploring different pedagogies before arriving at the use of rubrics as thinking scaffolds through this study. The increasing uptake of user-centred design thinking processes by non-designers in business has prompted some design educators to incorporate it into their classes (e.g. Balakrishnan, 2022). This process may help design students to develop a general understanding of the design process but the study findings suggest that deepening students’ grasp of graphic design vocabulary had more effects on their ability to solve design problems independently. In education literature, instructional design is conceptualised as a systematic process whereby teachers analyse learning problems, design solutions, develop learning materials, implement the intervention, and evaluate learning outcomes (Morrison et al., 2013). However, the study results show that the process of creating design pedagogy is emergent and “designerly”, one requiring teachers to be making conjectures and continually experimenting with ideas to derive insights that inform their ongoing design action (Cross, 2001). In

our case, pedagogical design thinking meant exploring and making attempts to find “the way”, through which we also had to confront how we framed the problem and how this design frame may dislodge our established teaching routines. Design educators are first designers then educators. This sense of identity and established traditions of master-apprenticeship instruction influenced how the first proposal was framed around providing more content resources. The educational perspectives shared throughout the Circle of Practice programme and the project discussions between authors saw us exploring alternatives to teacher crits. The extent to which pedagogy changed core studio practices was a critical consideration.

When the second author connected these suggestions with her previous application of Visible Thinking activities in a Graphic Studio module in 2016, she began to see how rubrics could support rather than curtail creative exploration. If design thinking is the creation of solution pathways, design frames affect the kind of pathways that are being constructed. The findings suggest that even though teachers generally form design frames based on their perceptions of students’ abilities and learning behaviours, they can also appropriate new perspectives through dialogue with peers and using scaffolds such as educational theories and educational literature (Koh & Chai, 2016). Nevertheless, there are some core classroom cultures that design frames should align with. The use of rubrics as thinking scaffolds in this case enhanced students’ ability to engage graphic design languages, which bolstered their ability and motivation to participate actively in class crits which in turn strengthened the studio-based learning culture that the second author envisioned.

Implications for Higher Design Institutions

Through this study, we suggest three implications for the development of higher design pedagogy.

Develop Institutional Pedagogical Frames

Design frames influence how design educators articulate their design pedagogy. Yet, the design studio and extant cultures of studio learning remain core to higher design pedagogical practices. One criticism often hurled at design studios is its teacher-centred culture (Noël, 2020). This study shows that learner-centred studio experiences are possible through balancing teacher-centredness and heutagogy (Hase & Kenyon, 2007), but new kinds of design framing are needed to rationalise seemingly opposing pedagogies. The future landscape of higher design is set to have significant effects on the cultures of studio-based learning, as calls for more interdisciplinary learning and use of learner-centred methods such as problem-based learning are

consistently being made (Pontis & van der Waarde, 2020). The costs of maintaining dedicated studio spaces for small numbers of students and the successful migration of design studios online during the COVID-19 pandemic are pointing to new ways of organising the design studio experience (e.g. Iranmanesh & Onur, 2021). Pedagogical framing is needed at institutional level to demarcate the institution’s defining pedagogical experiences. This can help design educators to articulate congruent course-level design frames.

Develop and Use Pedagogical Language

This study shows that design thinking cannot be divorced from disciplinary design languages, but the language of teaching design is different than craft language. While there is a plethora of educational processes and methods (see Morrison et al., 2013), institutions need to appropriate and develop the unique pedagogical languages that can support the achievement of institutional pedagogical goals. This may constitute the instructional design processes, range of teaching methods, and pedagogical planning scaffolds that are unique to institutional goals, policies, and contexts. There is also a need to find ways of embedding this pedagogical language into day-to-day institutional practices through scaffolding design educators to learn, think, and apply.

Support Pedagogical Design Thinking

The study results show that disciplinary cultures and teacher beliefs strongly influence studio-based cultures, while pedagogical change tends to evolve gradually. Supportive social-cultural contexts work hand-in-hand with institutional goals and visions to support change. Pedagogical design thinking emerges through opportunities for dialogue, interdisciplinary exchanges, continual ideation, and testing. These are the contexts that allow design educators to apply pedagogical languages and examine their usefulness towards different curriculum situations. In this way, “reflection-in-action” underlying design thinking is facilitated (Schön, 1992), and this process supports institutions to find the unique forms of pedagogical design thinking that can support their pedagogical goals.

Conclusion

The future for designers is promising, but we need to contend with how designing is constantly being redefined by technological advancements, including recent advancements in artificial intelligence. Amidst these rapid changes, teaching students how to engage craft and work skills with a high level of professionalism to benefit society remains the core of design education. Yet, designing something is different than teaching someone to design. While the design discipline is starting to give thought to design thinking, there is also a need for deeper consideration of what constitutes the pedagogical thinking needed to foster more designerly development of students in preparation for future design industries. The range of pedagogical methods and the pedagogical design thinking that design educators can use will continue to evolve. And so must we.

References

- Balakrishnan, B. (2022). Exploring the impact of design thinking tool among design undergraduates: A study on creative skills and motivation to think creatively. *International Journal of Technology and Design Education*, 32(3), 1799–1812.
- Bohle Carbonell, K., Stalmeijer, R. E., Könings, K. D., Segers, M., & van Merriënboer, J. J. G. (2014). How experts deal with novel situations: A review of adaptive expertise. *Educational Research Review*, 12, 14–29.
- Bowers, J. (2011). *Introduction to graphic design methodologies and processes*. Wiley.
- Brown, J., Collins, A., & Duguid, P. (2000). Situated cognition and the culture of learning. *Psychology of Education: Major Themes: Pupils and Learning*, 2, 207–230.
- Brown, T. (2008). Design thinking. *Harvard Business Review*, 86(6), 84–92. <https://hbr.org/2008/06/design-thinking>
- Chang, H. (2016). *Autoethnography as method* (Vol. 1). Routledge.
- Chang, H., Ngunjiri, F., & Hernandez, K.-A. C. (2016). *Collaborative autoethnography* (Vol. 8). Routledge.
- Cross, N. (1993). A history of design methodology. In M. J. Vries, N. Cross, & D. P. Grant (Eds.), *Design methodology and relationships with science* (pp. 15–27). Springer.
- Cross, N. (2001). Designerly ways of knowing: Design discipline versus design science. *Design Issues*, 17(3), 49–55. [https://doi.org/10.1016/0142-694X\(82\)90040-0](https://doi.org/10.1016/0142-694X(82)90040-0)
- Crowther, P. (2013). Understanding the signature pedagogy of the design studio and the opportunities for its technological enhancement. *Journal of Learning Design*, 6(3), 18–28. <https://eprints.qut.edu.au/220427/>
- Dorst, K. (2011). The core of ‘design thinking’ and its application. *Design Studies*, 32(6), 521–532.
- Dorst, K., & Reymen, I. (2004). Levels of expertise in design education. In *DS 33: Proceedings of E&PDE 2004, 7th International Conference on Engineering and Product Design Education*, Delft, Netherlands.
- Faerm, S. (2022). *Introduction to design education: Theory, research, and practical applications for educators*. Taylor & Francis.
- Frascara, J. (2004). *Communication design—Principles, methods, and practice*. Allworth Press.

- Gibbons, A. S., Botturi, L., Boot, E., & Nelson, J. (2008). Design languages. In J. M. Spector, M. D. Merrill, J. van Merriënboer, & M. P. Driscoll (Eds.), *Handbook of research on educational communications and technology* (pp. 633–645). Routledge.
- Gillieson, K., & Garneau, S. (2018). A case for graphic design thinking. In P. E. Vermaas & S. Vial (Eds.), *Advancements in the philosophy of design* (pp. 121–151). Springer.
- Hargrove, R., & Rice, A. (2015). The challenge of beginning. *International Journal of Art and Design Education*, 34(2), 159–168.
- Harwood, E. (2007). Artists in the academy: Curriculum and instruction. In L. Bresler (Ed.), *International handbook of research in arts education* (pp. 313–334). Springer.
- Hase, S., & Kenyon, C. (2007). Heutagogy: A child of complexity theory. *Complicity: An International Journal of Complexity and Education*, 4(1), 111–118.
- Hasso Plattner Institute of Design at Stanford. (n.d.). *Design thinking bootleg*. <https://dschool.stanford.edu/resources/the-bootcamp-bootleg>
- Iranmanesh, A., & Onur, Z. (2021). Mandatory virtual design studio for all: Exploring the transformations of architectural education amidst the global pandemic. *International Journal of Art & Design Education*, 40(1), 251–267.
- Kimbell, L. (2011). Rethinking design thinking: Part I. *Design and Culture*, 3(3), 285–306.
- Koh, J. H. L., & Chai, C. S. (2016). Seven design frames that teachers use when considering technological pedagogical content knowledge (TPACK). *Computers & Education*, 102, 244–257.
- Langrish, J. (2016, June 27–30). The design methods movement from optimism to Darwinism. In P. P. Lloyd & E. Bohemia (Eds.), *Future focused thinking—DRS international conference*, Brighton, United Kingdom. <https://doi.org/10.21606/drs.2016.222>
- Morrison, G. R., Ross, S. M., Kalman, H. K., & Kemp, J. E. (2013). *Designing effective instruction*. Wiley.
- Noël, G. (2020). We all want high-quality design education: But what might that mean? *She Ji: The Journal of Design, Economics, and Innovation*, 6(1), 5–12.
- Plattner, H., Meinel, C., & Weinberg, U. (2009). *Design thinking*. Springer.
- Pontis, S., & van der Waarde, K. (2020). Looking for alternatives: Challenging assumptions in design education. *She Ji: The Journal of Design, Economics, and Innovation*, 6(2), 228–253.
- Project Zero. (2019). *What makes you say that?* https://pz.harvard.edu/sites/default/files/What%20Makes%20You%20Say%20That_0.pdf
- Redström, J. (2020). Certain uncertainties and the design of design education. *She Ji: The Journal of Design, Economics, and Innovation*, 6(1), 83–100.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155–169.
- Ritter, F. E., Baxter, G. D., & Churchill, E. F. (2014). User-centered systems design: A brief history. In F. E. Ritter, G. D. Baxter, & E. F. Churchill (Eds.), *Foundations for designing user-centered systems: What system designers need to know about people* (pp. 33–54). Springer.
- Schaefer, L., & Clandinin, D. J. (2019). Sustaining teachers’ stories to live by: Implications for teacher education. *Teachers and Teaching*, 25(1), 54–68.
- Schön, D. A. (1992). *The reflective practitioner: How professionals think in action*. Routledge.
- Simon, H. A. (1996). *The sciences of the artificial*. MIT Press.
- Swanson, G. (2020). Educating the designer of 2025. *She Ji: The Journal of Design, Economics, and Innovation*, 6(1), 101–105.
- US Bureau of Labour Statistics. (2023). *Occupational outlook handbook. Web developers and digital designers*. Retrieved August 10, 2023, from https://www.bls.gov/ooh/computer-and-information-technology/web-developers.htm?ref=blog-loom-asynchronous-video-messag_blog-10-digital-marketing-trends-yo_blog-hire-web-developers_blog-how-our-remote-te%80%A6
- Wrigley, C., & Mosely, G. (2022). *Design thinking pedagogy: Facilitating innovation and impact in tertiary education*. Taylor & Francis.

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Chapter 19

Codetta: Pedagogies of Designerly Formation



Joyce H. L. Koh

Abstract Being “designerly” refers to how designers solve design problems through synthesising knowledge, design processes and intuition. Designerliness can help designers cope with the increasingly interdisciplinary nature of design practice. However, learning to be designerly can be challenging for novice designers since this involves being open to exploration, risk-taking and failures. While studio-based learning foster designerliness incidentally through crits and creative exploration, more deliberate pedagogies may be required. This codetta raises several areas for inquiry for higher design institutions with respect to their development of pedagogies for designerly formation.

Designers usually solve wicked problems that are open-ended and difficult to understand completely (Rittel & Webber, 1973). Being “designerly” (Cross, 2001) is often contrasted with methodical scientific experimentation because it involves emergent inquiry—one where designers try to make what they cannot yet fully articulate by integrating knowledge with intuition (Cross, 2001; Lawson, 2006; Rowe, 1991). Design expertise is shown in the skilful manoeuvring of this process to realise what Simon (1996) describes as satisfying solutions.

Learning to be designerly can be challenging for would-be designers (Hargrove & Rice, 2015). Many are stymied by the sheer openness of the process, especially when they fail to realise that being designerly involves exploration, risk-taking, tenacity, and learning from failures (Koh et al., 2015). However, industries are demanding more designerly people. The successful use of user-centred design thinking processes (e.g. Brown, 2008) for business innovation has expanded design work beyond traditional design disciplines. The rapid uptake of digitised options for living and working following the COVID-19 pandemic and the proliferation of artificial intelligence tools are continually redefining design industries and its workflows. Students of diverse profiles are also entering higher design programmes, with some who may learn design but choose not to be conventional design practitioners (Pontis & van der Waarde, 2020). There is a sense that design educators need to go beyond studio-based

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learning. As per Bauhaus traditions, teachers of design studios are expert practitioners who model craft standards and mentor student projects (Faerm, 2022). In this teacher-focused master-apprenticeship system, designerly formation occurs incidentally through crits and creative explorations, but it is suggested that new pedagogical methods including interdisciplinary experiences, real-world projects, problem-based learning, personalisation of learning, and heutagogy may better prepare students for future industries (Pontis & van der Waarde, 2020). What combination of pedagogical approaches would be more efficacious, and how should designerly formation be structured? The lack of standardised pedagogical vocabulary and the paucity of research into design education pedagogies, especially in the 2D disciplines (Swanson, 2020), continually present challenges to institutions seeking to make evidence-informed pedagogical choices.

A more fundamental challenge with designerly formation is that designerly attributes are difficult to standardise across the variety of design industries and practices (Kimbell, 2011). These theoretical difficulties leave the field without a common underpinning; the educational consequence being minimal exposure to the philosophy of design and the meaning of designerly practice in higher design courses (Wrigley & Mosely, 2022). Students may enter design programmes expecting to be told the “right way” only to discover or be frustrated that the expectations for designerly practice cannot be more different (Koh, 2022).

To successfully develop pedagogies for designerly formation, higher design institutions need further inquiry into the following areas:

- What is being designerly and what are the contexts of designerliness?
- What is your pedagogical language for designerly formation? What instructional approaches would embody your pedagogical language?
- What are the effective ways to design and evaluate pedagogies for designerly formation?
- How can teachers and students be supported to engage with pedagogies for designerly formation?

References

- Brown, T. (2008). Design thinking. *Harvard Business Review*, 86(6), 84–92. <https://hbr.org/2008/06/design-thinking>
- Cross, N. (2001). Designerly ways of knowing: Design discipline versus design science. *Design Issues*, 17(3), 49–55.
- Faerm, S. (2022). *Introduction to design education: Theory, research, and practical applications for educators*. Taylor & Francis.
- Hargrove, R., & Rice, A. (2015). The challenge of beginning. *International Journal of Art and Design Education*, 34(2), 159–168.
- Kimbell, L. (2011). Rethinking design thinking: Part I. *Design and Culture*, 3(3), 285–306.
- Koh, J. H. L. (2022). Designing for designerly ways of knowing: Creating learning design futures in higher education. In L. Tan & B. Kim (Eds.), *Design praxiology and phenomenology: Understanding ways of knowing through inventive practices* (pp. 189–204). Springer.

- Koh, J. H. L., Chai, C. S., Hong, H. Y., & Tsai, C. C. (2015). A survey to examine teachers' perceptions of design dispositions, lesson design practices, and their relationships with technological pedagogical content knowledge (TPACK). *Asia-Pacific Journal of Teacher Education*, 43(5), 378–391.
- Lawson, B. (2006). *How designers think: The design process demystified* (4th ed.). Routledge.
- Pontis, S., & van der Waarde, K. (2020). Looking for alternatives: Challenging assumptions in design education. *She Ji: The Journal of Design, Economics, and Innovation*, 6(2), 228–253.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, 4(2), 155–169.
- Rowe, P. G. (1991). *Design thinking*. The MIT Press.
- Simon, H. A. (1996). *The sciences of the artificial*. MIT Press.
- Swanson, G. (2020). Educating the designer of 2025. *She Ji: The Journal of Design, Economics, and Innovation*, 6(1), 101–105.
- Wrigley, C., & Mosely, G. (2022). *Design thinking pedagogy: Facilitating innovation and impact in tertiary education*. Taylor & Francis.

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Part V

Conclusion

Chapter 20

Revisiting Salient Themes in Signature Pedagogies for Arts and Design Education, Pointing to Future Exploration



Rebecca Y. P. Kan and Christopher S. G. Khoo

Abstract The exploration of signature pedagogies in selected arts and design disciplines has identified distinctive traits and concepts that are important to professional education in each field. This chapter discusses nine salient themes that characterise these pedagogies: the artist's voice, style and identity; interpersonal interaction and collaboration; reflection and reflexivity; technology-enhanced teaching and learning; linking, connecting and relating through synthesis and coherence; creativity; truthfulness, authenticity and trust; creative collaboration with other artists and designers; and the interplay between surface structure and deep structure. Based on these themes and the chapter topics, nine pedagogical issues are proposed for future exploration and development in the signature pedagogy framework. These are pedagogies of pioneers in the profession, generative apprenticeship, reflexivity, transition, artistic tradition and heritage, truth, evocative ambiguity, creative uncertainty and designerly formation. Collectively, these pedagogical issues inform three defining characteristics of signature pedagogies: first, what experts in the field do; second, how knowledge within the discipline is analysed, critiqued, accepted or refuted; and third, what constitutes the threshold concepts that shape the discipline.

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Introduction

Arts and design professions are clearly different from other professions. The yardstick for an adequate artistic creation or performance is less “objective” or tangible than, say, for health, engineering and legal professions. The Merriam-Webster online dictionary defines *art* as “the conscious use of skill and creative imagination especially in the production of aesthetic objects” and *artistic* as “showing imaginative skill in arrangement or execution”. Cambridge Dictionary (online) defines *art* as “the making of objects, images, music, etc., that are beautiful or that express feelings”, and *artistic* as “skilfully and attractively made”. Creative imagination, aesthetic excellence, beauty and human feelings are attributes that are difficult to assess and measure and difficult to teach students to realise.

This exploration of signature pedagogies in selected arts and design disciplines by faculty members at the Nanyang Academy of Fine Arts, University of the Arts Singapore, has identified distinctive traits and concepts that are important in the professional education for each discipline. A closer examination reveals that these traits and concepts can be grouped into themes that are common concerns across arts and design disciplines, though they take different surface forms, are framed differently or are given more prominence in the context of particular art forms.

A major contribution of this examination of arts and design education is in uncovering and clarifying concepts and themes that are understated and often overlooked in the professional education for non-arts disciplines. This can be attributed to the “artistic” and creative foci of arts/design professions and to the common artistic quest for excellence and transcendence in the art—to achieve creations or performances that are “out of this world”.

In each chapter, the authors have examined a cluster of salient concepts that they consider important in their professional and pedagogical experience and explicated and illustrated the concepts in their teaching contexts—pointing the way to future exploration of these concepts in professional education for other disciplines. The importance of these concepts may not be so obvious in the teaching of entry-level professional competencies. Their value may lie in nurturing aspiring professionals to achieve excellence and, may we suggest, artistry in their chosen profession.

This book has adopted the concept and framework of Signature Pedagogy for the Professions (Shulman, 2005a, 2005b) as a lens and scaffolding for analysing pedagogical ideas and practices. The authors have endeavoured to relate their ideas and practices to different dimensions in the framework to identify extensions to the framework and to enrich it with additional concepts. Each chapter has plumbed the deep structure of professional education to clarify distinctive traits that foster habits of the mind (thinking and knowledge), habits of the hand (performance and other skills) and habits of the heart (moral virtues and other dispositions) that are important dimensions in the signature pedagogy framework, in addition to pedagogical content knowledge. Leong and Khoo (in Chap. 12) propose the addition of habits of the soul; De Silva (Chap. 14) argues for the addition of habits of the ear; Yu (Chap. 16) highlights the importance of habits of sight. The habits of mind, hand, ear, eye, heart

and soul are not only individually important in arts and design professions, they must interact and combine seamless, naturally and consciously as well as unconsciously to produce transcendent creations and performances, as pointed out by Leong and Khoo.

Salient Concepts and Themes in Arts and Design Professional Education

Professional training in arts and design shares many similar issues with professional training in other disciplines, including how to impart various kinds of thinking skills, how to link theory and practice, how to teach teamwork and collaboration skills, how to make use of various kinds of interaction and dialogue, how to make use of different kinds of technology and so forth. We suggest that a clearer understanding of these issues in the context of arts and design will indicate new ways of applying them to other disciplines as well. In addition, there are other issues that are distinctly associated with arts and design: being truthful and authentic, being creative and imaginative, interacting with the audience as participants in artistic creation, creating new realities and transcending the everyday.

We have grouped the concepts into nine themes:

1. The artist's voice, style and identity.
2. Interpersonal interaction and collaboration.
3. Reflection and reflexivity.
4. Technology-enhanced teaching and learning.
5. Linking/connecting/relating, synthesis and coherence.
6. Creativity.
7. Truthfulness, authenticity and trust.
8. Creative collaboration with other artists/designers.
9. Surface structure and deep structure.

As will be apparent in the discussion below, these nine themes are related—each theme relying on the presence of other themes for effective realisation. The themes of creativity, voice/style/identity, truthfulness/authenticity/trust and creative collaboration are of particular significance to artistes and designers, whereas the other themes are generic themes relevant to every profession. We propose that examining these themes in professional education and practice in other disciplines will continue to yield insights and enrich the concept of signature pedagogy.

Artist's Voice, Style and Identity

The artistic voice (or artistic vision for painting and visual arts) and identity are important attributes for a convincing and compelling performance or creation. For

musicians, this includes the musician's characteristic sound. Kan (in Chap. 2) has alluded to Maestro Lim Yau's preoccupation with sound: "sound is our business". Critical assessments of an artist's works/performances will usually characterise the artist's voice, vision or style. However, the characteristic elements of an artistic voice, vision and style will vary from artist to artist, and moreover, they are subjectively determined. The artist's identity is easier to characterise as artists are likely to be able to articulate their conception or perspective of their art and practice. Professional identity reflects self-awareness and self-image vis-à-vis professional practice and the professional's role in society (Terry, 2009).

Artist-educators as accomplished teachers will also have their individual teaching style. Chapters 2 and 4 have examined the artistic identity and pedagogical style of two artist-educators. Indeed, all the authors in this book have revealed their pedagogical identity and style in their writing. However, as mentioned earlier, the relationship between the artistic voice/vision/style and teaching style awaits further research.

Our main interest is in how teachers can facilitate students' development of their artistic voice, vision and style. This is a question that merits more study. Kan (Chap. 2) explains how Maestro Lim Yau sought to help conductors find their musical voice through reflection leading to self-discovery. One of his students explained that "he doesn't spoonfeed you, so sometimes he deliberately says things for you to figure out" (Chap. 2). Yu (Chap. 16) found that the self-discovery of artistic voice, vision and style is related to creativity—that is, artistic voice and style produce distinctive creations and performances. Thus, in supporting creativity, teachers are also helping students in self-discovery of their voice, vision and style.

Self-discovery of voice, vision and style may also be aided by listening to or watching audio or video recordings or live performances of other artists. Volioti and Williamon (2021) found that listening to recordings of music performances can help instrumentalists figure out their own style in relation to other musicians and also be exposed to technical and interpretive possibilities that they can select and meld with other influences to form their voice/style.

Perhaps the most promising approach is that taken by Leong and Khoo (Chap. 12) who explained the importance of seeking truth in body movement in order to give a truthful performance. Future studies can examine how students can be encouraged to seek truth, honesty and authenticity in creative works and performance, leading to uncovering and refining their true artistic identity and voice.

Interpersonal Interaction and Collaboration

Interaction and dialogue between student, teacher and peers take place in every discipline, but take distinctive characteristics in the arts and design disciplines. The interaction is more personal and intense in apprenticeship and mentoring situations where a master artist provides guidance to a student apprentice—to transfer explicit and tacit knowledge, and the way of life of a professional. The interaction between student and teacher is important for imparting ways of thinking, practice and attitudes

that may not really be taught in a classroom. Koh and Tan (in Chap. 18) noted that “Sharing is not one-way. When students trust me enough, they will also share their experiences with me. This in turn allows me to encourage them, inject hope and optimism, motivate them to make creative attempts, thereby fostering a positive disposition that I can make it”.

These personal, deep and intense conversations with arts and design masters are useful in capstone modules to help students transition to being full-fledged professionals and forge their own careers. They reveal facets of professional life and work not explicitly scripted in the curriculum and point to excellence and transcendence in artistic performance.

Peer interaction between students is also important for professional learning. They can take many forms, including different kinds of collaborative interaction. Indeed, a collaborative kind of relationship between teacher and student is beneficial for student learning. James (1996), in describing interpersonal interactions in sculptor’s metal work studio noted that “by using their own experiences to inform their comments, the instructors spoke as if making sculpture was a collaborative effort between them and the students” (p. 152). Chamorro-Koc and Kurimasuriyar (2020) in their survey of studio practices at a creative industries department found that all their respondents emphasised the collaborative nature of studio learning, though the collaboration took different forms in different disciplines. Both James (1996) and Chamorro-Koc and Kurimasuriyar (2020) have discussed the varieties of beneficial peer interactions.

Finally, the interaction or communication between artist/performer and the audience is the ultimate goal of all the training. Leong (in Chap. 12) avers that “a live theatrical event is a synchronous communication event—a dialogue between the performers and the audience. When actors perform, they send out messages that form meaning and shifting perceptions of the audience, transporting the mind of the audience to an imaginary world evoked through the performers’ hand, mind and heart skills”. In Chap. 2, Maestro Lim Yau makes a similar point with respect to music performance: “The content of the sound, of the music that you make, if it’s good enough and sincere enough, it will touch your audience and I think touching the audience is a very important part of the development of a musician”.

The different types of interpersonal interactions, their content and their influence on student learning are clearly a rich area for qualitative research.

Reflection and Reflexivity

Reflection and reflexivity are of course key to continuous development in an artistic craft and, as we suggested earlier, in uncovering and refining the artist’s voice and identity. Reflection is about critically analysing one’s artistic works and performance, but also the preparation and thinking processes that lead up to it, to find ways to improve. Reflexivity includes examining one’s reflective process to consider whether it is productive. It also includes examining one’s assumptions and how they guide one’s reflection to arrive at possibly biased conclusions.

In an educational institution setting, the teachers and mentors play an important role in guiding students' reflection and reflexivity. However, what is more important is to teach students strategies and routines for productive reflection and reflexivity that they can use in self-regulated learning after graduation from the academy.

Wong (in Chap. 6) provided detailed case studies of how he taught reflection and reflexivity to students, as well as how he applied reflection and reflexivity to his own teaching. Yu (Chap. 16) describes how a fashion educator guides her students to examine their preconceptions and assumptions by asking probing questions that help them to generate creative ideas. More case studies are needed to trace the cognitive and mental processes involved in reflection and reflexivity. Especially, it will be useful to professional education in general to understand what cognitive and mental processes can lead to reflexive moments or trigger epiphanies that transform or transition a student into a creative and inspired artist. Thus, reflection and reflexivity are important in effecting transitions for aspiring artists and may be an important dimension in the pedagogies of transition proposed by Kan (in Chap. 9).

Technology-Enhanced Learning and Teaching (TELT)

Use of digital technologies to support teaching and learning, especially in the context of online learning, is a huge research area. However, comparably less work has been done in the area of arts and design professional education, possibly because they often involve physical craft, with design and digital animation and storytelling being notable exceptions.

The main contribution of this book to TELT is in providing use cases and ideas for developing new types of online learning systems and digital tools to support the kinds of learning presented in the book. More creative online systems, interfaces and digital/analytical tools are needed.

Two chapters in the book have provided examples of how TELT can be productively explored. Wong (Chap. 6) carried out a small study in employing TELT in an online music analysis course. He explains how he used the Community of Inquiry framework and online technologies to develop the short online course. He employed open captions, background music, video animated effects and in-video quizzes to surprise and engage students. He used Vlogging techniques with CapCut software to enhance teaching presence, embedded interactive quiz in videos with Vizia and using Kahoot for the final quiz to enhance cognitive presence and self-directed assignment with Flipgrid.

Khoo and Tan (Chap. 10) proposed using a knowledge graph and a graph database management system to organise digital resources in an archival collection and relate them to resources on the Web. They used a graph visualisation tool, Cytoscape.js, to present information as graph visualisations on a Web interface—to support browsing and visual analysis by tracing links in the graph.

Linking/Connecting/Relating, Synthesis and Coherence

Thinking, learning and teaching are all founded on linking and relating concepts, ideas, entities and experiences and synthesising knowledge and narratives that are coherent and meaningful. The theme of relating and synthesis interweaves with all the other themes, taking different guises and roles in arts and design education.

An important kind of conceptual linking and relating is connecting theory with practice or performance. In the context of professional arts and design education, theory should inform art and lead to better performances. Conversely, performance experience should inform theoretical analysis, leading to a virtuous cycle of theory → performance → theoretical analysis. This close interaction between theory/theoretical analysis and practice/performance is a characteristic feature of arts and design professions. Engaging in the continual cycle of theory–practice enables performers to develop their own personal theory + performance that reflects their voice and identity.

However, connecting theory and practice is difficult for students. Koh and Tan (in Chap. 18) noted that when “students were prompted for their design rationalisation, their application of graphic design vocabulary did not come naturally”. Students need some kind of thinking scaffold to guide their thinking to productively link theory and practice. Koh and Tan developed self-reflective questions as thinking scaffold to help students to apply graphic design theory to their work. Peh (Chap. 8) proposed a framework based on design thinking to function as a thinking scaffold “to guide students in the ideation process—from crafting story ideas to preparing multiple sub-story plots ...”. In contrast, Wong in Chap. 6 starts with what the students are familiar with by asking them to demonstrate theoretical concepts with the musical instrument they are majoring in, giving students more confidence in exploring the interaction between theory and performance.

Linking and connecting narrative elements is highlighted in Chap. 8 on digital storytelling, where the use of metaphors and analogies helps the audience to link story elements. As Peh puts it, “the biggest challenge in storytelling on multiple platforms is to lead the audience to ‘connect the dots’ seamlessly, to make sure that they can link the bite-sized sub-stories crafted for the various platforms—sub-stories that work individually and yet cohere to form a complete picture”.

Thus, a close examination of linking, synthesis and coherence in professional practice and case studies of how to impart these skills to students in the context of learning merits a lot more study.

Creativity

A thread that runs through all the chapters is the concern for fostering creativity and imagination—how to educate students to create new art for new situations and

contexts, and to imagine the previously unimaginable, rather than to replicate the work of past masters.

Kan, in proposing pedagogies in generative apprenticeship (Chap. 3), stressed how apprenticeship should not be a method for replicating a master's art but should provide a foundation for the aspiring artist to develop and envision new creations and performances. Similarly, Khoo and Tan (in Chap. 11) stressed that archival materials, including audio and video recordings of previous performances, should support creativity by alerting artists to technical and interpretative possibilities that they can select to incorporate in their own playing.

The authors in this book are acutely aware of the need to nurture creativity and imagination in their students. Koh and Tan (Chap. 18) agonised over how to teach students to use self-reflecting rubrics to stimulate creative thinking rather than as a checklist. Kan (Chap. 2) explained how Maestro Lim Yau, in his orchestral conducting, sought to convey “a vision that the orchestral musicians experience as intellectual stimulation and inspirational motivation ... finding the conditions required for their own creativity”. In teaching conducting, Maestro Lim used “different rehearsal languages” to provoke unexpected things to happen. He encouraged conducting students to experiment and take musical risks in rehearsals. Cariño (Chap. 4) explains how master dance choreographer Lim Fei Shen used metaphors and analogies for students to realise creatively in dance movements. Peh (in Chap. 6) taught students to find a “trigger”—which can be a photograph, artefact, personal experience, etc. that the student emotionally relates to—to inspire the student to creatively work out a coherent and compelling story. Yu (Chap. 16) examines how three fashion educators guide their students to cultivate creativity through exercising keen observation (way of seeing) and thinking skills to generate, analyse, and integrate ideas or alternative perspectives with their individual voice and style.

However, these raise several questions: What is creativity and how can it be recognised? How can one explain in what way a creative work or performance is creative? Are there different kinds and degrees of creativity? Finally, what are the ways of stimulating creativity in different arts and design disciplines, for different kinds of students? As we have pointed out in Chap. 1, being creative does not mean doing something totally way out or haphazard, but accomplishing it within artistic or contextual constraints and available resources.

Truthfulness, Authenticity and Trust

As mentioned earlier, arts and design professional education needs to impart more than competence to students, but also the awareness of and ambition to infuse their art with that extra quality that raises art to a transcendent level. Arts and design professionals need to be able to recognise transcendent qualities in art works and aspire to attain that level of performance. But what that transcendent quality is differs from one artistic field to another and may need to be imparted and assessed differently.

Peh (in Chap. 8) talks about training students “to craft authentic stories based on a theme using their personal experience”. Yu (Chap. 16) describes how a fashion educator upholds a kind of frank honesty and directness that is necessary “for fashion designers to convey ‘their own voice’”. Leong and Khoo (in Chap. 12) discuss the challenge of training students to recognise and seek truth in their performance. They explain how truthfulness in performance engenders trust and care between actor and audience and among the actors in a theatre performance in order to collaboratively give a truthful performance.

Chamorro-Koc and Kurimasuriyar (2020) noted that for enhanced learning in a studio, rapport between teacher and students are needed to create an environment of openness and trust so that students feel safe and confident to express their ideas and views.

One can’t help thinking that in the postmodern era where truth is perceived as relative (Duignan, n.d.), leading to a lack of authenticity and trust, it is all the more important to examine the question of truth, authenticity and trust in every discipline. The perspective in arts and design disciplines where truth, authenticity and trust are not taken for granted but represent transcendent goals to strive for, offers a compelling way forward, for other disciplines to consider.

Creative Collaboration

Collaborative work is increasingly important in scientific, industrial and corporate environments. Insights into how collaborative work can yield good results can be obtained from examining how artists collaborate with other artists in the act of artistic creation. Barrett et al. (2021) characterised creative collaboration as a collaborative process that has creativity embedded within—with features of non-hierarchical learning, the element of “flow”, approximately equal distribution of responsibilities and unpredictable outcomes partly determined by the quality of the collaborators.

De Silva (Chap. 14) found that in a Javanese gamelan ensemble, players “came from all walks of life” and started with little experience playing gamelan. The collaborative outcome is shaped by collaborative effort as well as the quality of individual contribution. The players seem to be constantly engaged in a kind of musical negotiation to achieve a good performance. The elements and attributes of a gamelan ensemble and performance provide a framework for analysing and comparing professional collaborations in other disciplines, as well as interactions between professional and client, for example in a clinical health setting.

In fashion design, Ban (2023) said that designers always work in a team and engage in different kinds of creative collaborations: “Creative directors have several assistants, while freelance designers might work with specialised ateliers or factories. Designers collaborate with other professionals at different levels of the process: patternmakers, textile designers, product developers, etc. These collaborations often impact the evolution of the design, driving it on a new path. Many projects develop

transdisciplinary[ity] through collaborations with artists, architects, engineers, etc.” (p. 70).

Surface Structure and Deep Structure

What is seen by the eyes for an artistic work is just the tip of the iceberg. Much of the meaning, creativity and genius of an artistic creation or performance has to be grasped by a discerning human audience or consumer. There is a lot going on below the surface form. What the artist or performer puts into an artistic work or performance includes years of prior training, study, preparation of mind, body and soul, vision and so on. Developing the students’ perception and understanding of the deep structure of an artistic creation or performance is an integral part of professional training.

We have earlier alluded to the importance of connecting theory with practice and performance. Theory is a kind of deep structure for both artistic work/performance and for education. Connecting theory and practice/performance and using a thinking scaffold to analyse artistic creations, discussed earlier, are examples of traversing between surfaces to deep structure. Wong (Chap. 6) exemplifies the zooming in and out of different levels of abstraction or deep structure in music theory analysis. The self-reflection rubrics devised by Koh and Tan (Chap. 18) are specified in fairly general terms to be applicable to most design situations. In applying the rubrics, the students have to “specialise” them, fleshing them out with surface details relevant to the design product the students are working on.

Thus, seeking the deep structure, theory and underlying explanations of creative work and performance is what experts in any professional discipline do reflexively and unconsciously, as is the application of theory to professional practice. Analysis of the different types of deep structure and theories in artistic work as well as in the teaching of various art forms will help arts and design professionals to understand their work better and afford teachers more ways for imparting artistic competencies.

Inspiring Pedagogical Futures

We should not aspire to predict the future; we should invent it. (Shulman, 2013, p. 178)

Based on the concepts and themes discussed earlier and the chapter topics, we have proposed the following pedagogies and elaborated on them in separate codetta chapters, complemented with insights from the literature.

Pedagogies of Pioneers in the Profession highlight the importance and influence of teaching artistry based on conviction, clarity of insight and creative vision, demonstrating both artistic experience and pedagogical competence through eminent

artist-educators. Pioneering artist-educators, in addition to being supremely accomplished artists, possess the teaching artistry to impart personal practical knowledge needed to scale artistic heights. Because these pioneering figures have had extensive training in the profession, such pedagogical signatures demonstrate what Shulman (2006, p. 29) referred to as “a deep integration” of personal practice and pedagogical content, reflecting habits of mind, hand and heart that are vividly conveyed to students at different stages of their development. The pedagogies of these artist-educators are not signature pedagogies of competence for imparting basic professional competencies, but signature pedagogies of artistic excellence and transcendence—to impart the knowledge, desire and vision to transcend a good performance to produce an out-of-the-ordinary result, or as Maestro Lim Yau put it (in Chap. 2), an encounter with the Holy Grail. Borne out of a lifetime of experiences, these personal practical experiences enhance the students’ knowledge about how art is made and what professional practice truly means (Exley, 2008).

Pedagogies of Generative Apprenticeship emphasise a learner-centred approach, actively engaging apprentices in constructing or creating new knowledge and understanding through generative mechanisms. This pedagogical approach fosters outcomes through complex inquiry processes that contribute to the development of new economies (Guile & Young, 1998), encouraging apprentices not just to replicate past creations or performances, but to extrapolate and invent (Shulman, 2008a). Such a transformative approach builds on the time-honoured pedagogical signature of apprenticeship, where new partnerships between master and apprentice are pivotal to shift the learning paradigm towards innovation and enterprise in both thought and practice. As Filorella and Mayer (2015) explained, when learners are actively involved in generating their own understanding of the material, they are more likely to remember, retain and apply that knowledge later. Such a partnership promotes creativity and learning exchanges, which enables the students to draw from experts’ knowledge and experience, at the same time allowing space for a dialectical tension between expert and student ideas to create off-shoots for future development.

Pedagogies of Reflexivity encourage educators to critically explore their own biases, dispositions and perspectives through their teaching philosophies and within the disciplinary practice and to likewise sensitise students in processes of self-awareness and self-questioning, in order to foster critical thinking and a deeper engagement with the subject matter. Reflexivity involves engaging with uncomfortable knowledge and destabilising moments that challenge existing knowledge and practices. Signature pedagogies of the future should embrace this discomfort, creating spaces that encourage continuous learning, unlearning and relearning. As co-learners who engage in reflection-in-action to question their own assumptions and those of their students, the “reflexivity of social interactions” (Shulman, 1996, p. 8) between educators and their students leads to significant personal and intellectual growth for both students and teachers, contributing to a more dynamic and responsive learning experience.

Pedagogies of Transition opens new pathways for an epistemic shift of dialogic exchange, where educators relate to the knowledge that students produce to become

the material for critical conversations. By facilitating liminal spaces that are “rhizomatic, zigzag, spiral” and “positive and negative at the same time” (Gale & Parker, 2014, p. 738), such conversations build the professional identities, personal development and well-being of their learners beyond thinking, performing and acting. Through provocations, authentic learning tasks and designing spaces for critical analysis, we develop pedagogical signatures that “link ideas, practices, and values” (Shulman, 2005a, p. 19). Pedagogies of transition intentionally illuminate tensions between academic learning and practical application, shifting the focus away from innovation for its own sake towards building meaningful connections with the personal and professional interests of students that lead to transformative experiences. To take a leaf from Shulman’s (2008b) editorial note on *Stewarding Change*, “without connections between past, present, and future—there would be no reason to educate, to invest, or to raise children well” (p. 6).

Pedagogies of Artistic Tradition and Heritage propose the use of online archives and collections for self-regulated learning, creative inspiration and developing artistic voice and identity. The archives of arts and design education institutions contain a wide variety of records that are primary and secondary sources for research in the development of particular art forms, the history of arts groups, the life and work of eminent artists, as well as the cultural and social environment of the times that the records were generated. Khoo and Tan (Chap. 11) note the increasing agreement in the archival science literature that an archive should not be viewed as a collection of materials taken out of time and context and preserved in stasis, but as a living collection that is continually re-enacted to generate new experience and understanding, and continually evolving as records of re-enactments and commentaries are added. The use of archives to support a pedagogy of artistic tradition and heritage is at a nascent stage. New knowledge organisation systems are needed to organise digitised archival materials to support such uses. New archive information systems, digital processing technologies (including artificial intelligence) and user interfaces need to be developed. In Chap. 10, Khoo and Tan propose knowledge graphs, graph database and graph visualisation as a promising approach.

Pedagogies of Truth refer to teaching methods and approaches that prioritise the discovery of truth. In artistic practice, “looking for the truth” (Shulman, 2002) relates to a complete alignment through habits of the mind, body, hand, ear, heart and soul. Leong and Khoo (Chap. 12) deepen the concept in theatre practice by exploring how a truthful performance can be manifested through an overall cohesion in the physical, emotional and intellectual being of the student-actor. Pedagogical approaches that guide students towards bodily enactments of truth and emotional authenticity include circles of trust and empathy that build rapport among peers, personalising assignments and assigning tasks that stimulate the curiosity to question and find deeper meanings of truth. Such pedagogical signatures are especially important in an age where masters are no longer gatekeepers of truth. By encouraging students to confront uncomfortable awareness of their body, mind and soul, these pedagogies enable students to discover their strengths, limitations and biases, fostering a more objective and truthful approach to performing, making and learning in the arts.

Pedagogies of Evocative Ambiguity highlight an essence of artistic practice, which involves “a tolerance for ambiguity and an openness to alternative interpretations” (Shulman, 2012, p. 79). Rather than providing clear-cut answers or predetermined outcomes, such pedagogical approaches encourage students to be more open and receptive towards uncertain and thought-provoking ideas, challenging students to engage with complex ideas and reflective dialogue. Drawing on Shulman’s (2008a) recognition that practice is “characterized by uncertainty, ambiguity, and unpredictability” (p. 8), we highlight how the value of evocative objects, such as triggers (Chap. 8) and the *kendhang* (Chap. 14) fosters pedagogies of evocative ambiguity. “Triggers” (in Chap. 8) are used to stimulate and inspire the student to flesh out a coherent and compelling story. A trigger can be a photograph, drawing, artefact, personal experience or any relevant entity or idea that the student can emotionally relate to use as a starting point for exploration, analysis and development. As an evocative object, the gamelan (Chap. 14) becomes a rich source of inquiry for students to communicate and creatively collaborate with one another. While suspending judgement will “likely to be somewhat painful” (Dewey, 1910, p. 12), activating a collaborative learning environment can conjure a space for students to connect with their own experiences and knowledge and nurture ways of thinking through others. Creating a “flow” (Csikszentmihalyi, 1990) through relational listening in ensemble playing (Chap. 2) or different degrees of being “in the zone” with the music and performance (Chap. 14) further empowers students to discover their own capacity for agency and shared leadership.

Pedagogies of Creative Uncertainty are rooted in the inherent unpredictability of what takes place in studios of the visual arts and conservatories of the performing arts. These spaces embrace uncertainty, serendipity and happenstance as integral aspects of arts education. The solutions are intentionally incomplete, reflective of artistic practice as a space where “not-knowing is ... sought, explored and savoured; where failure, boredom, frustration and getting lost are constructively deployed” (Fisher & Fortnum, 2013, p. 7). Within these liminal walls, learning is messy, playful, provisional and both destructive and constructive. While an easy response to uncertainty is to reduce, disguise or gloss over it, uncertainty should not be avoided but accommodated (Capobianco & Rfordáin, 2015). Practical activity is “the uncertainty which attends it”, as Dewey (1929, p. 6) succinctly puts it. Shulman (2005a) insists that this must even serve as “a socializing model for handling the conditions of practice” (p. 18). Arising from the inherent complexities of the arts and the open-ended nature of creative production, Chap. 17 offers some suggestions to support educators in navigating the tensions between certainty and uncertainty in professional practice. This codetta serves as a clarion call for more scholarly work to understand how artist-educators purposefully generate uncertainty in the service of learning.

Pedagogies of Designerly Formation extend what Shulman (2005b, p. 57) would consider as “experiences of teaching and learning that can influence the values, dispositions, and characters” for professions in design. According to Koh et al. (2015), being designerly involves exploration, risk-taking, tenacity and learning from failure. Fostering such pedagogies cultivate habits of mind that socialise future professionals

to the conditions of designerly practice, which builds professional identity and character, as well as professional dispositions and values. Through a deeper understanding of “being designerly” (Chap. 18), new pedagogies of designerly formation can take root to better prepare students for future industries. Koh (Chap. 19) points out that in the arts and design, the project objective or requirements may be emergent rather than predetermined. Creatively developing the goal of the artistic endeavour is to some extent part of the artistic or design effort. Koh refers to this approach and attitude as being “designerly” (Cross, 2001), “where designers try to make what they cannot yet fully articulate by integrating knowledge with intuition” in the process of “exploration, risk-taking, tenacity, and learning from failures”. Being creative means to do something new, novel and innovative. But this does not mean doing something totally way out or haphazard, but accomplishing it within artistic or contextual constraints or boundaries. What remains apparent is that the future of signature pedagogies in arts and design requires a continued stream of emergent inquiry, favouring questions over answers, and a shift to both the students’ and tutors’ perspectives of meaning, in order to bring about new ways of understanding.

Collectively, exploring creative pedagogies informs three characteristics of signature pedagogies: first, what experts in the field do; second, what it means to analyse, critique, accept or refute knowledge used in the discipline; and third, what are the threshold concepts in the discipline. What is clear and apparent is that signature pedagogies are endeavours orientating towards the realm of future signature learning experiences. As has been noted in the case of music maestro Lim Yau (in Chap. 2) and dance choreographer Lim Fei Shen (in Chap. 4), it is not possible for artistic creation to be simply based on modelling and scaffolding alone, even as these artist-educators value observation and coaching as useful tools in the performing arts. In the beautiful words of Kelchtermans (2009), “the person of the teacher is always somebody at some particular moment in his/her life, with a particular past and future (p. 263)”. Thus for future pedagogic signatures, we need to look into the past, present and future world through artistic creations of the students (Klebesadel & Kornetsky, 2009; Thomson & Hall, 2015). As Shulman (2013) prophetically reminds us,

I can guess that the future will not bring comfort to the nostalgic. The next generation in all areas of education will certainly be more digital, more networked, less place-bound, more jurisdictionally diverse, and less centrally regulated. (p. 179)

Conclusion

Arts and design schools are by nature highly active and re-generative environments for performative enactments of artistic as well as educational ideas. Though making sense of one’s teaching experiences is a very personal journey, coming together to weave multi-threaded discussions across arts and design disciplines with different surface forms has uncovered common concepts and themes in their deep structure. This would help educators to forge creative pedagogical responses based on a new

understanding of common traits and concepts, making it possible to re-imagine new futures in arts and design education.

Professional education, including that for arts and design, is going through a radical change where an expanding range of skills and competencies are needed to navigate the professional landscape. The explorations in this book have also led us to believe that we do not need to abandon classical models of pedagogies, but instead identify the essential pedagogical elements and “core competencies” and re-frame them or re-mix them with new elements for the new, more complex professional environment. Further research using qualitative, quantitative or hybrid methods are needed to deepen the understanding of the essential features of signature pedagogies and the issues that challenge extant pedagogical identities in arts and design.

We acknowledge that not every pedagogical approach in the education of arts and design professionals can be conceptually explained or explicitly analysed. A lot of implicit knowledge is embodied, embedded and enacted without being made explicit. As Cook and Brown (1999) observed, “even experts in a given skill can find their ability to use their tacit knowledge ‘thrown off’ when they are asked to describe explicitly what they are doing ...” (Nonaka & Takeuchi, 1995 in Cook & Brown, 1999). One does epistemic work that the other cannot. The interaction with the tutor and among students entails a dynamic way by which tacit and explicit knowledge interact. Exploring what goes in-between the tacit and explicit would therefore enable us to look beyond outwardly visible surface manifestations of the pedagogy, in order to consider structural relations that would be akin to what Bourdieu (1983) described as “invisible, or visible only through their effects” (p. 311).

As our discourse draws to a close, we acknowledge new post-COVID-19 challenges that will reshape our understanding of higher arts education. Generative AI opens Pandora’s box of questions on the value of higher education curriculum and assessments; experience with online learning environments forced on teachers and students by the COVID-19 pandemic has reshaped our understanding of the possibilities and challenges of online learning modes; ecological emergencies and ongoing global upheavals shackle movements towards sustainability, diversity and inclusivity. So what impact do these have on higher arts and design education? As Dewey observed regarding problems rooted deep in the complex social and political perils we live in, “We don’t solve them; we get over them”. Or, in Shulman’s own words, “we reframe them, rethink them, and keep at them” (Shulman, 2005c, p. 29).

References

- Ban, L. (2023). Inspired: Exploring creative pedagogies at the early stage of the fashion design process. *Art, Design & Communication in Higher Education*, 22(1), 69–87.
- Barrett, M. S., Creech, A., & Zhukov, K. (2021). Creative collaboration and collaborative creativity: A systematic literature review. *Frontiers in Psychology*, 12, 713445.
- Bourdieu, P. (1983). The field of cultural production, or: The economic world reversed. *Poetics*, 12(4–5), 311–356.

- Cambridge. (n.d.). Art. In *Cambridge.com dictionary*. <https://dictionary.cambridge.org/dictionary/english/art>
- Capobianco, B. M., & Ríordáin, M. N. (2015). Navigating layers of teacher uncertainty among preservice science and mathematics teachers engaged in action research. *Educational Action Research*, 23(4), 581–598.
- Chamorro-Koc, M., & Kurimasuriyar, A. (2020). Insights from studio teaching practices in a Creative Industries Faculty in Australia. *Arts and Humanities in Higher Education*, 19(2), 172–185.
- Cook, S. D. N., & Brown, J. S. (1999). Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science*, 10, 381–400.
- Cross, N. (2001). Designerly ways of knowing: Design discipline versus design science. *Design Issues*, 17(3), 49–55.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. Harper and Row Publishers.
- Dewey, J. (1910). *How we think*. D. C. Heath.
- Dewey, J. (1929). *The quest for certainty: A study of the relation between knowledge and action*. Minton, Balch & Company.
- Duignan, B. (n.d.). Postmodernism and relativism. In *Britannica*. Retrieved February 28, 2024, from <https://www.britannica.com/topic/postmodernism-philosophy/Postmodernism-and-relativism>
- Exley, B. E. (2008). Visual arts declarative knowledge: Tensions in theory, resolutions in practice. *International Journal of Art and Design Education*, 27(3), 309–319.
- Filorella, G., & Mayer, R. E. (2015). Generative learning strategies in the classroom. *Journal of Educational Psychology*, 107(3), 773–785.
- Fisher, E., & Fortnum, R. (2013). *On not knowing: How artists think*. Black Dog Publishing.
- Gale, T., & Parker, S. (2014). Navigating change: A typology of student transition in higher education. *Studies in Higher Education*, 39(5), 734–753.
- Guile, D., & Young, M. (1998). Apprenticeship as a conceptual basis for a social theory of learning. *Journal of Vocational Education & Training*, 50(2), 173–193.
- James, P. (1996). The construction of learning and teaching in a sculpture studio class. *Studies in Art Education*, 37(3), 145–159.
- Kelchtermans, G. (2009). Who I am in how I teach is the message: Self-understanding, vulnerability and reflection. *Teachers and Teaching: Theory and Practice*, 15(2), 257–272.
- Klebesadel, H., & Kornetsky, L. (2009). Critique as signature pedagogy in the arts. In R. Gurung, N. Chick, & A. Haynie (Eds.), *Exploring signature pedagogies: Approaches to teaching disciplinary habits of mind* (pp. 99–117). Stylus Publishing.
- Koh, J. H. L., Chai, C. S., Hong, H. Y., & Tsai, C. C. (2015). A survey to examine teachers' perceptions of design dispositions, lesson design practices, and their relationships with technological pedagogical content knowledge (TPACK). *Asia-Pacific Journal of Teacher Education*, 43(5), 378–391.
- McCoy, S. (2014). Singing pedagogy in the twenty-first century: A look toward the future. In S. D. Harrison & J. O'Bryan (Eds.), *Teaching singing in the 21st century* (pp. 13–20). Springer.
- Merriam-Webster. (n.d.). Art. <https://www.merriam-webster.com/dictionary/art>
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. Oxford University Press.
- Shulman, L. S. (1996). Paradigms and research programs in the study of teaching: A contemporary perspective. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 3–36). Macmillan.
- Shulman, L. S. (2002). Truth and consequences? Inquiry and policy on research on teacher education. *Journal of Teacher Education*, 53(3), 248–253.
- Shulman, L. S. (2005a). Pedagogies of uncertainty. *Liberal Education*, 91(2), 18–25.
- Shulman, L. S. (2005b). Signature pedagogies in the professions. *Daedalus*, 134(3), 52–59.
- Shulman, L. S. (2005c, September–October). Dignify the professional teacher. *Change*, 23–29.

- Shulman, L. S. (2006, March/April). From hermeneutic to homiletic. The professional formation of clergy. *Change*, 28–31.
- Shulman, L. S. (2008a). Pedagogies of interpretation, argumentation, and formation: From understanding to identity in Jewish education. *Journal of Jewish Education*, 74, 5–15.
- Shulman, L. S. (2008b, May/June). Editorial. Stewards of change. *Change*, 6–7.
- Shulman, L. S. (2012). The challenges and opportunities for liberal education in a faith-based university. In E. Davis (Ed.), *A higher education. Baylor and the vocation of a Christian University* (pp. 75–87). Baylor University Press.
- Shulman, L. S. (2013). Shedding light on Jewish education. *Journal of Jewish Communal Service*, 88(1/2), 178–180.
- Terry, K. S. (2009). Externships: A signature pedagogy for the apprenticeship of professional identity and purpose. *Journal of Legal Education*, 59(2), 240–268.
- Thomson, P., & Hall, C. (2015). Everyone can imagine their own Gellert: The democratic artist and ‘inclusion’ in primary and nursery classrooms. *Education*, 43(4), 420–432.
- Volioti, G., & Williamon, A. (2021). Performers’ discourses on listening to recordings. *Research Studies in Music Education*, 43(3), 481–497.

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Chapter 21

Afterword: A Critical Perspective of Arts and Design Professional Education



Christopher S. G. Khoo

Abstract This afterword offers a critical counterpoint to the signature pedagogy perspective showing how critical pedagogy is complementary to signature pedagogy in offering a critical edge to arts and design professional education. It examines what new insights may be obtained using a critical framework. Noting that arts and design professional education prepares aspiring artistes and designers not just to attain competence in an art form but to aspire to excellence and transcendence, it suggests enhancements to formulate a critical pedagogy of excellence and transcendence.

This book has adopted signature pedagogy as the common framework and analytical tool for examining professional education issues and methods in a range of arts and design disciplines. The framework is broad and rich enough for the contributing authors to relate interesting parts of their art and teaching to dimensions of signature pedagogy and deep enough to nudge them to clarify their artistic and educational stance. Signature pedagogy is, of course, not the only educational framework or theory for framing and analysing professional arts and design education. This chapter critically reflects on the discussions in this book using the lens of critical pedagogy—to examine what new insights may be obtained using a different analytical framework and to offer a critical counterpoint to the signature pedagogy perspective. It is also hoped that this will point the way to developing a critical pedagogy for arts and design professional education.

Kincheloe (2008a) noted that *critical pedagogy* is too complex to be characterised by a simple definition. It can be considered an educational philosophy, theory and school of thought that comprises several related themes or thought perspectives, including a vision of social justice and equality, the goal of reducing human suffering and the harmful effects of the dominant power and narrative, relevance to important issues in the students' lives, respecting the prior knowledge and experience that students bring to the classroom, concern for individuals who are marginalised or

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oppressed, the assumption that education is inherently political, consideration for power and control inside the classroom, and balancing the pursuit of social change with development of the students' mind (Abrahams, 2005a, 2005b; Kincheloe, 2008a, 2008b). Writings on critical pedagogy urge the importance of continually reflecting on one's culture and assumptions to change and improve (Freire, 1970/2005; Giroux, 2007). Applying the above themes and the concepts of "oppression", "freedom", "problem" and "reality" to arts and design education allows us to re-examine several recurrent issues and themes raised in this book.

The principal concern of this book is how to prepare aspiring professionals not just to attain competence in an art form but to aspire to excellence and transcendence, and to scale the creative heights. Mere competence is not good enough in arts and design professions. An arts and design pedagogy is a pedagogy of excellence and transcendence. Contemporary critical pedagogy does not emphasise striving for excellence and transcendence. However, critical pedagogy writings do highlight the importance of continually reflecting on one's culture and assumptions to continually improve and strive for freedom. We propose that a critical pedagogy of excellence and transcendence should include the lofty goal of enabling the artist or designer to attain a state of communion with the divine in their artistic and design creation process.

A significant contribution of critical pedagogy to arts and design education is to ask the questions "What is the purpose of artistic creations, designs and performances? What is the purpose of transcendent art and design?" The response of critical pedagogy would be that artistic creations and designs should contribute towards improving social justice, reducing social inequalities and transforming society and culture for the better. We agree that arts and design professional education should lead students to grapple with questions about the purpose of their art and the future contribution of their artistic life and work to society. However, we argue that artistes and designers should be afforded the "freedom" to decide on the answer to this question as part of their search for artistic identity. Some artistes and designers may find meaning or draw inspiration from a desire to dialogue with, and transform, their community. Others may seek religious inspiration to draw close to the divine. Exposure to a criticalist perspective and mindset, and applying criticalist principles to projects in some courses, is certainly desirable in opening students' eyes to one "possibility" of finding meaning in their art and design as well as their professional life and work.

Transcendent art or design creations are expected to have beneficial effects on other people and on society, not through organised revolution but by sparking epiphanies, raising the consciousness of the involved stakeholders, and transforming their perception. This is compatible with the perspective of academic or cognitive critical pedagogy, in contrast to revolutionary critical pedagogy (Malott, 2011). According to Malott (2011, p. 156), academic critical pedagogy has "a strong emphasis on critical self-reflection" with a desire to change people's perspectives and ways of thinking to reduce social inequalities and increase cross-cultural understanding. We are in agreement with Fay (1977) that "changing people's basic understanding of themselves and their world is a first step in their radically altering the self-destructive patterns of interaction that characterise their social relationships" (p. 204). Thus, the framework of

signature pedagogy can be extended to place more emphasis on “second-generation effects”—the future beneficial impact of graduated arts and design professionals on the world. The benefits of a signature arts and design education should accrue not just to students as budding artistes or designers, but also to their future audiences and users.

A core tenet of critical pedagogy is that effective teaching and learning must involve dialogue between student and teacher who pose and solve problems together. According to Freire (1974/2013), dialogue between teacher and student should be mediated by problems related to “existential situations” posed from “reality”. As this knowledge of reality is attained “through common reflection and action” (Freire, 1970/2005, p. 69), this results in *conscientization* (or critical consciousness) which inevitably leads to action that effects some change. Most of the pedagogical methods examined in this book include intense engagement, open-ended interpersonal interaction, reflection and interaction between theory and practice.

As the discussions in this book attest, all artist-educators grapple with the dialectical tension between striving for artistic excellence and engaging in dialogical interaction with the student—to guide students to find their visions of artistic summit and the pathways to these. Critical pedagogy directs the teacher to re-live or re-enter the journey of discovery with individual students to re-create knowledge. In the process, the teacher learns alternative pathways to the same artistic goal or discovers alternative artistic goals that are equally compelling. A critical pedagogy of excellence and transcendence thus needs to incorporate the critical role of artist-educators who have acquired insight and wisdom to walk with the student along an individual pathway to excellence and transcendence. Giroux (2020) and other critical pedagogy theorists have acknowledged the importance of a benign authority of teachers in the service of critical pedagogy.

Freire (1970/2005) asserted that effective dialogue engenders love, trust, faith, hope and humility. The importance of care for the students’ welfare and future, and trust between teacher and student clearly ungirds the pedagogical methods discussed in the book. The teacher must also have faith and hope that the student will eventually “grow up” to be a consummate artiste or designer despite current challenges. The student must have faith in the teacher and have hope in order to persevere in the face of slow and uncertain progress. Hope and humility also represent the artistic attitude of becoming and improving, and never arriving.

These concepts are explicitly discussed in Chap. 12 in the context of training actors’ body movement in theatre performance. Leong and Khoo emphasise the importance of mutual trust and care between teachers, students and peers, as well as among the ensemble of actors during a live performance. A truthful performance will also elicit trust and care in the audience. In Chap. 18, Tan noted that “When students trust me enough, they will also share their experiences with me. This in turn allows me to encourage them, inject hope and optimism, motivate them to make creative attempts, thereby fostering a positive disposition that ‘I can make it’”. The critical perspective suggests that these are important habits of the heart for signature pedagogies in arts and design.

The concepts of power and control, and oppression and freedom, are important concerns in critical pedagogy. Critical pedagogy advocates for the kind of education that develops in students a sensitivity to social injustices and inequalities, and a critical consciousness of the prevailing social, political and cultural environment and narratives, and their insidious influence on our preconceptions, assumptions and ways of thinking. Though these are not at the forefront of consciousness in the discussions in this book, there are nevertheless related issues that the contributing authors do grapple with. One important issue is that of transforming and freeing oneself to find one's own identity and creativity as an artist or designer. Artistic creativity is predicated on freedom—freedom from set patterns of thinking and doing. But freedom does not mean anarchy or randomness. It means envisioning something novel and realising that vision in artistic creation. An artistic creation that embodies this freed imagination and creativity can then have an uplifting effect on its audience.

Thus, a major responsibility of the teacher is to guide the student to recognise habitual patterns in ideas and practices within the student (due to prior education, experience and culture) that are hindering the student's development. The issue of freedom is relevant to the aspiring artiste or designer's struggle to find his or her individual voice, style and identity, rather than unconsciously adopting a borrowed style from an "oppressive" source. On the other hand, prior knowledge and experience can also provide a foundation for artistic identity and be a rich repository as grist for the artistic mill. Thus, teachers must endeavour to understand the individual students' background, current way of thinking and doing, as well as their artistic personality so as to help them to overcome limitations and, if possible, transform the limitations into artistic strengths. As Kincheloe (2008a, 2008b) encourages, teachers should be researchers of their students, to trace the source of their interpretive frameworks to personal and social backgrounds. Thus, the discussions in this book are aligned with the critical pedagogy perspective that "learning cannot be separated from an individual's identity" (Kincheloe, 2006, p. 147).

For students to develop critical consciousness of the sources of power and control over their artistic imagination and ideation, reflection and reflexivity are needed. Reflexivity refers to self-examination of how our reflections are biased by our assumptions, preconceptions and habitual way of thinking, and whether these should be changed. Malott (2011) pointed out that "acquiring the skills to be able to step back and reflect upon your own ideas" as a "product of external conditioning" is "a central aspect of the process of critical pedagogy" (p. 157). Action that is informed by reflection and understanding is known as *praxis*. The close coupling of such thinking and action, where thinking supports action, and action informs thinking, adds another dimension to the habits of mind in the signature pedagogy framework. When action is informed by reflection and understanding (i.e. *praxis*) through a dialogic process between teachers and students as co-learners, this leads to new insights and understanding.

In the age of technology and artificial intelligence, it is all the more important for individuals to assert and develop their humanity. The professions of arts and design and the creations of artistes and designers play a critical role in nurturing and developing the heart and soul of what makes us human. Embracing the principles

of critical pedagogy into the curriculum will help to sensitise students to set ways of thinking and doing that constrain artistic development, and to the socio-political-cultural sources of influence. It also highlights the dysfunctional and oppressive elements in the professional environment and in society, equips students to reflect on their deleterious effects, take some personal action (*praxis*) to reduce the harm and, at an appropriate moment in their career, have the courage and leadership to change the culture and system for the better. As Giroux (2007) aptly points out, this “language of possibility” is “capable of thinking risky thoughts that engages a project of hope, and points to the horizon of the ‘not yet’” (p. 77).

References

- Abrahams, F. (2005a). The application of critical pedagogy to music teaching and learning. *Visions of Research in Music Education*, 6(1), article 6. <https://digitalcommons.lib.uconn.edu/vrme/vol6/iss1/6>
- Abrahams, F. (2005b). The application of critical pedagogy to music teaching and learning: A literature review. *Update: Applications of Research in Music Education*, 23(2), 12–22.
- Fay, B. (1977). How people change themselves: The relationship between critical theory and its audience. In T. Ball (Ed.), *Political theory and praxis: New perspectives* (pp. 200–233). University of Minnesota Press.
- Freire, P. (1970/2005). *Pedagogy of the oppressed* (Trans. by M. B. Ramos, 30th anniversary ed.). Continuum. (Original work published 1970.)
- Freire, P. (1974/2013). *Education for critical consciousness*. Bloomsbury. (Original work published 1974.)
- Freire, P. (1998). *Pedagogy of freedom*. Rowman & Littlefield.
- Giroux, H. A. (2007). *Border crossings: Cultural workers and the politics of education*. Routledge.
- Giroux, H. A. (2020). *On critical pedagogy* (2nd ed.). Bloomsbury Publishing.
- Kincheloe, J. L. (2006). Postformalism and the socio-cultural and political challenge: Taking multi-logicity seriously. In P. L. Thomas & J. L. Kincheloe (Eds.), *Reading, writing, and thinking: The postformal basics* (pp. 141–168). Brill.
- Kincheloe, J. L. (2008a). *Knowledge and critical pedagogy: An introduction*. Springer.
- Kincheloe, J. L. (2008b). *Critical pedagogy primer* (2nd ed.). Peter Lang Publishing.
- Malott, C. S. (2011). *Critical pedagogy and cognition: An introduction to a postformal educational psychology*. Springer.

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