A mixed methods analysis of constructivism in the teaching materials created for older beginner piano students: An Australian perspective.

By
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Abstract

This research explores the facilitation of constructivism in the teaching materials and method books most commonly used by Australian studio piano teachers when teaching older beginning piano students. A two-phase research design using mixed methods methodology is employed. The first phase of the project identifies the teaching materials and method books preferred by Australian studio piano teachers, when teaching the older beginner piano student, aged 12 to 17. In the second phase these teaching materials and method books are evaluated to determine the degree to which they facilitate constructivist learning.

In phase one, piano teachers from all states and territories in Australia were invited to complete an online survey comprised of closed and open-ended questions regarding the teaching materials used with older beginning students. Identifying and quantifying the teaching materials selected by the majority of piano teachers was the chief objective of phase one. Secondary objectives of the survey included an exploration of the participant's teaching practice and their opinions regarding the teaching materials currently available for older beginner students, aged 12 to 17. For the purpose of this research the older beginner is defined as a student who commences piano lessons sometime between the ages of 12 to 17.

In phase two the learning theory of constructivism provided a lens and framework for the purpose of critically examining the teacher preferred materials identified from the survey administered in phase one. The various components of constructivism learning theory were identified to compile a comprehensive definition that embraced the multiple manefestations of this theory. This comprehensive definition which includes aspects of social and cognitive constructivism informed the creation of a constructivism tool (CET). Morford (2007) defines constructivist learning theory as a process involving an individual's active building and construction of knowledge. Scruggs (2009) argues that an active and engaged student progresses more quickly and finds greater meaning in the music making experience.

The purpose of phase two was to determine the extent to which selected teaching materials facilitate constructivism in terms of the way the content, approaches and structure of the method books incorporate different learning styles as well as active cognitive and co-operative social learning. The CET also explored the focus of learning in terms of facilitating

student self-reflections, self-evalution, ownership and goal setting. This research offers insights for piano teachers and music education researchers into aspects of piano teaching in Australia and the teaching materials for older beginners in relation to constructivism. Research outcomes indicate that the piano method books preferred by teachers, for teaching older beginners, facilitate some aspects of constructivism very strongly yet other features of constructivism are moderately or marginally encouraged.

RHD Thesis Declaration

Candidate's Statement

By submitting this thesis for formal examination at CQUniversity Australia, I declare that it meets all requirements as outlined in the Research Higher Degree Theses Policy and Procedure. I have not submitted in whole or part this work at any other tertiary institution.

Statement Authorship And Originality

By submitting this thesis for formal examination at CQUniversity Australia, I declare that all of the research and discussion presented in this thesis is original work performed by the author. No content of this thesis has been submitted or considered either in whole or in part, at any tertiary institute or university for a degree or any other category of award. I also declare that any material presented in this thesis performed by another person or institute has been referenced and listed in the reference section.

Joanne Mary Burrows

Signed: Joanne Burrows

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Copyright Statement

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Previous submission statement

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Nature of candidate's contribution, including percentage of total

In conducting the study, I was responsible for all aspects of the research and creation of the evaluative tool. This publication was written by me. I formed the research question, collated the literature, analysed the data and interpreted the results. (80%)

Nature of co-authors' contributions, including percentage of total

My co-author, Professor Judith Brown, assisted in the authorship, providing feedback, editing and assistance with the formatting of the article. (20%).

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Definition of Terms

Studio piano teaching	The one-to-one, individual piano lesson usually taught in the home or small studio.
Traditional teaching approach	The master-apprentice style of teaching, characterised by the master (teacher) directing, correcting, instructing, telling and showing the apprentice (student) how to play.
Younger beginner	The piano student, commencing the study of piano, aged 11 or under.
Older beginner	A student who commences piano lessons sometime between the ages of 12 to 17
Teaching resources and teaching materials	Any set of lesson plans, repertoire collection, learning tasks or activities used for teaching and learning to play the piano, including method books.
Piano method book, method book and method	A book or set of materials that provides a programmed, sequenced course of study, specifically designed and created for the piano student.

Preface

I have been teaching classroom music and studio piano teaching for over 20 years. As the Head of Keyboard at the Riverina Conservatorium of Music, I bring to this research the wide and varied perspectives of myself and my colleagues. Although this research is not, by the definitions of Brannick and Coghan (2007), Greene (2014) and van Heugten (2004), insider research, it is important to acknowledge my position as one who practices within the field of music education. As the researcher in this project, I attempt to observe and examine music education, specifically piano teaching, without preconceptions and bias (Guba & Lincoln, 1985). As a teacher, I bring to this work a degree of preunderstanding, knowledge, experience and insight (Gummesson, 2000). As an insider, I bring my lived experience to bear on my research questions (Brannick & Coghan, 2007). Greene (2014) makes reference to the difficulties of insider research in terms of achieving a suitable level of detachment. She identifies potential problems that may threaten objectivity and compromise validity, including methodological issues, subjectivity, bias and power.

I have attempted to set aside my assumptions and preconceptions and explore the research questions as openly as possible through an acknowledgement that the research project was borne out of my insider status as a piano teacher. All social research tends toward an interpretivist epistemology, and it is impossible for the researcher to be completely objective (Diesing, 1972; Mantzoukas, 2005; Muckler & Seven, 1992; Ratner, 2002). There will always be some aspect of one's social and cultural heritage that colours the way information is viewed. Likewise, participants in social research view the world through lenses shaped by culture, personal experiences and social background (Ratner, 2002; Ross, Amabile, & Steinmetz, 1977).

Guba and Lincoln (1985) propose a range of processes to promote the trustworthiness of social research. These include prolonged engagement, persistent observation, triangulation and reflexivity. As an insider, I included a range of checks that aimed to mitigate my own biases and facilitate an unclouded interpretation of the data. These included the use of an anonymous survey, careful analyses of the qualitative data over several months and the inclusion of an outside moderator to verify the results related to phase two of the research. I frequently practiced reflexivity in an endeavour to find, as Merriam et al., (2001, p. 411) describe, a "more truthful, authentic understanding of the situation". This research is enriched by data analyses from several vantage points; the advantages of insider knowledge and

experience; researcher reflexivity; and the strengths of mixed methods methodology. The research outcomes which contribute new knowledge to the academic world are also intended to be useful for the Australian piano teacher in her or his private studio.

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List of Acronyms and Initialisms

ABRSM	Associated Board of the Royal Schools of Music
AMEB	Australian Music Examinations Board
AMusA	Associate of Music, Australia
ANSWRC	Association of New South Wales Regional Conservatoriums
ANZCA	Australia and New Zealand Cultural Arts
CET	Constructivism evaluation tool
CQU	Central Queensland University
LMusA	Licentiate of Music, Australia
MTA	Music Teacher Associations
NASM	National Association of Schools of Music
NSW	New South Wales
RACE	Royal American Conservatory Examination
TMusA	Teacher of Music, Australia
UK	United Kingdom
USA	United States of America
VARK	Visual Aural Read/Write Kinaesthetic learning styles

Chapter One: Introduction

An evaluation of the degree to which constructivism is facilitated in the teaching materials and method books used by Australian studio piano teachers, with older beginner students, is the nucleus of this research. For the purpose of this research, the older beginner is defined as any student who commences learning piano from the ages of 12 to 17. This chapter presents an overview of the research proposal, provides a rationale for its focus, places the research topic in context, and identifies the significance of the research in relation to constructivism, teaching materials and Australian studio piano teaching. A presentation of the research questions which delimit the areas of inquiry and a brief outline of the research design conclude Chapter One.

Overview

Piano teaching has a long tradition that can be traced backed to seventeenth century Europe (Brubaker, 1996). Historically, piano lessons were characterised by the master (performer) sharing his or her expertise with the student (apprentice) in the form of a one-to-one lesson, typically held in the home (Bjøntegaard, 2015; Brubaker, 1996; Enoch, 1977; Uszler, 1996; Watson, 2010). Described as the master-apprentice approach, this traditional form of teaching continues to dominate studio piano teaching into the twenty-first century (Bautista et al., 2009; Bridges, 1988; López-Íñiguez, Pozo, & De Dios, 2014). McPhail (2010) observed that the master-apprentice paradigm is typically teacher directive, visually orientated, reactive and corrective. Similarly, research by Chmurzynska (2012) describes a series of piano lessons, each of which unfolded in a sequence of teacher instructions, corrections and critical responses to the student's performance.

The traditional master-apprentice model as a teacher-dominant, transmissive teaching model, restricts the student's role to the reception and recall of imparted information (Biggs, 2010; Bjøntegaard, 2015; Cleaver & Ballantyne, 2014; Wanzel, 2003). Constructivism, as a theory of learning, challenges this mode of teaching. An increasing body of research provides evidence that instruction and the attempted transmission of knowledge from one person to another is not the only, nor most effective learning model (Bain, 2004; Bruner, 1996; Garnett, 2013; Green, 2017; López-Íñiguez, Pozo, & De Dios, 2014; Prawat, 1992; Scott, 2011, 2012). Constructivism provides an alternative teaching model that mandates the student's active engagement in the learning process. In constructivism, learning is defined as a process in which each individual constructs, augments and adapts her or his knowledge and skills

through relevant cognitive experiences and social interactions (Bonk & Cunningham, 1998; Collmer, 2012; Confrey, 1990; Debrot, 2016; Myers, 2009; Webster, 2000, 2011). The value of constructivism is endorsed when students who are encouraged to learn constructively display improved confidence and greater retention of knowledge (Bada, 2015; Brooks & Brooks, 1999). The extent to which existent piano teaching resources and method books facilitate constructivist learning is not known. As such, the facilitation of constructivism, in the piano lesson, through the use of method books is the focus of this research.

Careful planning is required to facilitate constructive learning and the teacher's choice of teaching materials is highly significant (Bowden, 2010; Cleaver & Ballantyne, 2014; Mackworth-Young, 1990). Piano method books implicitly and sometimes explicitly reflect an educational philosophy that embraces assumptions about the learning process which impacts the manner in which learning occurs (Alfred's, 2019a, 2019c; Chappell, 1999; Chung, 1992; Faber, 2003; Hal Leonard, 2019a; Monroe, 2018). Teachers may not explicitly develop a philosophy of teaching, especially if they have not had professional learning opportunities, and thus may taught as they were taught (Lortie, cited in Borg, 2004). Thus, the choice of teaching materials and method books will, in varying degrees, shape the structure, content and style of the piano lesson (Daniel & Bowden, 2008, 2013; King, 2016). Research by Chmurzynska (2012) suggests that piano teachers continue to adopt the master-apprentice model which includes an approach to learning and teaching that is contrary to constructivism. Her findings also show that the shape, structure, content and style of the piano lesson either motivates the student and stimulates progress or de-motivates the student resulting in disinterest and a lack of achievement.

Background and context

The beginner piano student's first encounter with music is often through learning and playing repertoire from a beginner piano method book (Van Sickle, 2011; Nelson, 2013). Relevant, accessible pieces and well-structured learning tasks positively impact the student's motivation and progress (Briggs, 2010; Daniel & Bowden, 2008, 2013; Renwick & McPherson, 2002). An abundance of repertoire, method books and teaching resources are readily accessible for teaching the young beginner piano student. In the context of this project, the young beginner is defined as a student aged 11 or younger.

Many resources created for the older beginner are designed for adult learners and produced by corporate publishing companies; for example, the various adult piano methods

by Alfred's and Hal Leonard (Alfred's Website, 2020c; Kjos Website, 2020a). A limited range of method books, repertoire and structured teaching materials have been specifically created for older beginners, but there is a disparity between the quality and quantity of materials developed for younger beginners and those produced for older beginners (Bastien, 1977; Faber & Faber, 1998; Kjos Website, 2020c; Lu, 2012; Muck, 2009; Piano Adventures Website, 2019c; van Sickle, 2011). Furthermore, the majority of research related to the various resources for teaching piano has focused on piano method books designed to teach young beginner piano students (Emond & Comeau, 2013; Lane, 2006; Lu, 2012; Prieur, 1994). Information describing the teaching materials and method books used by piano teachers with older beginners, aged 12 to 17, is very scarce.

In addition to the restricted choice of teaching materials and method books for older beginners, teaching piano in the home-based studio in Australia is unregulated (Watson, 2010). No qualifications are required to teach piano from a home studio therefore the quality of teaching varies depending on: the educational background and expertise of the teacher; and the choice of teaching materials (Bae, 2010; Watson, 2010, 2011). Research by Enoch (1977), Chmurzynska (2012) and King (2016) which spans over 40 years has consistently identified a high drop-out rate amongst beginner pianists. Faber (2003) and King (2016) attribute the choice of teaching materials and resultant teacher practice as contributing factors to high student attrition.

Research exploring the older beginner, studio piano teaching, teaching practice, teaching materials and method books both globally and in Australia has been sparse (Burrows & Brown, 2019). This research, which investigates constructivism, and the learning materials used with older beginning piano students in Australia, addresses a gap in knowledge related to constructivism and piano pedagogy. Additionally, research related to piano and instrumental teaching reveals that current teaching styles which continue to reflect the master-apprentice model are often ineffective, sometimes alienating for the twenty-first century student and a contributing factor for the cessation of music lessons (Bain, 2004; de Vries, 2010; Karlsson & Juslin, 2008; Lebler, 2008; Rostvall & West, 2003). Constructivism provides the teacher with an alternative learning model involving a student-centric approach that emphasises student engagement and ownership (Bae, 2010; Cleaver & Ballantyne, 2014; Confrey, 1990; López-Íñiguez & Pozo, 2016; McPhail, 2013c; Scott, 2010, 2011).

Rationale and significance of research

An increasing body of research provides compelling evidence of the emotional, social and cognitive benefits of learning a musical instrument (Collins, 2012, 2014; Fisher, 2001; Hallam, 2010; Rauscher et al., 1997; Vitale, 2011). Research by Collins (2012, 2014) provides scientific evidence that both sides of the brain are activated only when playing an instrument or engaging with music. Hallam (2010) explored the impact of music learning on cognitive development in children. She found that those who engaged in learning music demonstrated improved fine motor co-ordination and concentration. The same children exhibited greater emotional awareness and more developed social skills than their peers not exposed to music learning. Fisher (2001) found that the experience of musical activities accelerated the student's acquisition of literacy skills. Other literature conducted by Bolduc (2008), Brown (2014), Hawkins (2016) and Ojukwu (2017) illustrates the positive advantages of music education.

Many Australian children learn some music at school through classroom music programs, instrumental band programs or participation in choirs but the range of musical experiences and opportunities for learning an instrument at school varies considerably across Australia (Buchan & Rankin, 2015; Burke, 2014; Clinch, 1983; St George, 2006). Piano lessons rarely form part of the school curriculum and are an alternative, additional or only source of musical learning for many students. Children and older beginners who wish to learn to play the piano usually seek private lessons with a studio-based teacher (Bridges, 1988; Klopper & Power, 2012). Thirty years ago, Doreen Bridges (1988) described the home-based, studio music teacher as the backbone of music education in Australia. This model continues to be one of the most common ways to learn a musical instrument.

Extant literature sheds some light on aspects of pre-tertiary music education in Australia (Lowe, 2010; St George, 2006; Watson & Forrest, 2012). There is a small pool of research that has examined the teaching materials and teacher practice in the context of studio piano teaching (Bowden, 2010; Daniel & Bowden, 2008). The majority of research related to pre-tertiary piano teaching has been undertaken outside Australia (Ballard, 2007; Bautista et al., 2009; Brubaker, 1996; Chen, 2013; Chung, 1992; Costa-Giomi, Flowers, & Sasaki, 2005; Jørgensen, 2001). A high proportion of that research has centred on young children or the adult learner. Literature exploring the non-adult, older beginner piano student is scarce. A greater awareness and understanding of the teaching materials and method books used by

studio piano teachers, with older beginners, may facilitate improved teacher practice, more positive student experiences and address student attrition.

Music education research in Australia

Australians are prolific music education researchers and a significant proportion of music education research has focused on instrumental teaching and performance in tertiary music courses. This research includes an exploration of student and teacher perspectives on one-to-one teaching (Carey & Grant, 2014); group lesson models for instrumental teaching at tertiary institutions (Daniel, 2004; Latukefu, 2007; Zhukov, 2004); assessment practices (Harrison et al., 2013) and a range of studies that investigate teaching styles, gender, instrumental lessons and sight reading (Zhukov, 2007, 2008, 2012, 2014). Research exploring classroom music teacher training at tertiary institutions is another area of focus. Ballantyne & Packer, 2004 examined teacher training programs in relation to teacher burnout. Ballantyne (2007) also explored the impact of pre-service training and praxis shock among young teachers. Edwards-Groves (2014) investigated the role of critical mentoring and Elgersma (2012) evaluated teacher training from the perspective of a first year out teacher. These studies are a small sample of the research conducted by Australian academics. Their work provides a rich background for this research.

Research investigating pre-tertiary music teaching within Australia explores school band programs, student motivation, student engagement, teacher practice and outreach programs (McPherson, 2007; McPherson & McCormick, 1999; McPherson & Renwick, 2001; Pitts, Davidson, & McPherson, 2000; Pitts & McPherson, 2000; St George, 2006; Tait & Blaiklock, 2005; Watson & Forrest, 2012). Research investigating pre-tertiary instrumental music teaching has been pursued by several small-scale studies. Bowden (2010) explored the teaching materials chosen by Queensland studio piano teachers for intermediate level students. The results revealed a disparity between teacher selected repertoire and student choice and a reluctance by some teachers to adopt popular, jazz and contemporary music into the piano lessons. These outcomes emphasise the importance of relevance and repertoire providing a strong link to this study as relevance is an integral to constructivism. A study by Klopper and Power (2012) examining the professional practice of studio music teachers in one New South Wales Regional Conservatorium of Music highlights issues related to the isolation of one-to-one instrumental teachers and the disparate variety of skills required to be both a performing musician and a music teacher. The study reveals that instrumental teachers are often equipped to be performers but not equipped for the teaching role that is often a part

of their post tertiary study. Thus, student learning will be shaped by the inherent pedagogical philosophies of the teacher's chosen methods and materials.

A number of Australian research projects explored specific aspects of piano pedagogy including: exemplar piano teaching for example, Franklin Peterson's textbook (Crichton, 2011); differences in classical and modern piano pedagogy (O'Brien, 1991) and piano pedagogy with a blind student (Power & McCormack, 2012). Other research related to studio music teaching is more generalised and includes: the role of practice (Renwick, 2008; Sloboda, Davidson, & Howe, 1996); teaching musical expression to adolescents; (McPhee, 2016) and the role and responsibilities of the studio music teacher (Watson, 2011). Research that specifically explores the older beginner, constructivism and the teaching resources used by teachers in the Australian piano studio teaching will contribute to this area of academia.

Globally, the quantity and focus of the literature related to instrumental learning and piano teaching in particular is replicated. Research in other countries has also tended to concentrate on the tertiary music sphere in relation to performance preparation, practice strategies, music teaching qualifications, teacher training, pedagogy and classroom music teaching (Duke, Simmons, & Cash, 2009; Haddon, 2011; Hansen & Imse, 2016; Jelen, 2015; Nielsen, 2001; Teixeira dos Santos & Hentschke, 2010). Research examining pre-tertiary music teaching includes student motivation, practice, the role of parents, impact of the student's peer group, improvisation and examinations of music books written for young beginners (Albergo, 1988; Austin & Berg, 2006; Bugeja, 2009; Burnard, 2000; Uszler, 1996). Specific research targeting the teaching materials for the older beginner, and their role in facilitating constructivism in the piano lesson is one of several areas yet to be explored.

Purpose of the study

To date, an exploration of the teaching materials and method books created for older beginning piano students in Australia, through the lens of constructivism has not been undertaken. This research adopts a mixed methods approach which will allow the use of both quantitative and qualitative paradigms. The outcomes of the research are expected to include: an identification of the Australian teacher's preferred teaching resources for older beginner students; teacher opinions regarding the available teaching materials for older beginners; and the creation and application of a constructivism evaluation tool (CET). Application of the created tool, to the method books commonly used with older beginners, will determine the degree to which constructivism is fostered in the piano methods used with older beginners.

The identification and analysis of teacher preferred method books for older beginners in relation to constructivism will provide new data, fill a gap in current knowledge and contribute a fresh understanding of aspects of teacher practice as enacted in the pre-tertiary Australian piano studio.

Research questions

This research project is framed by one over-arching question: to what degree do the teaching materials, chosen by Australian piano teachers, for older beginning piano students, facilitate constructivist learning? In order to address the central research question, three sub-questions clarify the parameters; delimit the scope of the research; and frame the subsequent analysis.

- What piano teaching materials and method books are most often used by Australian piano studio teachers when teaching older beginners?
- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

Research aims

The broad aim of this research is to describe the current status of Australian piano teaching in relation to the teaching materials used with older beginner piano students. This will involve an identification and description of the teaching resources used by Australian piano teachers for older beginning piano students. The lens of constructivism will be used to create an evaluation tool that will enable an analysis of the teaching materials. The research will contribute to extant research related to constructivism in the one-to-one piano lesson; address a gap in the current literature regarding older beginning students and studio piano teaching in Australia; and contribute to the strong tradition of Australian scholarship in music education. In addition, this research aims to cultivate a deeper understanding of constructivism and be of practical value to the studio piano teacher.

Chapter Two: Literature Review

Literature related to the research questions will be explored in this chapter. A review of the literature germane to constructivism, piano pedagogy and studio piano teaching in Australia will provide the context for this research. A critical analysis of seminal texts and scholarly articles will discuss the evolution and characteristics of constructivism.
An examination of the literature, doctoral dissertations and studies encompassing the areas related to piano teaching will include: traditional teaching paradigms; the teaching resources available for beginner piano students particularly piano method books; approaches to music reading; evaluation tools developed to examine piano teaching materials; and research related to pre-tertiary piano teaching in Australia . A review of this research will establish the context for an investigation of constructivism and the teaching materials used with older beginner piano students.

Constructivism and Music Education

The learning theory of constructivism evolved from the work of three key figures: John Dewey (1859-1952), Jean Piaget (1896-1980) and the writings of Lev Vygotsky (1896-1934). Dewey (1922) challenged the behaviourist approach to learning that influenced education practices in the early and mid-twentieth century (Samelson, 1981). Dewey (1922) argued that education is not a passive reception of instruction but something active and constructive. The behaviourist approach to education and learning is rooted in a biological understanding of human behaviour and cognition that views learning as a transmissive process, usually from teacher to student (Boghossian, 2006). Skinner (1904-1990) proposed a scientifically based, behaviourist view of the learning experience. He described the learning process as a form of conditioning used to motivate and elicit favourable behavioural responses, for example, a correct answer (Skinner, 1953).

In contrast, Piaget defined knowledge as the personal construction of meaning through the adaptation or assimilation of new ideas (Piaget, 2013). Piaget argued that the knowledge construction is also shaped by the person's age and developmental stage. His research identified four main stages of development:

i. the sensorimotor, birth to 24 months, characterised by learning object permanence;
ii. pre-operational, from ages 2-7, the development of symbolic thought;
iii. concrete operational, from ages 7-11, the emergence of operational thought; and

iv. formal operational, from adolescence to adulthood, the ability to process abstract thoughts.

Agbenyega (2009) argues that these stages are descriptive of Westernised cultural thinking and thus, do not adequately explain the developmental sequences evidenced in non-western cultures. However, Piaget's theories changed the way educators viewed learning and teaching and his work continues to impact education systems across the western world (Agbenyega, 2009). Like Piaget, Vygotsky (1980) described learning as a constructive process but stressed the inherently social nature of all learning. Vygotsky's work emphasised the significance of peer and collaborative experiences as integral for the construction of meaning and meaning-making as central to learning (Vygotsky, 1980).

Diverse descriptions and understandings of constructivist learning have evolved from the initial work of these key figures making it difficult to provide a simple, clear-cut definition of constructivism (Fosnot & Perry, 1996; Fosnot, 2005; Liu & Ju, 2010; Phillips, 1995; Null, 2004; von Glaserfeld, 2001; Wiggins, 2007; Windschitl, 2002). Morford (2007) identifies several forms of constructivism each influenced by either the work of Piaget or Vygotsky. Despite the different manifestations of constructivism, all forms of constructivism are founded on an interpretivist epistemology and ontology. An interpretivist epistemology defines knowledge as adaptive, flexible, culturally influenced, shaped by age and constrained by developmental stage. An interpretivist ontology accepts the co-existence of multiple realities and recognises the individualised perceptions of social relationships (Cobb, 1994; Fosnot, 2005; Matusov & Hayes, 2000; Morford, 2007; Wiggins, 2007).

Constructive learning involves effort and requires the individual to actively engage in the learning process as she or he builds and constructs personal understanding (Gordon, 2009; Scott, 2011; Shively, 2015). Learning to play the piano implies some measure of constructivist learning as the student utilises personal understanding to demonstrate acquired knowledge and skills, that is, to read and play the music (Shively,1995). Action research by McPhail (2010) and Mackworth-Young (1990) provides compelling evidence that teaching strategies guided by constructivist learning theory create a more efficacious, student-centric educational environment which facilitates the acquisition and retention of new skills and knowledge. Ferenc (2015) and Hood (2012) discovered that the collaborative aspects of constructivism enhanced their students' ability to retain learned skills and knowledge, fostering improved understanding which lead to more rapid progress. Similarly, López-

Íñiguez and Pozo (2016) found that progress motivated the student to practice more often and the resultant regularity of practice engendered continued improvement and success.

Constructivist learning empowers the student to remember, recall, transfer, manipulate and apply learned information and skills to new experiences and situations (Hood, 2012; Mackworth-Young, 1990; Özeke, 2009). López-Íñiguez and Pozo (2016) studied teacher-student interactions during a series of one-to-one cello lessons. Their findings revealed that the facilitation of constructivist learning in the form of the transferal and application of knowledge to new situations: increased student retention, improved student motivation, cultivated a greater love of learning and stimulated skill acquisition and progress. Inversely, Özeke (2009), Duke, Simmons and Cash (2009), Enoch (1977) and King (2016) found that poor retention of learned material and an inability to apply knowledge across various contexts limited the student's capacity for progress and success. Students who did not achieve or progress were found to have reduced motivation and low self-efficacy regarding musical learning often resulting in the termination of music lessons (Chmurzynska, 2012; King, 2016; St George, 2006).

Self-efficacy, described by Bandura (1977), is an individual's self-understanding of her or his ability to learn a skill or complete a task. For the music student, self-efficacy refers to an individual's perceived belief in their ability to successfully learn music (Bandura, 1977; Cogdill, 2014; Hallam, 2001; McCormick & McPherson, 2003). Self-efficacy influences the student's choice of task, the amount of effort put into the chosen task and the resilience to persist when faced with difficulties or failure (McPhail, 2010; Pintrich, 1999; Schunk, 2012; Zimmerman, Bandura, & Martinez-Pons, 1992).

Zimmerman (2000a) argues that success is not solely dependent on innate talent, but is achieved through effort and the degree of effort influenced by the student's self-efficacy. Constructivism which facilitates student ownership, self-evaluation, and the setting and monitoring of goals contributes to the development of positive self-efficacy. A study by Coutts (2018) explored adult learning in terms of motivation, student self-efficacy and the teacher's role as a facilitator. Coutts (2018) describes the implementation of transformative pedagogical strategies which included questioning, collaboration, dialogue, experiential learning and reflective practice. These strategies in combination with relevant learning materials and the faciliatory role of the teacher are shared by the learning theory of constructivism. Results revealed that fostering self-direction and student ownership built strong self-efficacy.

Ferenc (2015) and Countryman (2012) found that positive self-efficacy in different groups of tertiary music students, improved overall student outcomes as participants demonstrated better long-term memory and an increased ability to transfer and apply knowledge to new tasks. The achievement of better results fostered positive self-efficacy and heightened motivation. These results are confirmed by Zimmerman, Bandura and Martinez-Pons (1992) who found that self-efficacy directly impacted student motivation and progress. An understanding of achievement as a result of effort, in the form of daily piano practice is essential for the piano student hence, the development of strong self-efficacy becomes integral for successful musical learning (McCormick & McPherson, 2003; Pitts, Davidson, & McPherson, 2000; Pitts & McPherson, 2000; St George, 2006). This research strongly suggests that constructivism; a process of learning that facilitates proactive student engagement, the use of relevant, age appropriate materials, student goal setting and self-reflection; contributes to the development of positive self-efficacy.

Defining constructivism

Constructivism describes knowledge as an individual's non-objective, constructed understanding (Morford, 2007). This definition highlights the individualised nature of knowledge and learning. Constructed understanding is influenced by the learner's personal cognitive lens. An individual's personal cognitive lens is shaped by age, stage of development, personality, culture, daily experiences, prior learning and a range of other factors (Fosnot, 2013; Piaget, 2013). A learner's personal cognitive lens shapes the way in which she or he learns (Gordon, 2009; Wiggins, 2004).

It is impossible to account for the exact composition of every individual's personal cognitive lens. Fleming (1995) and Fleming and Baume (2006) describe four main learning styles that explain the various approaches or cognitive lenses an individual may adopt throughout the learning process. The four learning styles define an individual's preferred way of taking in and interpreting new information in order to build knowledge and skills. Othman and Amiruddin (2010) stress that preferred learning styles are shaped by many factors unique to each individual including gender, age, personality, heritage, environment, education, prior learning, current experiences, culture and community. Thus, it can be argued that an individual's preferred learning style or preferred combination of learning styles represents a significant component of her or his personal cognitive lens.

VARK learning styles

Fleming (1995) and Fleming and Baume (2006) conducted substantial research into the ways different individuals learn which resulted in the VARK learning styles model. The VARK model offers clear, established definitions of the different ways in which learning may occur. The acronym VARK, represents four different modes of learning described by Fleming (1995): visual, aural, read/write and kinaesthetic. Fleming (1995) argued that an individual may utilise one or a combination of learning styles when acquiring a new skill or encountering new information.

The visual student learns effectively through symbols, diagrams and demonstration. The auditory learner learns through listening, discussion, talking and lectures. Auditory learners prefer to hear information and ideas either in words, or in the case of music, by example. Reader/writers prefer to learn by reading or writing for example, making lists, writing diaries and reading information. Kinaesthetic or tactile learners, learn through moving, doing, touching and feeling. Kinaesthetic students find it difficult to be still for long periods of time and need activity in order to learn. Repetition and physicality are their preferred tools (Fleming, 2012).

Research related to learning styles is mixed. Some researchers discredit learning styles as a valid theory, while others provide evidence supporting the educational value of learning styles (Beheshti, 2009; Garcia, 2002; Willingham, Hughes, & Dobolyi, 2015; Zhukov, 2007). De Bruyckere, Kirschner and Hulshof (2015) outline several limitations inherent in the definition, identification and application of learning styles. In contrast, Boatman, Courtney and Lee (2008) and Tanwinit and Sittiprapaporn (2010) found that an acknowledgment and accommodation of the student's learning preferences enabled varied presentations of new information and concepts, which maximised learning outcomes. While research does not specifically link constructivism with learning styles, Boatman, Courtney and Lee (2008) and Yiatrou et al., (2016) allude to the importance of acknowledging individual learning styles in constructive learning.

The argument that the learner's preferred learning style is part of the individual's personal cognitive lens is anchored in a core supposition of constructivism that assumes true learning occurs only when the learner actively constructs and builds knowledge (Cobb, 1994; Morford, 2007; Sjøberg, 2007; Taber, 2006). New information and new experiences need to be comprehensible to the learner. When new knowledge or skills are not presented in ways

accessible to the learner, for example, in one of her or his preferred learning styles, the opportunity to construct knowledge may not occur (Biedenbender, 2012; Fleming & Baume, 2006).

The value of the VARK learning model as it pertains to constructivism lies in six key areas. First, the VARK model identifies different personal cognitive lenses by acknowledging the varied ways in which learners acquire and receive new information, experiences or skills. The four learning styles and the combinations of learning styles possible in the VARK model recognises that each individual learner learns using unique processes in order to construct new knowledge and understanding (Othman & Amiruddin, 2010). Second, the VARK learning styles model distinguishes between two types of visual learners, those who like to work with text and those who prefer to work with graphs, symbols and diagrams (Fleming & Mills, 1992). This distinction is significant in the context of music education as many of the printed materials and method books used in teaching piano often employ both text-based information, musical notation and diagrams. Third, Boatman, Courtney and Lee (2008) emphasise that the VARK model distinguishes between mild, strong and very strong learning preferences, reducing the prescriptive nature often associated with other learning style models. Fourth, the VARK model acknowledges that some learners are bi-modal or multi-modal, that is, some learners have more than one preferred learning style. Fifth, in the VARK model, the capacity for the learner to develop and employ less-preferred learning styles is acknowledged, minimising the rigid definitions sometimes found in other learning models. Sixth, preferences for a particular learning style are viewed as flexible and adaptive which aligns with the theory of constructivism.

Additionally, the VARK learning styles model provides a medium for the student to develop, with teacher assistance, a measure of self-understanding and self-awareness about her or his own learning, enabling more effective learning and the development of meta-cognitive awareness (Murphy et al., 2004). Pritchard (2017) argues that when an individual becomes aware of her or his own thought processes this will, with encouragement, develop metacognitive skills: a self-understanding of the ways in which one learns.

An understanding of the adaptive nature of learning acknowledged in the VARK learning styles model, matches well with the fluid nature of knowledge as understood and described by constructivism (Fleming & Mills, 1992). Research conducted by Beheshti (2009) supports the positive value of learning styles. She argues that more effective learning occurs when curricula and learning activities are adapted to accommodate each student's

preferred mode of learning. Other research, related to adult learning, the education of medical students, economic majors, tertiary music education and classroom teaching, discusses the value of the VARK learning styles and provides ample evidence to justify the validity of learning styles in the context of education, specifically, piano pedagogy (Biedenbender, 2012; Filimon, 2012; Leung et al., 2014; Mishra, 2007; Peyman et al., 2014; Prithishkumar & Michael, 2014; Tanwinit & Sittiprapaporn, 2010; Wright & Stokes, 2015).

In tandem with the learner's personal cognitive lens, described in this research by the VARK learning styles model, constructivism is characterised by active student responses that involve cognitive processes that include questioning, analysis, the application and transferal of knowledge and problem solving (Wadsworth, 1996). The theory of constructivism argues that it is almost impossible for the learner to retain and extend her or his knowledge base unless the student actively synthesises information and connects it to prior knowledge (McPhail, 2016; Morford, 2007; O'Neill, 2012). Constructed explanations processed through each individual's personal cognitive lens are achieved by the cognitive acts of the learner who builds new understanding from and onto her or his existent knowledge base and previous experiences (Gordon, 2009; Wiggins, 2004, 2007).

Cobb (1994) and Wiggins (2007, 2016) argue that personal cognitive acts cannot be completely separated from the inherently social nature of teaching and learning. The social aspects of meaningful learning, influence and assist knowledge construction (Lutz & Huitt, 2004; Shively, 2015; Wiggins, 2016). Socio-cultural learning theory, developed by Vygotsky (1980), is a manifestation of constructivism that stresses the collaborative, socially interactive nature of learning, the value of peer learning, the importance of discussion and shared experiences. In socio-cultural learning theory, social aspects of learning are requisite (Kozulin et al., 2003). However, Phillips (1995) cautions that a greater emphasis on the interactive aspects of learning characteristic of socio-cultural theory, may lead to a neglect of the personal cognitive processes integral to constructivism.

A broader definition of constructivism as a theory of learning, recognises the importance of both the cognitive functions of the individual and the social aspects of learning (Morford, 2007). This impacts the role of both student and teacher in the learning process. In constructivism, the student's every-day understanding, prior knowledge and social experiences are used to guide the next steps of learning. This makes the teacher's role pivotal, not as a giver of knowledge, but as a facilitator and director of the learning process. In this

context, constructivism provides a challenge for the music teacher as the complexities of musical learning include a requisite body of knowledge (McPhail, 2010).

Direct instruction is often a default approach for many teachers and research into the one-to-one instrumental lesson specifically, the pre-tertiary studio piano lesson, indicates that the most common mode of studio piano teaching is the master-apprentice model (Bautista et al., 2009; Duke & Henninger, 2002; King, 2016; López-Íñiguez & Pozo, 2014; McPhail, 2013a). The master-apprentice model is characterised by an instructional, didactic dynamic between the master (teacher) and the apprentice (student) (Bjøntegaard, 2015; Carey, 2010; Carey et al., 2006; Daniel, 2004; Gaunt, 2008). Predicated on the belief that accomplished performers make high-quality educators, the master-apprentice model posits the teacher as the source of all knowledge. Lesson formats are typified by a series of exchanges that include: the master (teacher) instructing and showing; a response or performance by the apprentice (student); followed by the master's (teacher) feedback (Bautista et al., 2009; Bjøntegaard, 2015; Carey, 2010; Duke & Henninger, 2002; Karlsson & Juslin, 2008; Rostvall & West, 2003; Siebenaler, 1997). The master-apprentice model is a teacher-centric approach that leans towards a behaviourist conception of education often characterised by an assumption that the student will learn passively through observation, absorption and mimicry (Burwell, Carey, & Bennett, 2017; Chmurzynska, 2012; Enoch, 1977; McPhail, 2010, 2013a; Siebenaler, 1997).

Instructional and transmissive approaches to learning derived from the master-apprentice model and influenced by twentieth century, behaviourist philosophies, are characterised by: directions, closed questions, an explanation of new knowledge, student mimicry and rote learning. In these contexts, the role of the student often becomes passive and receptive (Chmurzynska, 2012; Ertmer & Newby, 1993). McPhail (2010, 2013a, 2016) argues that instructive teaching, historically considered the antithesis of constructive learning, can be compatible with constructivism when used in the context of student-centred, teacher-guided learning. He suggests that instructive, student-centred, teacher-guided learning accommodates the complexities of musical learning and is not incompatible with constructivism when the new learning is actively processed, linked to prior knowledge, and applied and transferred to other contexts.

In constructivism, knowledge is considered emergent, developmental, adaptive and changeable. New information may alter the student's current perceptions and understanding of a given concept and new experiences may lead to the development and enhancement of

skills (Fosnot & Perry, 1996). Thus, learning is perceived as an ongoing organic process, not something to be received by the individual nor merely a product to be achieved (Morford, 2007; Shively, 2015; Yilmaz-tüzün & Topcu, 2010). A recognition of knowledge, skills and understanding as something that grows and deepens over time results in a greater awareness of, and focus on, the learning process. Constructivism is not singularly focused on the achievement of goals and prescribed outcomes. The learning process itself is important. A focus on the processes of learning does not infer that the outcome or product is unimportant instead, constructivism ensures that the realisation of a product is not achieved at the expense of the processes of learning (Bruner, 1996).

Research by Hood (2012) and McPhail (2013a) identified that a focus on the process of learning enabled the student to own her or his learning, at the same time requiring a shift from a teacher-centric, instructive approach to more active, student driven and interactive processes. Both researchers discovered that a greater focus on the learning process encouraged student self-reflection, self-evaluation and from this, the development of self-regulation. Self-regulation skills are essential for all musicians (Nielsen, 2001, 1999b; McPhail, 2010). Self-regulation describes an activity of self-reflection and self-evaluation, used by the learner, involving the selection, use, testing, discarding, change and adaptation of learning strategies in order to learn more effectively (Ertmer & Ertmer, 1998; McPherson & Renwick, 2001; Nielsen, 1999b).

Self-regulation is a key ingredient for the development of meta-cognition, also important for ongoing musical learning (Zimmerman, 2002b). Meta-cognition describes an individual's self-awareness of how she or he learns (Efklides, 2008; Schunk, 2012). López-Íñiguez and Pozo (2016) argue that meta-cognition is more likely to be developed through a learning approach founded in some form of constructivism. Long-term learning and engagement in music making requires the piano student to develop meta-cognition (Colombo & Antonietti, 2017; Hallam, 2001; McPhail, 2010). Countryman (2012) and Hood (2012), found that an emphasis on the process of learning facilitated both the acquisition of musical skills and the development of meta-cognition, self-regulation, student ownership and goal setting. Later research by Ferenc (2015) supports these findings. Her research includes statements by students intimating that how they learned was "as important as what they learned" (p. 67). In constructivism, the process of learning is as important as the outcome particularly as a focus on the learning process may facilitate the development of self-

regulation and meta-cognition (Bada, 2015; Fosnot & Perry, 1996; Yilmaz-tüzün & Topcu, 2010).

Constructivism: A Comprehensive Definition

For the purposes of this study, a comprehensive definition of constructivism describes an approach to learning that accommodates the learner's personal cognitive lens (Morford, 2007). In addition, the learning is structured and sequenced so that new information and experiences are relevant and accessible to the student, link to and build on prior knowledge and skills, and is student-centred (Bonk & Cunningham, 1998; McPhail, 2010). Constructive learning is an active process that involves the individual's personal construction of understanding and knowledge through cognitive procedures including questioning, analysis, the application and transfer of knowledge and skills, and problem-solving (Gagnon & Collay, 2006; Morford, 2007; Piaget, 2013). The personal construction of knowledge is also impacted by the social interactions inherent in the learning process including dialogue, discussion, debate, collaboration, shared experiences and scaffolding (Vygotsky, 1980; Wiggins, 2004, 2007, 2016).

Wiggins (2016) stresses that the provision of meaningful interactions between learners, peers and teachers is crucial. Peers and teachers often provide support in the form of scaffolding to enable successful learning (Bruner,1996). Scaffolding, a term coined by Jerome Bruner and associates, refers to the temporary support provided to help students complete tasks beyond their level. When the learner can function independently, the support or scaffold is removed (Kupers, van Dijk, & van Geert, 2015). Constructivism acknowledges that understanding evolves, changes and deepens. Thus, the learning process is enacted via a variety of tasks and activities that utilise personal cognitive acts and social interactions from which a final product, goal or achievement is produced (Burrows & Brown, 2019). A focus on the processes of learning provides opportunities to encourage student self-reflection, self-evaluation, ownership of the learning and goal setting (Lebler, 2007). The process of learning is integral to constructivism and as important as the final result.

Action research conducted by Mackworth-Young (1990), McPhail (2010, 2013a, 2013b) and Miller (2012) explored the departure from an exclusively teacher-dominant (master-apprentice) approach to one that encouraged different aspects of constructivist learning. McPhail (2010, 2013a, 2013b) discovered through several studies that aspects of

constructivist learning enabled his music students to progress more quickly, take greater ownership of the learning process and sustain higher levels of motivation. Mackworth-Young (1990) altered her teaching style from a traditional teacher-dominant method to explore the impact of constructivist learning in piano lessons. She found that the collaborative approaches integral to constructivism created a more student-centric lesson, promoted student engagement and augmented student motivation. Miller's (2012) exploration of constructivism in the elementary music classroom revealed that constructivism enabled her young students to retain information related to creative music making over several weeks of lessons.

Similarly, Özeke (2009) found, in an exploration of constructivism aligned with an Orff approach to musical learning, that her students developed deeper understanding. Both Miller (2012) and Özeke (2009) found that constructivism in musical learning provided a supportive and encouraging framework for the younger students, allowing each to work at her or his pace and resulting in highly motivated student engagement. Despite the small scale of these research projects, the positive student outcomes suggest that constructivist learning is beneficial and can be integrated into the one-to-one the instrumental lesson, the piano lesson and the classroom.

Teaching materials and piano method books

Teaching materials, method books and repertoire choice significantly shape the activities, tasks and interactions within the piano lesson (Bowden, 2010; Daniel & Bowden, 2013; Faber, 2003; Green, 2017; Ruppel, 1956). Research exploring the teaching materials for beginning piano students has concentrated on piano method books (Chen, 2013; Chung, 1992; Hayase, 2006; Kim, 2005; Lu, 2012; Muck, 2009; Prieur, 1994; Ruppel, 1956; van Sickle, 2011; Yang, 2015). A piano method is defined as a series of integrated musical works, exercises and tasks, organised in a sequential and progressive order, specifically designed to facilitate the development of piano skills (Brubaker, 1996). Most piano method books have been created for young beginner students, aged 5 to 11 years (Kjos Website, 2020a, 2020b, 2020c; Piano Adventures Website, 2020a; Palmer, Manus, & Lethco, n.d.).

Ruppel (1956) conducted one of the earliest evaluations of piano method books written for beginners. His analysis of 20 popular American piano method books clarified the importance of pedagogically sound teaching materials. Ruppel (1956) concluded that a skilful teacher using inferior teaching materials could achieve acceptable results but the same teacher using superior teaching materials would produce superior results. Subsequent studies

by Bae (2010) and Chmurzynska (2012) support these conclusions. Other research that followed Ruppel, examined various method books from differing foci (Ballard, 2007; Lane, 2006). A selection of relevant studies and dissertations will be discussed in the following section.

A proportion of the literature related to piano teaching resources comprises of doctoral dissertations and masters' theses that compare American-created method books with method books designed in Korea, Japan, China and Taiwan (Chung, 1992; Hayase, 2006; Lee, 1998; Yang, 2015). Chung (1992) researched the similarities and differences between three American method books, *Alfred's Basic Piano Library*, Bastien Piano Series, David Glover Piano Series and a Korean composed series, *Se Kang Beyer Piano Method*. She compared the content and the approaches to music reading and technique used by the authors of each method. Her discussion focuses on the content included in each method with the goal of providing information that the Korean teacher may use as guide when selecting a method book. Chung's (1992) results reveals that the methods adopted a directive approach to teaching. Her work, partially relevant to the Australian piano teacher, does not examine the teaching content in relation to constructivism or explore the relevance of these method books for the older beginner.

Daniel and Bowden (2008) investigated the content of the piano method books used by Queensland piano teachers. Preferred books were identified by survey method and the content of each method explored in terms of holistic teaching. Holistic teaching is a concept of teaching that promotes a balanced development of the whole individual (Daniel & Bowden, 2008; Mahmoudi et al., 2012). The method books were analysed and the results tabulated to summarise the aspects of musical learning covered in each book. The development of technique and music literacy was found to dominate all the selected method books while the development of aural and creative skills received little attention. Although the small size of the survey renders the resultant data limited for broad statements regarding piano teaching in Australia, the study offers rich data regarding teacher preferences and the content of various method books.

An analysis of the repertoire used in method books is a more frequently researched area (Albergo, 1988; Sundell, 2012; Uszler, 2000). Some studies extended the analysis of repertoire to include the sequencing and progression of skill development (Chen, 2013; Hayase, 2006; Prieur, 1994). Research by Lu (2012), Ballard (2007) and Thomas-Lee (2003) provides basic information about a range of piano method books including the title and

composer of pieces and the origin and categories of repertoire. Supplementary books written to accompany method books received mixed attention. Hayase (2006) identified that the lesson books alone did not always provide adequate material for all aspects of musical development.

A number of studies devoted attention to the visual presentation and organisation of the method books in relation to the young students (Brubaker 1996; Hayase, 2006; Prieur, 1994; Ruppel, 1956; Sundell, 2012; van Sickle, 2011; Yang, 2015). Method books written or compiled after 1980 exhibited an attempt to accommodate the interests and developmental stages of the young child, for example, the use of colourful illustrations, rhymes and words to accompany some of the repertoire and the landscape orientation which is more suited to the perceptual span of the young child (Brubaker, 1996; Sundell, 2012). It is noteworthy that pictures and graphics may become outdated and personalities differ in preferences for a more or less cluttered page (Chen, 2013). Additionally, it is not known how the older beginner relates to method books designed for the young student.

Muck (2009) examined the pedagogical approach of 14 beginning piano methods used by American piano teachers. Her research focused on the ways in which music reading, rhythm, technique, theory skills, musical content and musicianship is introduced in each method book. The method books were arranged into three age-based categories: the young child, the older beginner and the adult beginner. Muck (2009) identified three methods created for the older beginner: *Accelerated Piano Adventures,* Faber and Faber; *Beginning Piano*; and *Piano for Busy Teens*. Her research examined the repertoire, reading approaches, technical skills and theoretical content of each method. This included a brief evaluation that described the quantity and quality of instructive text. A short conclusion mentions that method book authors offer different approaches without fully explaining the underpinning philosophical and pedagogical basis of each method.

The bulk of literature exploring piano method books examines method books for young beginner piano students and is in the form of unpublished or published doctoral theses (Bae, 2010; Chen, 2003; Hayase, 2006; Lu, 2012; Sundell, 2012; van Sickle, 2011; Yang, 2015). There is very little research that specifically investigates the teaching materials and method books created for the non-adult, older beginner piano student.

Approaches to music reading

The approach to music reading used by different method books is a more extensively

researched area. Music reading refers to the process of learning to interpret musical notation into musical sound. Unlike sight reading, defined by Zhukov (2014) as a specific skill developed after years of practice, music reading describes the student's ability to independently decode the musical notation, practice and learn set repertoire.

Chen (2013) and Emond and Comeau (2013) found that several piano methods emphasised music reading and visual learning from the initial lesson including the: Bastien Series, Alfred's Premier Series, *Piano Adventures* by Faber and Faber, *The Music Tree* by Frances Clark, and the John Thompson Method for Young Beginners. In these method books, activities and exercises to develop aural skills, musicianship and theory were typically provided in supplemental books or in the margin of the page as optional extras (Chappell, 1999; Chen, 2013; Daniel & Bowden, 2008; Hayase, 2006; Sundell, 2012; van Sickle, 2011; Yang, 2015). Furthermore, Sundell (2012) and Daniel and Bowden (2008) identified that aural, and creative skills were not well integrated across the leading piano method books for young beginners. The separation of aural and creative learning from visual learning raises several issues. First, music is primarily an auditory experience and activity. Second, the eye often impedes the student's ability to hear and listen. Third, the student is less able to develop the listening skills when too tied to notation. Fourth, a visually dependent approach to learning music does not acknowledge other learning styles. Constructivism is a more holistic approach predicated on the student's self-construction of understanding and thus engages the student on many levels and in a range of learning styles.

A comparison of the three main approaches to music reading: the middle C approach, pioneered by John Thompson; the intervallic method, developed by Frances Clark; and the multi-key approach favoured by Bastien, Alfred, and Faber and Faber were also investigated (Emond & Comeau, 2013; Hayase, 2006; Muck, 2009; Prieur, 1994). Emond and Comeau (2013) found that the middle C reading approach which involves a note-by-note approach to reading requires the beginner pianist to commence with both thumbs together on middle C. New notes or pitches are introduced slowly, while a wide variety rhythmic patterns are introduced. This method is limited as students are not specifically taught to identify musical patterns in the score, but instead spell out the note names in order to read the music making the development of fluent music reading skills very slow.

The multi-key approach involves using the five-finger position, usually across the keys of C, F and G major (Hayase, 2006). In the multi-key approach, the student reads a

variety of music using the five fingers in different positions on the keyboard. Finger numbers are linked with the notes on the stave. While this enables students to read patterns instead of spelling notes it sometimes makes the reading of music beyond five notes more difficult (Hayase, 2006). The concept of using similar patterns in different keys or contexts reflects constructivism in terms of the application and use of knowledge as a basis for constructing new understanding, however, Hayase (2006) does not make this link.

The intervallic reading method introduced by Frances Clark involves the introduction of the music stave one line at a time. Students are taught to read by recognising intervals in combination with the contour of the musical phrase. This approach reinforces playing all over the keyboard but it requires more planning time and does not facilitate the development of a vocabulary of visual patterns (Emond & Comeau, 2013; Lane, 2006). Extant research related to music reading approaches has not included the older beginner or explored the role of constructivism in the development of music reading skills. The approach to music reading explored by these researchers reveals a tendency toward the master-apprentice, transmissive, instructive form of pedagogy as students are required to memorises and learn specific notes and rhythmic values. Further investigation using a tool that evaluates constructivism in method books will further explore this point.

The larger proportion of the research regarding the teaching materials and piano method books for beginning students has been conducted outside Australia and focused on teaching resources created to teach younger beginners (Chen, 2013; Chung, 1992; Kim, 2005; Lu, 2012; Yang, 2015). Varied information has been generated from this research including: an understanding of the different approaches to reading music; an awareness of the different foci of method books created in America, Korea, China and Japan; descriptions of the repertoire genres provided in selected method books; and the percentages of reading, aural, technical, creative and performance tasks included within some method books.
An investigation of constructivism in relation to the teaching materials created for piano students and the method books developed for the older beginner is not evident in the current literature.

Evaluation tools

A number of researchers have created, adapted or adopted an evaluation tool in order to investigate the teaching resources and method books for beginning piano students. Hayase (2006) adopted the standards set by the Royal American Conservatory Examination (RACE).

RACE refers to an American grade system, similar to the Australian Music Examinations Board (AMEB). RACE provides a syllabus, set of standards and assessments through which music students may choose to progress. The adopted tool was used to compare the *Miyoshi Piano Method*, a series of piano books composed by Japanese composer, Akira Miyoshi, with the *Piano Adventures* method books by Nancy and Randall Faber. The content of each method was examined in terms of pacing, technical exercises, repertoire, ensemble activities and approaches to reading. Her research identified the strengths of each method in relation to RACE standards and several shortfalls related to the development of aural, improvisational and creative skills. The results provide insights into method books used in America. Although Hayase's (2006) evaluation tool was not designed to investigate constructivism, aspects of his discussion allude to positive effects of sequencing materials in ways that allow the student to build on prior learning.

Van Sickle (2011) assessed five popular piano methods suitable for young beginners. She adopted the National Association of Schools of Music (NASM) guidelines as an evaluative tool. NASM determines the national standards and credentials for music education in America (Forsythe, Kinney, & Braun, 2007; van Sickle, 2011). The content of five American method books was summarised in table form to illustrate the inclusion of the following core musical concepts: notation, musical terms, scales, key signatures, intervals, triads, ear-training, form, harmony, composition and improvisation. The subsequent discussion in relation to NASM guidelines provides information relevant to the American piano teacher for the teaching of young children. Van Sickle's (2011) research did not extend to an exploration of method books for the older beginner or constructivist learning in the piano lesson, but the summary of each method book provides insight into the instructive and content driven nature of the methods examined

Sundell (2012) adapted Heavner's theoretical comprehensive musicianship model to evaluate 12 American piano method books. Heavner's (2005) original model comprised a table that identified all aspects of music learning. The table was applied to various publications to assess the degree of integration of the following musical components: aural, performance, technique, repertoire, history, theory and creative work. According to Heavner (2005), comprehensive music learning was achieved when a set of learning materials includes each component equally. Sundell (2012) adapted Heavner's tool by categorising six areas of piano learning: aural, ensemble, composition, improvisation, transposition and creativity. The extent to which each musical area was included within each selected method book was

identified. Results indicated that the six areas were unequally addressed across the method books examined. In general, the method books emphasised reading, technical skill and repertoire highlighting an inequity which favours visual learning and instruction. Sundell's (2012) research provides information about 12 popular American piano method books and although she does not explore constructivism in the piano lesson or specifically discuss the teaching materials and method books used with older beginners, the process of adapting Heavner's evaluative model provided an exemplar for the development of the constructivism evaluation tool (CET) used in this research .

Research projects exploring the teaching resources for the beginner pianist have predominantly centred on method books for young children (Burrows & Brown, 2019). The focus of the larger proportion of this research includes: accounts of the visual presentation, an examination of the different approaches to music reading, repertoire and content summaries of several American method books, comparisons of American methods with method books created outside America and the evaluation of method books and teaching materials using specific tools. Almost none of the research has purposefully examined, identified, discussed or evaluated method books in relation to constructivism or the older beginner. These omissions represent a significant gap in the current literature related to music education.

Piano teaching in Australia

In Australia, pre-tertiary music lessons (including piano lessons) are usually conducted in a one-to-one dyad, with a self-employed private or studio music teacher providing individualised tuition, to students in pre-determined time frames, from a home-based studio (Klopper & Power, 2012; Watson, 2010). However, instrumental and studio piano teaching as enacted in the Australian community generally operates behind closed doors and research regarding current studio teaching practice is piecemeal (Bridges, 1988; Burwell, Carey, & Bennett, 2017; Clinch, 1983; Daniel & Bowden, 2013; Gaunt, 2008; Klopper & Power, 2012; Watson, 2010; Zhukov, 1999; 2004). Watson (2010) describes the bulk of instrumental teaching across Australia as a cottage industry; the private studio teacher acting as the sole trader delivering lessons from their home or studio.

Researchers have also explored aspects of tertiary music education offered at various Australian tertiary institutions (Carey, 2010; Carey & Lebler, 2012; Collins, 2011; Daniel, 2004; Edwards-Groves, 2014; Latukefu, 2007; Zhukov, 2004). The literature, unequally

divided between studies evaluating the effectiveness of instrumental lesson paradigms, performance preparation, sight reading and the training of classroom music teachers, offers some insights applicable to studio piano teaching. In summary, there has been less research explicitly focused on Australian pre-tertiary piano teaching, the older beginner student, and the teaching practice of Australian studio piano teachers. A large percentage of the research regarding piano teaching in Australia is not specific to: piano teaching; the resources for teaching older beginners; or constructivism in the piano lesson.

Summary

Literature spanning over the last 50 years reiterates that many piano students stop learning after a relatively short time, often before they have the skills to be independent musicians (Bridges, 1988; Costa-Giomi, 2004; Costa-Giomi, Flowers, & Sasaki, 2005; Enoch, 1977; Gerelus, Comeau, & Swirp, 2017; Hayase, 2006; King, 2016; Wanzel, 2011). In 1977, Enoch asked, "Is something very wrong for so many to stop?" (p. 33). Ruppel (1956), Enoch (1977), Faber and Faber (2003) and King (2016) argue that the teaching materials and method books used by the individual teacher significantly impacts the student's learning experience. The recapitulation of similar outcomes from research which extends for more than half a decade, highlights the fundamental importance of quality teaching materials.

This research project, exploring constructivism and the teaching materials and method books used by Australian teachers with older beginner piano students will provide: a present-day understanding of the resources available for Australian studio piano teachers; augment the pool of knowledge related to piano pedagogy; contribute to the current literature pertaining to constructivism in education; and lay the foundation for further study. Chapter Three provides an outline of the research design and methodology that will provide the framework for an examination of constructivism, Australian studio piano teaching and the piano teaching materials and method books used with older beginners.

Chapter Three: Research Methodology and Method

The core focus of this research is an investigation of the degree to which constructivism is facilitated in the teaching materials and method books used by Australian studio piano teachers, with older beginner students (those aged 12 to 17). This chapter articulates the theoretical position of the research, provides an overview of the research methodology, delineates the research method and design and concludes with a description of the data collection and analysis procedures.

Overview of Mixed Methods Methodology

Mixed methods as an independent methodology evolved into a recognisable method for conducting social and educational research in the latter half of the twentieth century (Denscombe, 2014). Creswell (2014) describes mixed methods as the integration of qualitative and quantitative data collection paradigms. Creswell and Clark (2017) state that some researchers employ mixed methods methodology in order to draw on the strengths of more than one method to better understand social and behavioural interactions. The choice of mixed methods methodology permits the combination of quantitative and qualitative data collection and analysis processes. A combination of quantitative and qualitative research paradigms facilitates tri-angulation of the data enabling a deeper understanding of the research questions (Creswell, 2014). Mixed methods methodology offers the researcher greater flexibility in the choice, sequencing and application of more than one research method. The mix of quantitative data and descriptive, qualitative data permitted the use of multiple research strategies and better accommodated the wide range of variables inherent in the social and educational aspects of this research (Creswell, 2014).

The fundamental epistemology and ontology underpinning quantitative and qualitative research can be polarised (Johnson, Onwuegbuzie, & Turner, 2007). Traditionally, quantitative research has been anchored in an epistemological worldview that defines all knowledge as objective, unchanging, discoverable and measurable and an ontological understanding that reality exists independently of social factors. In contrast, qualitative research is grounded in an interpretive epistemology that describes knowledge as non-objective, fluid, adaptable and relative, and an ontological postulation that reality is shaped by a range of social factors resulting in the co-existence of multiple realities (Denscombe, 2014).

The use of mixed methods methodology provides scope for the researcher to employ quantitative research paradigms supported by an interpretivist philosophy. An interpretivist stance, characteristic of most qualitative research, acknowledges the changing nature of knowledge and the multiplicity of perspectives (Denscombe, 2014). This research underpinned by an interpretivist position uses both quantitative and qualitative methods to investigate constructivism and the teaching resources for older beginners in the context of Australian studio piano teaching.

Research design

A two-phase sequence is used to explore the research question and sub-questions related to constructivism and the teaching materials and method books used with older beginners by Australian studio piano teachers. In phase one, survey research is employed to collect both quantitative and qualitative data related to the teaching materials and method books that Australian studio piano teachers use with older beginners. The quantitative data from the survey provides broad statistical information that answers sub-question one: what teaching materials and method books are used by Australian piano studio teachers when teaching older beginners?

The qualitative portion of the survey data is gathered from eight short answer questions. Open-ended questions are used to invite participating teachers to provide the rationale for their choice of piano method books and teaching materials; itemise the strengths and weakness of the chosen teaching materials; describe the details of how they use their chosen materials with older beginners; and suggest areas of research that would be useful for piano teachers. The qualitative component of the survey addresses sub-questions two and three.

- What do Australian piano teachers consider to be the strengths and weaknesses of their preferred teaching resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

The second phase of the research is in two parts. Phase two, part A, involves the development of an evaluative tool that can be used to assess the facilitation of constructivism in the preferred teaching materials identified in phase one. In phase two, part B, the evaluation tool is used to examine the teaching materials preferred by teachers. Phase two of the research answers the central research question: to what degree do the teaching method

books, chosen by Australian piano teachers for older beginning piano students, facilitate constructivist learning? Figure 1 provides a diagrammatic summary of the research design.

Research design summary

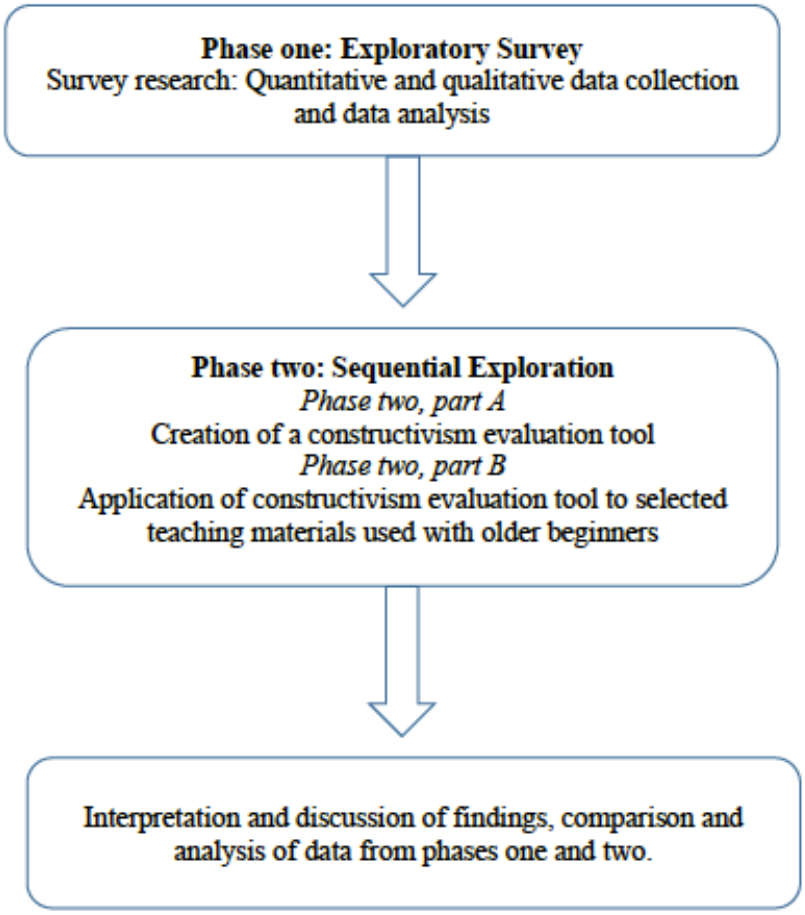

Figure 1: Diagram of research design

Data collection

The choice of mixed methods research methodology provides a framework that allows for the collection and analysis of data over two phases. The first phase consisting of an exploratory survey, collects a mix of quantitative and qualitative data. The qualitative data is analysed using summative and conventional content analysis (Hsieh & Shannon, 2005; Mayring, 2004; Stemler, 2001; White & Marsh, 2006). The second phase follows sequentially and involves the creation and application of a constructivism evaluation tool to the preferred teaching materials identified in phase one. This data is qualitative. Specific details of the research methods for phase one and phase two are outlined below.

Research Method: Phase One

Exploratory survey, quantitative and qualitative data collection

In phase one, survey research was chosen to answer the three sub-questions:

- What method books are used by Australian piano studio teachers when teaching older beginners?
- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

Responses to the survey provided a mix of quantitative and qualitative data.

Purpose and procedure

Phase one of the research explores Australian studio piano teaching in relation to the choice of teaching resources used by teachers when teaching older beginners. The core skills and concepts for learning to play, piano repertoire and method books and the focus of learning are also investigated. Survey method is used, facilitating the sampling of a larger and more diverse group of teachers than is possible with other research methods such as focus groups or interviews (Kelley et al., 2003). Teachers from every state and territory in Australia were invited to participate in an anonymous survey generating a random sample of participants from the piano teaching cohort. The employment of the larger sample size achievable from survey research, aimed to reduce the impact of researcher and participant bias (Glasow, 2005). It is important to acknowledge and minimise the influence of any underlying assumptions held by the researcher, thus, participation in the survey was anonymous and voluntary (Menachemi, 2011).

Teachers were contacted via several different forums including the “The Art of Piano Pedagogy” Facebook page, administrated by Elissa Milne, the Music Teacher Associations in each Australian state and territory (MTA), the Association of New South Wales Regional Conservatoriums (ANSWRC), public websites and tertiary institutions. It is acknowledged that teachers who are contactable through one of the above agencies may not be representative of all piano teachers in the community but the choice of survey method and the resultant larger sample allowed for a reasonably broad range of teacher opinions and provided a starting point for the research.

The primary goal of the survey was to identify the teaching resources Australian teachers use with older beginners. Secondary goals included: a determination of the teachers' rationales for the choice of teaching materials and method books; participants' opinions regarding the method books available for older beginners; and a brief exploration of the ways in which teachers use their preferred teaching resources. The survey also collected demographic information pertaining to the respondents' age, teaching experience, location by state, studio size and percentages of younger and older beginners within each piano studio. The final questions of the survey, included to enrich the data, sought information regarding teacher qualifications, ongoing professional development and performance.

Ethics approval was provided by CQU ethics committee (No. 21044) and a pilot survey was conducted in October, 2018, leading to very slight modifications to some survey questions (Fink, 2003). The survey was administered through SurveyMonkey and open to participants from November 1st 2018 to February 28th 2019.

Survey design, development and administration

The survey completed by 239 piano teachers, comprised 29 questions including a range of closed and open-ended questions (Converse & Presser, 1986; Kelley, Brown, & Sitzia, 2003). The 21 closed-ended questions collected demographic information concerning the participants' age, location (by state or territory only), number of years teaching, studio composition and size, music and teaching qualifications and preferred teaching materials, specifically, method books. The closed questions included a pre-determined list of options from which participants were able to select an answer. Responses to the 21 closed questions generated quantitative data in the form of basic statistical information. Information related to demographics and teaching experience were included to enrich the data and provide context for this research.

The eight open-ended questions that formed part of the survey invited teachers to complete short written responses. This provided opportunities for participants to:

- Clarify or explain the reasons for answers made in the closed ended questions particularly in relation to selected teaching method book for older beginners, aged 12-17.
- Identify the teaching materials and method books that they used outside the pre-determined list offered by the researcher in the closed ended questions.

- Explain and describe aspects of teaching practice in terms of the way they used the method books and teaching materials.
- Itemise the strengths and weaknesses of the method book they use with older beginners.
- Outline the resources, books, repertoire and learning activities perceived to be missing or lacking from the currently available teaching method book for older beginners.
- Provide additional comments related to teaching older beginners.

The data generated from the short answer questions was qualitative. The survey questions are included in Appendix B. The key purpose of the survey was to identify the method books and teaching materials used by Australian teachers with older beginner piano students. In order to provide rich data and substantive context, tThe survey also sought to gather, albeit in a limited fashion, the participating teacher's opinions of their preferred resources for older beginners and a description of the ways in which these materials are used in teaching older beginners.

Quantitative analysis

SurveyMonkey recorded the total number of participant responses (n= 239 = number of responses for each question). For each of the close-ended questions, SurveyMonkey calculated the overall number of responses to each question and the total responses for each multiple choice answer then converted the answers selected by participants into a percentage. The larger number of responses possible through survey research provided sufficient quantities to achieve a valid data sample (Weber, 1990).

Qualitative analysis

The qualitative data collected from the eight open-ended questions was examined over a three-month period, using two different forms of content analysis. Content analysis provides both recognised procedures and structures for examining the large body of text engendered from the survey responses; and reliable techniques for making replicable, valid inferences from the qualitative data generated by participant answers (Elo & Kyngäs, 2008; Harwood & Garry, 2003; Krippendorff, 2018; Mayring, 2004; White & Marsh, 2006).

Hsieh and Shannon (2005) define three distinct forms of content analysis: conventional content analysis; directed content analysis; and summative content analysis. According to Hsieh and Shannon each form of content analysis has both strengths and limitations. In order to draw on the strengths inherent in different forms of content analysis, the research the data was examined several times using both summative and conventional content analysis. Summative content analysis involves counting the frequency of repeated words and synonyms in combination with a comparison of the context of repeated words (Kondracki, Wellman, & Amundson, 2002). Counting the frequency of word usage facilitates an understanding of the content and underlying context for the use of euphemisms. Hsieh and Shannon (2005) suggest that summative content analysis is useful when exploring word usage, thus, the context of all words of similar or the same meaning enabled codes to be allocated and contextualized. A summative content analysis of the survey responses provided a quasi-quantitative approach to the first analysis of the data (Potter & Levine-Donnerstein, 1999).

As an initial examination, the use of summative content analysis allowed for a non-reactive, unobtrusive exploration of the survey data, facilitating insights into how and where words were used (Hsieh & Shannon, 2005). The limitations of summative content analysis lie in the possible failure to recognise the broader meanings of words which compromises the credibility of the data (Stemler, 2001). Consistency and transparency are essential in all forms of content analysis and the means of checking the intended meaning of particular words can be difficult when responses are anonymous and the questions devised by the researcher (Kelley et al., 2003). The inclusion of mechanisms that monitored the interpretations of participant responses was provided by the careful wording of the survey questions, the re-examination of the data over a three-month period, and the use of two forms of content analysis (Guba & Lincoln, 1985).

A second analysis using conventional content analysis involved data immersion. Conventional content analysis is useful for describing and understanding social phenomena (Hsieh & Shannon, 2005; Kondracki, Wellman, & Amundson, 2002). In this analysis the survey answers were read, repeatedly, word by word, allowing the categories and codes to emerge inductively from the text (Coffey & Atkinson, 1996; Miles & Huberman, 1994; Stemler, 2001). Conventional content analysis goes beyond the counting of words as it includes a focus on language use and meaning. This process facilitates the creation of categories that include explicit and inferred meanings of the text (Kondracki, Wellman, &

Amundson, 2002). The advantage of conventional content analysis is situated in the avoidance of preconceived categories, moderating possible researcher bias. A limitation of conventional content analysis lies in the risk of failing to recognise key categories. A comparison of the results produced from each form of content analysis, conducted over a time frame of three-months aimed to reduce the impact of this limitation (Guba & Lincoln, 1985).

Content analysis procedures

The procedures common to all forms of content analysis were used including the sorting, counting and comparison of words and comments; the identification of categories; and the development of codes from data immersion (Krippendorff, 2018). The initial summative analysis of the survey responses facilitated the identification and counting of key words and words of like meaning. The conventional content analysis enabled the categories to emerge from the responses made by teachers in the survey. A comparison of the categories generated from each analysis facilitated the recognition of key themes (Elo & Kyngäs, 2008; Harwood & Garry, 2003; Hsieh & Shannon, 2005; White & Marsh, 2006).

The trustworthiness of the data was considered carefully. The use of quantitative and qualitative methods and the respective data sets generated from each analysis created an avenue for comparison thereby addressing the three sub-questions:

- What piano teaching materials and method books are most often used by Australian piano studio teachers when teaching older beginners?
- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

The use of two forms of content analysis reflects an acknowledgement of the interpretative nature of qualitative social research. Thus, the employment of two types of content analyses, capitalising on the strengths of each research technique aimed to reduce ambiguity, moderate researcher bias, neutralise researcher assumptions, and mitigate respondent bias.

Research Method: Phase Two—Part A

Sequential exploration, qualitative data collection

The following section details the research method used in phase two. Phase two was conducted in two parts. Part A involved the creation of a constructivism evaluation tool (CET); a tool to evaluate the facilitation of constructivism in teacher preferred method books. Part B comprised the application of the constructivism evaluation tool (CET) to selected piano methods and teaching materials created for older beginners. The constructivism evaluative tool will henceforth, be referred to as the CET.

Purpose and procedure

In phase two, part A, the CET was developed for the purpose of examining the degree to which the salient features of constructivism are facilitated in a set of teaching resources. The creation of the CET is shaped by the defining aspects of constructive learning theory outlined in Chapter Two.

Part B of phase two, involved the application of the CET to the teacher preferred teaching materials identified in phase one. An application of the CET involved many page by page readings of each method book and the allocation of a measure that describes the degree to which the core aspects of constructivism are facilitated. Analysis of the data accrued from multiple applications of the CET enables an assessment of the degree to which the selected piano methods, created for older beginners, facilitate constructivism. The application of the CET to teacher preferred resources answers the central research question: to what degree do the method books chosen by Australian piano teachers when teaching older beginning piano students, facilitate constructivism?

Creating the CET

The theory of constructivism is nuanced and complex. In order to create the CET, it was important to tease out the many definitions, details, qualities, activities and processes that comprise constructivist learning theory. A comprehensive description of constructivism presented in Chapter Two provided the foundation for the creation of five broader categories and 16 related descriptors that comprise the CET. Each descriptor of the CET framed an investigation of the most commonly preferred teaching materials for older beginners. The five categories and descriptors of the CET are summarised below.

Category one: the approach to learning, the learner's personal cognitive lens

Descriptors the VARK learning styles

- Visual learning style
- Aural learning style
- Read/write learning style
- Kinaesthetic learning style

Category two: the structure of the learning tasks

Descriptors

- Relevance
- Prior learning
- Student-centred

Category three: cognitive learning

Descriptors

- Questioning and analysis
- Application and transferal of skills and knowledge
- Problem solving

Category four: social learning

Descriptors

- Discussion
- Collaborative learning
- Scaffolding

Category five: the focus of learning

Descriptors

- Self-reflection and self-evaluation
- Student ownership
- Student goal setting

CET: evaluation parameters

In order to provide consistency between repeated analyses of the teaching materials, parameters for the application of the CET were devised. The parameters describe six assumptions regarding the context in which each set of teaching materials is examined. The parameters, listed below, aimed to clarify and enable an assessment of the printed materials alone, without reference to the ways in which a teacher may use the materials. Thus, the teaching materials were read in the context of the following parameters.

i. The method book is utilised in the sequence provided by the creators, and the teacher does not alter the sequence of learning.
ii. The student completes all tasks set out in the method book in the order presented.
iii. There is no deviation from, or adaptation of, the tasks and activities presented in the method book.
iv. The teacher does not include additional tasks or repertoire from sources outside the method book.
v. Text-based material is read by the teacher directly from the method book to the student, without elaboration or discussion.
vi. Online materials and audio files are not included in the evaluation of the method books.

The researcher acknowledges that it is unlikely that every or any teacher would follow a selected method book, or set of teaching materials without additional explanations; discussion and elaboration of text-based information; the inclusion of additional materials for extension or remediation; and the skipping of pages that are redundant or irrelevant. It is highly probable, when using a method book or set of teaching materials that teachers do include extra questions; discussion; alternative tasks; additional explanations; other repertoire options; and the use of audio, video and online materials.

It is beyond the scope of this study to account for every individual teacher's interpretation, presentation and adaptation of any given set of teaching materials, thus, an evaluation of the teaching materials was made from the printed content of each page of the selected materials, according to the parameters and assumptions outlined previously. In this context, application of the CET to teacher preferred teaching materials and method books addresses the over-arching research question that investigates the degree to which

constructivism is facilitated in the method books used by Australian piano teachers, with older beginners.

CET: delimits

Although the evaluation parameters established a consistent framework for the reading of each set of teaching materials, a specific set of delimits was needed in order to clarify the criteria for the allocation of a rating for each descriptor of the CET. Thus, the descriptors which expiate the various characteristics of constructivism within each of the five categories of the CET were delimited. The delimits provide a set of criteria intended to moderate inconsistent interpretations of each CET application, reduce the impact of biases and assumptions held by the researcher, and inhibit the loss of perspective that may occur when reading large volumes of material (Krippendorff, 2018; Guba & Lincoln, 1985). The delimits for each descriptor of CET also provides other researchers, piano teachers and interested stakeholders, a framework and criteria set that can be used to examine any set of teaching materials.

The development of a set of delimits that informed the measurement of each descriptor involved a range of carefully considered decisions. Delimits describing categories one, three and four were relatively easy to establish. Delimits related to categories two and five were more difficult to define. A full exposition of the delimits for each measurement is presented in the next section.

CET: Constructivism Evaluation Tool

Category one: the approach to learning

Category one assesses the degree to which each learner's personal cognitive lens is accommodated in the teaching materials. The four learning styles that comprise the VARK learning styles model provide the descriptors for category one. The VARK model encompasses a range of cognitive lenses as a learner may be single modal (preferring one learning style), bimodal (using two learning styles), multi-modal (using several learning styles) or become adept in a less-preferred learning style, if needed (Fleming & Baume, 2012). Morford (2007) argues that new information needs to be accessible to the learner's cognitive lens. The VARK learning styles model identifies ways in which information becomes both accessible and comprehensible for the learner (Fleming 2006; Fleming & Baume, 2012). The VARK model facilitates an assessment of the ways in which, each set of

teaching materials presents new information, knowledge and skills. Thus, the CET counted the number of activities and approaches that used one or more of the following:

- V visual learning: seeing, watching and observing;
- A aural learning: listening and hearing;
- R reading information and writing notes as a means of learning; and
- K kinaesthetic learning: learning by doing, physical activity.

Delimits

In the music context, V, visual learning style, refers to the use of symbols, arrows, pictures diagrams, musical notation, and music symbols in the presentation of concepts and skills as well as the mimicry of observed physical demonstrations. Pages are rated V, visual learning style, when one or more of the following are included:

- symbols;
- specific notational examples;
- finger numbers;
- chord symbols;
- diagrams of the piano keyboard, posture, the hand;
- musical symbols and notation;
- arrows, stars, brackets, visual cues for learning;
- drawings and pictorial representations e.g. piano keyboard, hands, posture, hand shape;
- illustrations, which relates to repertoire titles, new concepts or new skills; and
- teacher demonstrations recommended by the method book.

In the music learning context, A, aural learning style, describes the process of listening as a means of learning new concepts and skills. Pages are rated A, aural learning style, when one or more of the following are included:

- suggestions or directions asking the student to listen;
- working out and playing songs and music by ear;
- creative tasks that required harmonisation, for example, adding chords to a melody;

- creative tasks that included improvisation, for example, completing a phrase, adding a filler;
- compositional activities, for example, making up rhythms, melodies or chord progressions;
- transposition tasks which are corrected by careful listening;
- echo clapping or singing back musical phrases requiring the student to listen and recall;
- other creative tasks that require listening; and
- listening to musical examples provided by teacher performances and demonstrations, as suggested by the method book text.

In the context of learning to play piano, R, reading and writing learning style, refers to text-based information, instructions, theory tasks and activities that involve written responses. Pages are rated R, read/write learning style, when one or more of the following are included:

- text-based information, instructions and directions;
- explanations of concepts and skills provided via printed text;
- text-based tasks, for example, review pages and theory units;
- written tasks, for example, notating music, circling notes, adding finger numbers or counting;
- theory questions; and
- the inclusion of lyrics for songs.

In the context of learning to play piano, K, kinaesthetic learning, refers to the physical actions and responses that enable learning such as clapping, singing, movement, playing repertoire, technical exercises, and other physical experiences related to producing musical sound. Pages are rated K, kinaesthetic learning style, when one or more of the following are included:

- playing piano;
- technical exercises and scales;
- clapping/tapping;
- singing;
- moving;
- dancing; and

- counting aloud.

Pages that include more than one learning style are recorded for each learning style utilised. Thus, some pages which use multiple learning styles will rate various combinations of V, A, R and K.

Measurement

A CET record sheet was created and used to record each examination of the teaching materials commonly used with older beginners. The number of visual (V), auditory (A), read/write (R) or kinaesthetic (K) learning activities provided throughout the materials was counted and noted in the relevant box of the CET record sheet: V, A, R or K. Pages that used a mix of styles were recorded in all relevant boxes. A percentage describing the use of each learning style, within each set of materials, was determined by comparing the total number of pages in the materials with the total number of pages for each descriptor. The formula is set out below in equation 1. An example of the CET record sheet, for category one is provided in table 1. A full description of the CET record sheet is presented later in this chapter.

Equation 1: Formula for determining the percentage of each learning style V, A, R, or K in a method book.

$$NLS \times 3(number\ of\ pages, learning\ style, from\ three\ evaluations) \times 100$$
$$\div TP \times 3(total\ pages\ in\ book \times three\ evaluations)$$
$$= \%\ of\ learning\ style\ facilitated\ in\ materials$$

Table 1
Example of CET record sheet: Faber & Faber, category one.

CET (Constructivism Evaluation Tool) Record Sheet									
Accelerated Piano Adventures: For the older beginner, lesson book 1		**Total Pages: 92**							
Category one: Approach to learning									
Learner's personal cognitive lens, VARK	Date	V (n/92)	%V	A (n/92)	%A	R (n/92)	%R	K (n/92)	%K
Researcher	1/11/19	92	100.0	17	18.5	88	95.7	89	96.7
Moderator	1/12/19	92	100.0	15	16.3	92	100.0	88	95.7
Researcher	1/3/20	92	100.0	17	18.5	92	100.0	89	96.7
Average of 3 evaluations = % of method reflects constructivism descriptor			100.0		17.8		98.6		96.4

Measurement and delimits: categories two to five

In categories two to five, a nominal measurement scale is used to provide a system for rating the degree to which each page of the five method books facilitates the descriptors within each category. The nominal measure consists of a Y and N rating.

- Y: yes, facilitates constructivism.
- N: no, does not facilitate constructivism.

The Y rating is allocated when

- new information is presented in ways that clearly facilitate the CET descriptor;
- the page includes activities or tasks that reflect the CET descriptor; and
- the delimits for a Y rating are included on the page.

The N rating is allocated when

- the page does not present information in ways that reflect the CET descriptor;
- there are no tasks or activities that reflect the criteria described in the delimits of the descriptor; and
- the delimits for an N rating are reflected in the method book.

It is important to clarify that the delimits for an N rating are not merely the opposite of those for a Y rating. The delimits describing the N rating also include, a lack of overt facilitation of the CET descriptor, the inclusion of practices that are characteristic of teacher-dominant methods as well as activities and tasks that assume a passive approach to learning. Thus, the N rating describes an absence of tasks that facilitate the descriptor of the CET, features that facilitate transmissive teaching approaches, didactic methods that contradict constructivism as defined by the CET and the inclusion of activities that do not support the constructive learning processes defined by the CET.

In categories two to five the same measurement formula is used to determine the degree to which each descriptor is facilitated in the method book. For each page of the method book or set of teaching materials a Y or N is allocated for each descriptor in accordance with the delimits (outlined below) specific to each descriptor. An aggregate of the number of pages rating Y and the total the number of pages rating N, is recorded in the CET record sheet on the date evaluated. The percentage of the method book that records Y and N

for each descriptor is determined using the formulas below. An example of the CET record sheet for category two is provided in table 2.

Equation 2: Percentage of teaching materials that facilitates constructivism

$$NY \times 3\,(number\ of\ pages\ yes, from\ three\ evaluations) \times 100 \div TP \times 3\,(total\ pages\ in\ book \times three\ evaluations) = \%\ of\ materials\ Y, yes, faciliates\ constructivism\ descriptor$$

Equation 3: Percentage of teaching materials that does not facilitate constructivism

$$NN \times 3\,(number\ of\ pages\ no, from\ three\ evaluations) \times 100 \div TP \times 3\,(total\ pages\ in\ book \times three\ evaluations) = \%\ of\ materials\ N, no\ does\ not\ facilitate\ constructivism\ descriptor$$

Table 2
Example of CET record sheet: Bastien, category two, descriptor 1.

Category two: Structure of learning tasks					
Descriptor 1: Relevance, links to age, stage, daily experiences					
	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	48	52.2	44	47.8
Moderator	1/12/19	51	55.4	41	44.6
Researcher	1/3/20	51	55.4	41	44.6
Average of 3 evaluations = % of method reflects constructivism descriptor			54.3 $\{(NY \times 3) \times 100\} \div (TP \times 3)$		45.7 $\{(NN \times 3) \times 100\} \div (TP \times 3)$

Category two: the structure of learning tasks

Category two examines how the learning is structured in terms of relevance to the learner's age, stage of development (according to Piaget's stages of development as outlined earlier), and daily experiences; prior learning and knowledge; and the facilitation of student-centred learning (López-Íñiguez & Pozo, 2016; McPhail, 2013a; Scott, 2006; Wiggins, 2004).

Relevance: delimits and measurement

Descriptor one of category two evaluates the relevance of the new knowledge and skills related to learning piano, to the older beginning Australian student's age,

developmental stage and daily experiences. In this research the Australian, older beginner describes any student born or living in Australia, any nationalised Australian, any student from immigrant families or from families of long-term Australian residency, and any student from a refugee family aged from 12-17. The older beginner's developmental stage is defined by Piaget's (2013) four stages of developments which describes the formal operational stage as the phase of adolescence to adulthood.

The Y and N delimits for this descriptor were difficult to define. The multi-ethnic, multi-cultural composition of 21st century Australia has resulted in students from India, China, Korea, Vietnam, South Africa, Africa (particularly the Sudan), the middle-east and other backgrounds learning piano (Abril & Flowers, 2007; Geyer, 2007). This, in combination with the cessation of regular singing as a common practice in schools (Wicks, 2015) and the vast number of music choices available on the internet makes the identification of relevant material more difficult (Ward, Goodman, & Irwin, 2014). Additionally, the diminishing pool of communally known folk tunes, and the short life span of a popular song or film score has reduced the quantity of repertoire that is universally or commonly familiar and accessible to the older beginner (Geyer, 2007; Ryan, 1998). Thus, the delimits for the Y rating (listed below) make reference to the aspects of Australian culture and life that the researcher (as an insider) judged as most likely to be commonly experienced by Australian students aged 12-17.

The Y rating is allocated when the page includes the following activities, tasks, repertoire and presentation:

- musical terminology using Australian language, for example, crotchet, bar;
- repertoire related to every-day activities in Australia, for example, *The Rain* (Alfred's), *Barefoot on the Beach* (Hal Leonard), *The Planets* (Alfred's);
- repertoire commonly heard or sung in Australia, for example, *Happy Birthday, Jingle Bells, Hot Cross Buns, Waltzing Matilda, Row Row Row Your Boat*;
- traditional and folk songs from England and Europe, for example, *Mary Had a Little Lamb, Clair de Lune, Lightly Row, Alouette, Greensleeves, Baa Baa Black Sheep*;
- genre songs that reflect jazz, boogie, rock film and popular music styles;
- famous and well-known classical excerpts, for example, *Ode to Joy* (Beethoven), *Musette* (Bach), *Morning* (Grieg);

- the language use in text-based instructions and descriptions is appropriate to the adolescent; and
- presentation is suitable for older beginners, that is, there are no babyish illustrations for example, pictures of teddy bears and toys.

The N rating is allocated when the page includes activities that do not directly or overtly connect with the Australian student's age, stage and daily experiences including:

- pedagogical songs that do not reference Australian culture and daily experiences or specific references to American culture such as, *Baseball* (Alfred's) and *Christopher Columbus* (Alfred's);
- songs that do not reflect popular, jazz and rock idioms and styles;
- the use of child-like drawings, illustrations of toys, teddy bears and cartoons in the presentation of the method;
- repertoire from lesser known classical excerpts such as *Polovtstian Dance* by Borodin (Faber & Faber);
- the use of American musical terms and spelling; and
- traditional folk songs that are specifically American such as *Yankee Doodle*, and *Darlin' Clementine* which may not be familiar to all older beginning Australian students.

It is acknowledged that the delimits for the Y and N ratings used to measure the relevance of the teaching materials is guided by the researcher's knowledge and experience as an insider of the field (Brannick & Coghlan, 2007), as well an assumption that some Australian students, particularly those without an Anglo-European heritage, may not be familiar with the aspects of American culture that permeate many of the teaching materials for older beginners in Australia (Ryan, 1998). It is also hypothesised that students with an Anglo-European background may connect more readily with traditional folk songs from the UK and Europe than those students with an Asian, Indian, African or Middle Eastern heritage (Abril & Flowers, 2007). Thus, an N rating also describes teaching materials that are characterised by any uncertain or unmeasurable degree of relevance; that is, repertoire, cultural references, language and musical terminology, which may or may not be accessible and relevant to the Australian student, particularly those without an Anglo-European heritage.

Prior learning: delimits and measurement

Descriptor two explores the degree to which new concepts and skills build on, or are directly linked to prior learning and previous experiences (López-Íñiguez & Pozo, 2016; Scott, 2006).

The Y rating is allocated when the page includes tasks that directly utilise or connected new learning with prior learning and previous experiences. This includes generalised knowledge such as the ability to read as well as the musical concepts and skills previously explained in the method book. The following list itemises the delimits for a Y rating:

- the use of the alphabet;
- the use of counting and numbers;
- explanations of patterns as they pertain to musical learning;
- specific reference to prior learning as a basis for new learning;
- the obvious use of previous knowledge and skills from earlier in the method to build or consolidate new skills, technique and knowledge; and
- the use of concepts and skills previously mentioned in the method to clarify the introduction of a new skill or concept.

A rating of N is allocated when the page:

- does not directly utilise or link new concepts and skills to those previously introduced;
- does include the arbitrary introduction or explanation of a new concept or skill;
- introduces several new concepts or skills simultaneously, which makes establishing a link with prior learning more difficult;
- introduces one or several new concepts without reference to prior learning; and
- involves the rapid learning of new concepts for example, a new concept or skill presented on successive pages.

Student-centred learning: delimits and measurement

Student-centred learning is identified by the provision of opportunities for the student to initiate and direct new learning, creative options that allow the student to lead the learning, and activities that encourage the student to extend the learning into other areas of interest (McPhail, 2010, 2013a). Student-centred learning allows for the teacher to guide the learning, while at the same time insisting on active student participation (McPhail, 2010)

The Y rating is allocated when the page includes:

- optional tasks such as discovery activities and revision pages;
- open questions;
- creative tasks;
- open-ended tasks;
- student initiated tasks;
- exercises, tasks and repertoire that allowed the student to ask questions, discuss or debate musical choices; and
- performance activities that incorporate creative or student-led dimensions.

The N rating is allocated when the page includes:

- specific directions and instructions;
- detailed explanations of concepts and skills;
- pre-corrective reminders;
- didactic text;
- tasks that suggest or stipulate rote learning and memorisation; and
- the presentation of new information as facts and skills to be learned and memorised.

Category three: cognitive learning

In category three, the personal cognitive acts of the learner in the form of active responses and cognitive processes are investigated (Cobb, 1994; Confrey, 1990; Freer, 2009; McPhail, 2013a; Miller, 2012; Scott, 2010). This entails an exploration of cognitive acts that are included in the method: questioning, analysis, the application and transferal of knowledge and problem solving skills.

Question and analysis: delimits and measurement

Descriptor one of category three explores the use of questioning and analysis tasks that prompt or require the student to actively inquire and respond.

The Y rating is allocated when the method book includes one or more of the following:

- questioning, both open-ended questions and closed questions;
- examination and analysis of the musical score, for example, finding the phrases, identifying the imitation, naming the chords, finding the repeat;
- revision pages where the student's understanding is assessed or tested;
- pages with theory tasks requiring analysis, for example, intervallic, chordal and structural investigations; and
- the introduction of new repertoire, concepts and skills using analysis or questioning as a pathway to learning.

A rating of N is allocated when the page includes:

- instructional and directive text;
- memorisation and rote learning tasks;
- activities requiring specific outcomes;
- an absence of questioning and analysis tasks; and
- the use of teacher-dominant teaching styles.

Application and transferal of knowledge: delimits and measurement

Descriptor two of category three evaluates the ways in which the teaching material requires the students to apply and transfer knowledge and skill as an avenue for understanding new information and learning. This descriptor includes activities that encourage the student to transfer or use what is known in order to interpret new settings.

The Y rating is allocated when the tasks listed below include:

- transposition activities;
- improvisation opportunities;
- harmonisation tasks;
- composition options;

- creative tasks;
- specific sight-reading tasks;
- playing by ear; and
- revision or theory tasks that require the application and transferal of knowledge and skills.

A rating of N is allocated when the materials:

- do not provide transposition, harmonisation or composition tasks and activities;
- do not include playing by ear;
- do not offer creative tasks;
- provide specific instructions and directions instead of opportunities for the student to apply and transfer knowledge and skills as part of the learning; and
- use transmissive, rote learning and mimicry approaches.

Problem solving: delimits and measurement

Category three, descriptor three investigates the use of problem solving activities. Problem solving refers to tasks that ask the student to identify problems and posit possible solutions. Difficulties, problems and issues are inherent in all aspects of musical learning however, only the tasks that specifically direct the student to work out potential problems and find solutions are deemed as facilitating this aspect of constructivism.

The Y rating is allocated when the page includes:

- clear and direct opportunities for the student to self-identify inaccuracies and deficiencies in her or his own performance, for example, the student self-identifies mistakes made in fingering, hand shifts, counting, incorrect notes;
- provision for the student to identify problems and suggest solutions to prevent mistakes and difficulties;
- creative tasks that stimulate problem solving skills; and
- questions that specifically ask the student identify and solve problems.

The N rating is allocated when the page includes:

- teacher-dominant approaches that provide solutions for potential problems;
- directive text that refers to difficulties that may be encountered;
- text suggesting potential errors, issues or problems;
- pre-emptive solutions to problems;
- corrective suggestions provided by the creators of the method;
- an assumption or implication in the text of the materials that the teacher will identify and correct student errors; and
- activities and tasks that do not offer scope or provide opportunities for students to notice problems and find solutions.

Category four: social learning

Category four examines the social aspects inherent in constructivism. Discussion, collaborative learning and the evidence of scaffolding; the provision of temporary support as the student acquires new skills and understanding are explored (Brooks & Brooks, 1999; Freer, 2009; Powell & Kalina, 2009; Mason, 2012; Murphy & Messer, 2000; Scott, 2012; Sawyer, 1999; Wiggins, 2016, 2007, 2004; Yang & Wilson, 2006).

Discussion: delimits and measurement

Category four, descriptor one investigates the provision of opportunities which encourage the student to engage in discussion or debate in order to explain her or his understanding.

The Y rating is allocated when the materials include activities where the student is asked to:

- explain her or his choices regarding performance, composition, improvisation;
- verbalise her or his processes of learning;
- demonstrate through discussion an understanding of new concepts;
- complete creative tasks that involves discussion;
- engage in listening tasks that promote or require discussion;
- learn or perform repertoire in ways that directly initiates discussion about the interpretation of the music such as, dynamics, articulation, expression, tempo;
- complete review pages, where student answers may be discussed; and
- discuss musical choices made by the student.

The N rating is allocated when the materials:

- does not provide opportunities for discussion;
- does not offer open-ended questions related to musical performance, style, and musical terminology;
- does not include creative tasks that may lead to discussion;
- employs closed questioning that required a single correct answer;
- do not suggest or provide scope for student-teacher discussion; and
- include specific directions that the student must follow.

Collaborative learning: delimits and measurement

Descriptor two of category four explores the collaborative learning opportunities provided in the method book. Collaborative processes may include, peer learning, shared learning, duet opportunities, improvisational, creative and ensemble tasks.

The Y rating is allocated when the page includes:

- duet playing opportunities;
- student-student duets;
- improvisation, with a peer or teacher;
- shared performance and learning tasks;
- research or theory activities requiring collaboration;
- ensemble activities; and
- tapping, counting, singing and clapping activities shared between teacher-student or student-student.

The N rating is allocated when the page includes:

- tasks that require solo practice;
- the prescription of solitary tasks; and
- directive and instructive text that does not provide room for collaborative or shared learning.

Scaffolding: delimits and measurement

Descriptor three, category four, examines the provision of scaffolding, in the form of additional, temporary support to enable student learning.

The Y rating is allocated when the page includes:

- arrows to draw attention to newly learned concepts;
- added text, for example, reminders about the tie or the sharps in a performance piece;
- circles or boxes that highlight a new concept, position shift or accidentals within repertoire or exercises;
- diagrams or pictures to support learning;
- provision of keyboard positions at the start of the musical excerpt;
- finger numbers provided for the first note and in more difficult tasks, finger numbers to assist student learning; and
- addition of counting.

The N rating is allocated when the page:

- does not include any finger numbers or questions to assist the student in determining the starting point of the song;
- does not include finger numbers throughout the song;
- does not provide symbols or diagrams to assist the learning of new skills and concepts;
- does not include supportive text in the form of suggestions or reminders;
- does not provide arrows, circles or other visual reminders for students to support new learning; and
- does not provide scope for teacher to provide student with scaffolding, for example, tasks which required the student to alone, to work out and learn new repertoire or skills without support.

Category five: the focus of learning

Category five evaluates the degree to which the teaching materials acknowledge the developmental, emergent, adaptive and changeable nature of knowledge (Wiggins, 2007). This category explores the focus of learning, the learning process and the ways in which teaching materials enable the learner's conceptions to change and evolve. This includes learning experiences that facilitate self-reflection, self-evaluation and student ownership of the learning process (Hood, 2012; Morford, 2007). Opportunities for personal goal setting and are also considered to reflect a focus on the process of learning as student goal setting

and monitoring may also encourage the development of self-regulation skills and metacognition (Jeanneret, Leong, & Rosevear, 2003; López-Íñiguez & Pozo, 2016; McPhail, 2013a; McPherson & McCormick, 1999; Miksza, 2012; Nielsen, 2001, 1999a; Varela, Abrami, & Upitis, 2016).

Self-reflection, self-evaluation: delimits and measurement

This descriptor evaluates the learning process in terms of the frequency of tasks that encourage student self-reflection and self-evaluation. Activities fostering student self-reflection and self-evaluation may lead to the development of meta-cognitive awareness and the development of self-regulatory skills.

The Y rating is allocated when the method book includes activities that encourage self-evaluation and self-reflection in relation to the student's own performance or learning including reminders, suggestions and questions related to:

- listening;
- checking;
- noticing;
- watching;
- observing; and
- explaining musical choices.

The N rating is allocated when the material emphasises or utilises:

- instructional text;
- the following of specific performance directions provided on the page;
- corrective text related to specific performance directions;
- closed questions about playing and performing;
- text where the end product or outcome is stressed rather than the process of self-examination; and
- text which does not include prompts for student self-reflective, self-evaluative practices.

Student ownership: delimits and measurement

Descriptor two, category five, explores the degree to which student ownership of the learning is clearly facilitated. The method books are examined to determine the ways in

which the materials allow student choice in terms of the range of activities, task types, styles of repertoire and the sequence and pace of learning. This includes options for creative music making, for example, improvisation or composition.

The Y rating is allocated when the page includes:

- clear options for repertoire selection or the provision of supplementary repertoire;
- a range of ensemble, duet and solo pieces from which the student may choose;
- several options for the learning of technique, from which the student can choose in order to learn new skills;
- options for the student to determine the learning sequence and pace;
- the inclusion of tasks that students choose to self-teach;
- creative tasks which invite student choice and ownership over both the parameters of the task and the outcome; and
- the inclusion of optional tasks.

The N rating is allocated when there is no scope for student to own the learning process including:

- a directive for the student to complete all the tasks offered, in the sequence provided, with no options to alter the sequence or pace of the learning;
- an absence of supplementary repertoire options;
- specific directions the student must follow; and
- an absence of creative, improvisation and composition activities.

Goal setting: delimits and measurement

Descriptor three examines the ways in which student goal setting is promoted through the exercises, set tasks, repertoire choices and learning activities provided in the method book. Personal goal setting may facilitate through the self-monitoring of goal achievement, the development of self-regulation.

The Y rating is allocated when the method book provides:

- encouragement and provision for the student to list personal goals;
- opportunities for the student to monitor her or his progress toward goals;
- assistance with the breaking down larger goals into smaller or mini-goals;

- text that encourages the teacher and student to discuss goals in relation to: practice, specific repertoire, tasks, skills and techniques; and
- opportunities to adapt repertoire, concepts and skills to meet student goals.

The N rating is allocated when the method book includes:

- tasks that are non-negotiable such as, exercises, technical skills and repertoire that cannot be omitted;
- tasks and activities that do not facilitate the setting and achievement of student goals;
- goals that are pre-determined by the content of the method book;
- no choices of repertoire related to the student's goals; and
- no options to alter the sequence and pace of learning to accommodate student's personal goals.

CET: Record sheets

The dates and results of each application of the CET were set out in a set of excel spreadsheets. The ratings allocated for each descriptor were added together and a percentage determined. Three applications of the CET were conducted on each set of teaching materials. Multiple applications of the CET aimed to identify disparate ratings, accommodate slight variations in results and moderate the results engendered from successive examinations. The percentage rating for each descriptor, determined from an average of three separate evaluations, provides an indication of the degree to which the defining aspects of constructivism are facilitated in the teaching materials. Table 3 provides an example of the CET record sheet for category two of Faber and Faber. A full record of the CET and the results for the five method books evaluated in this research is provided in Appendix C.

Table 3
Example of CET record sheet: Faber & Faber, category two, descriptor1.

Category two: Structure of learning tasks					
Descriptor 1: Relevance, links to age, stage, daily experiences					
	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	55	59.8	37	40.2
Moderator	1/12/19	59	64.1	33	35.9
Researcher	1/3/20	59	64.1	33	35.9
			62.7		37.3
Average of 3 evaluations = % of method reflects constructivism descriptor			$\{(NY \times 3) \times 100\} \div (TP \times 3)$		$\{(NN \times 3) \times 100\} \div (TP \times 3)$

Research Method: Phase Two—Part B

Application of CET to selected method books

In phase two, part B, five teacher preferred teaching resources identified by the survey in phase one were examined and re-examined using the CET. Three sets of evaluations were conducted between November 2019 and March 2020. Two evaluations were completed by the researcher, one in November 2019 and one in March, 2020. An additional CET application was completed by an external moderator in December, 2019. The external moderator, a piano teacher who had not participated in the survey, was separate to all the processes previously explained. An independent application of the CET by an external moderator, provided a different perspective and also mediated and verified the CET applications conducted by the researcher.

A single application of the evaluation tool involved a minimum of 16, separate, page by page readings of each set of method book. One page by page reading for each descriptor:

- four times for category one (once for each VARK descriptor)
- three times for category two;
- three times for category three;
- three times for category four; and
- three times for category five.

Multiple applications of the CET, including one by an external observer enabled a comparison of the results obtained from each examination. Some pages were clearly and

easily allocated a rating, other pages, less obvious. An average rating for each descriptor was made from the three evaluations. This addressed the small numerical discrepancies (3 or less) for any rating that occurred between the different examinations. Larger differences (4 or more) are acknowledged in the results section. Appendix C includes the complete CET record sheets of each evaluation of teacher preferred teaching materials.

This chapter outlined the research methodology, method and research design used to explore constructivism and Australian studio piano teaching. The purpose, procedure and two-phase design, framed by an interpretivist philosophy are presented in the context of a mixed methodology paradigm. Details related to quantitative and qualitative data collection and analysis processes were explained in relation to the research question and sub-questions. Chapter Four will present the results of the research conducted in phase one and Chapter Five, the results of phase two.

Chapter Four: Phase One Survey Results

In Chapter Four the results of the survey conducted in phase one will be presented answering the sub-questions posited to support the main research question. A brief overview of the survey will precede the presentation of the survey results. Participant responses will be set out in two parts. In part one the quantitative components of the survey will be reported to answer sub-question one: what piano teaching materials and method books are most often used by Australian piano studio teachers when teaching older beginners (aged 12 to 17 years)? Part two will present participant responses to a range of short answer questions. The qualitative data generated from the summative and conventional content analyses of teacher comments addresses sub-questions two and three.

- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

Part One: Quantitative Results

This section presents the quantitative data pertaining to each participant's background including: studio composition; numbers of students currently being taught; teacher training; qualifications; performance skills; professional development and the respondent's preferred materials for teaching older beginners.

Demographics

Questions 1 to 5, 7, and 19 to 28 provided quantitative information that provides a portrait of Australian piano teachers and context for this research. SurveyMonkey determined a percentage summary for participant responses regarding the following background information:

- the age distribution of teachers;
- years of teaching experience;
- studio composition;
- location (by state or territory);
- education and training;
- teaching qualifications; and

- ongoing professional development.

The opening survey questions collected general demographic information. Question 1 requested participants to select an approximate age range from a pre-determined list. Almost half of the participants (41%) identified as 46 and over; approximately a third (29%) as aged 31-45, and almost a quarter (17%) as 30 or under. A smaller percentage (13%) were semi-retired or retired. Figure 2 provides a summary of the answers to Question 1.

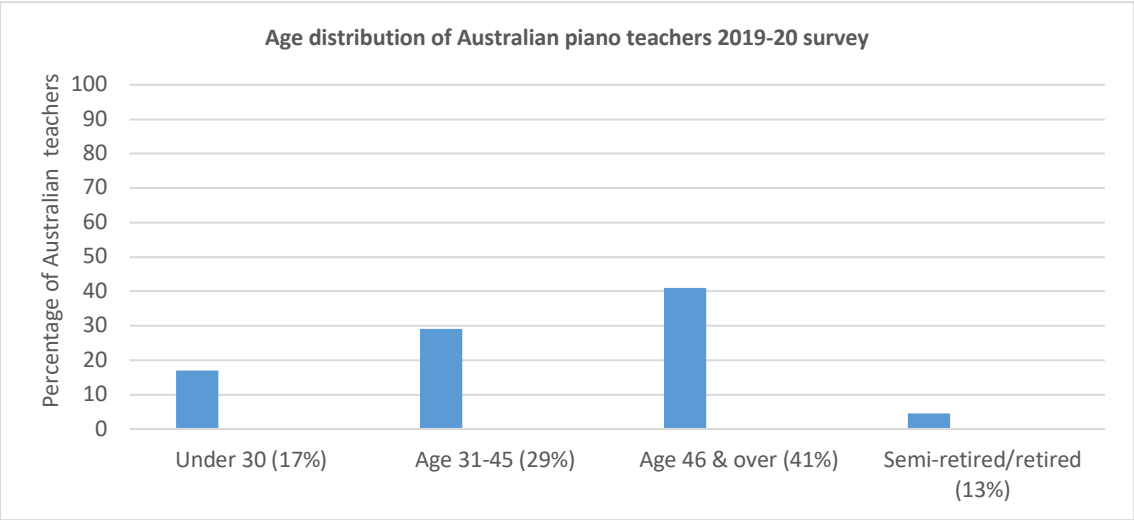

Figure 2: Age distribution of Australian piano teachers (2019-20).

Question 2 asked participants to indicate the number of years they have been teaching. Responses were fairly evenly distributed across those with less than 20 years of experience and those with over 20. A breakdown of the results revealed: 22% who indicated under ten years of teaching experience; 23% had 11-20 years; 31% had 21-35 years; and 24% had an excess of 35 years. Figure 3 provides a summary of the responses to Question 2.

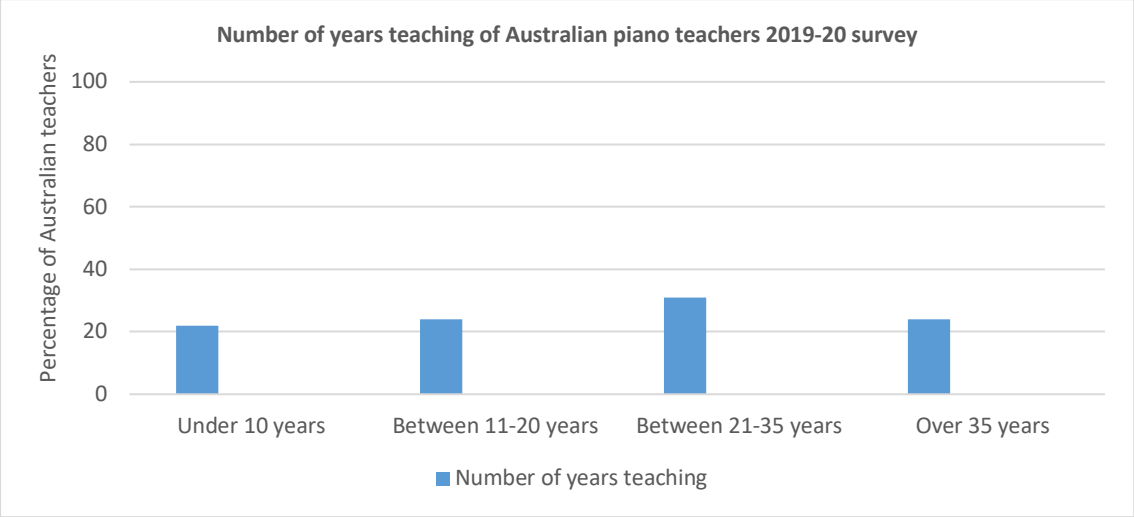

Figure 3: Number of years teaching piano, Australian piano teachers (2019-20).

In Question 3 the majority of participants, 37%, were teachers in NSW. Queensland teachers represented 21% of the cohort, Victorian teachers 13%, South Australian teachers 11%, Western Australian teachers 11%, Tasmanian teachers 4%, teachers from the ACT 4%, and the Northern Territory 1%. An additional 0.4'% of responses were provided by teachers based in New Zealand. Figure 4 provides a summary of participant locations.

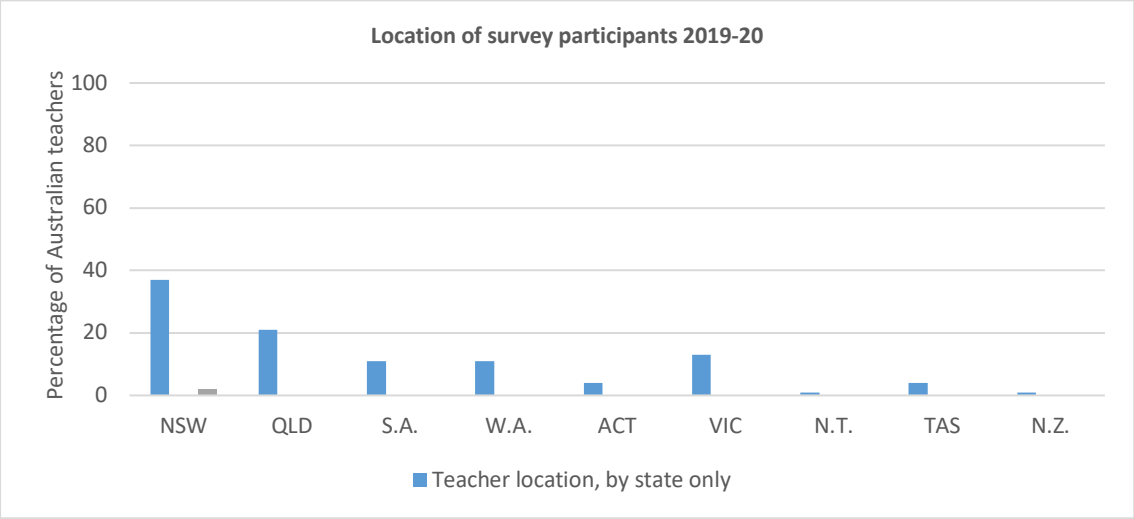

Figure 4: Australian piano teachers' location by state (2019-20).

Studio size and composition

Question 4, asked teachers to indicate the total number of students currently enrolled in their studio. Responses from teachers revealed a range of studio sizes from 10 or less to over 50 students. The following studio sizes were recorded: 21% of teachers taught 10 or less students; 24% taught between 11 and 20 students; 29% comprised between 21 and 35

students; 14% taught larger studios of comprising 36-50 students; and 12% of the studios included over 50 students. Figure 5 illustrates the various studio sizes of Australian piano teachers.

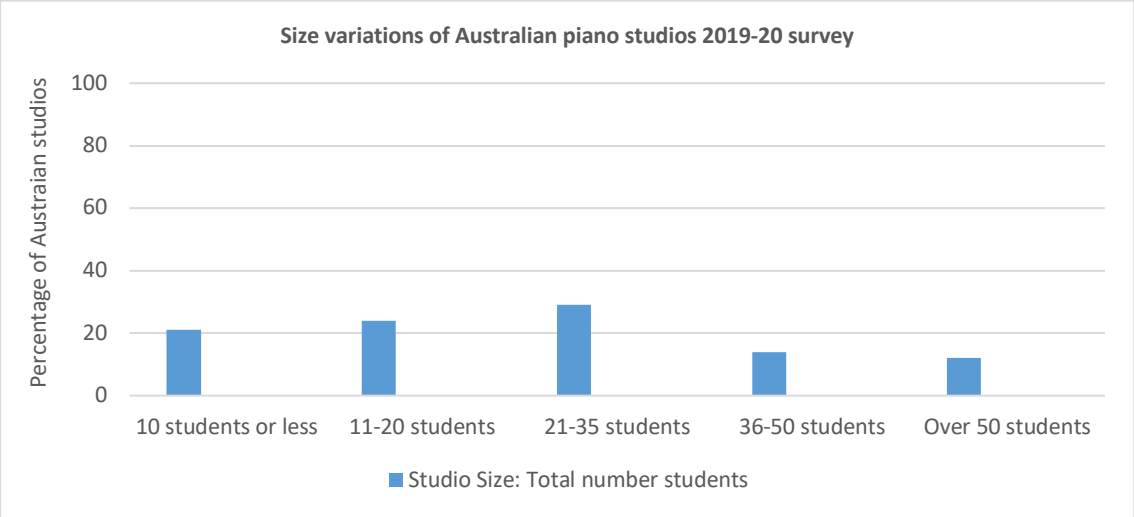

Figure 5: Size of Australian piano studios (2019-20).

In Question 5 the number of younger beginners that comprised the Australian piano studio was explored. The definition of a younger beginner student as one aged 11 or under and learning for 12 months or less was provided. Responses revealed that all piano studios included at least one beginner student aged 11 or younger. The majority of studios, 42%, included up to five young beginner students; 27% taught between six and ten young beginners; and 15% included 11-20 young beginners. Only 7% of studios currently included no younger beginners; 8% had over 20 young beginners; and 1% of studios were comprised of all young beginner students. Figure 6 summarises the results of Question 5.

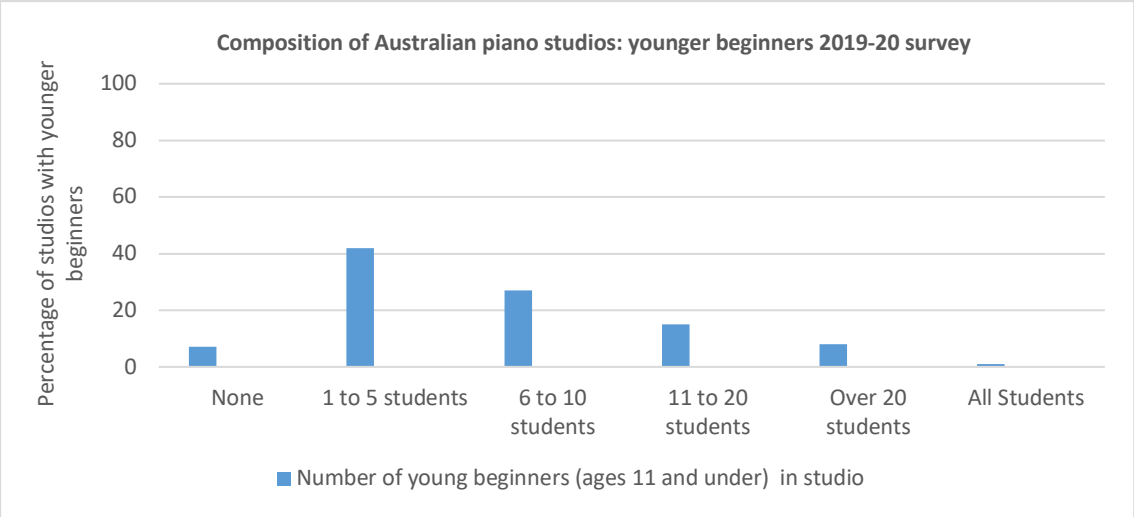

Figure 6: Number of younger beginners in Australian piano studios (2019-20).

In Question 7 participants were asked to indicate the number of older beginner students that formed part of their piano studio. The definition of the older beginner student as one who is aged 12-17 years and has been learning for 12 months or less was provided with the question. Responses revealed that, 26%, of the participants taught no older beginner students. The remaining 74% indicated that their piano studios included at least one older beginner student. This included: 58% of teachers who taught between one to five older beginners; 12% between six to ten older beginners; 3% between 11-20 beginners; and 1% of teachers with over 20 older beginners. No studios were solely comprised of older beginners. Figure 7 provides a graph of participant answers to Question 7 illustrating the number of older beginners taught at the time of the survey.

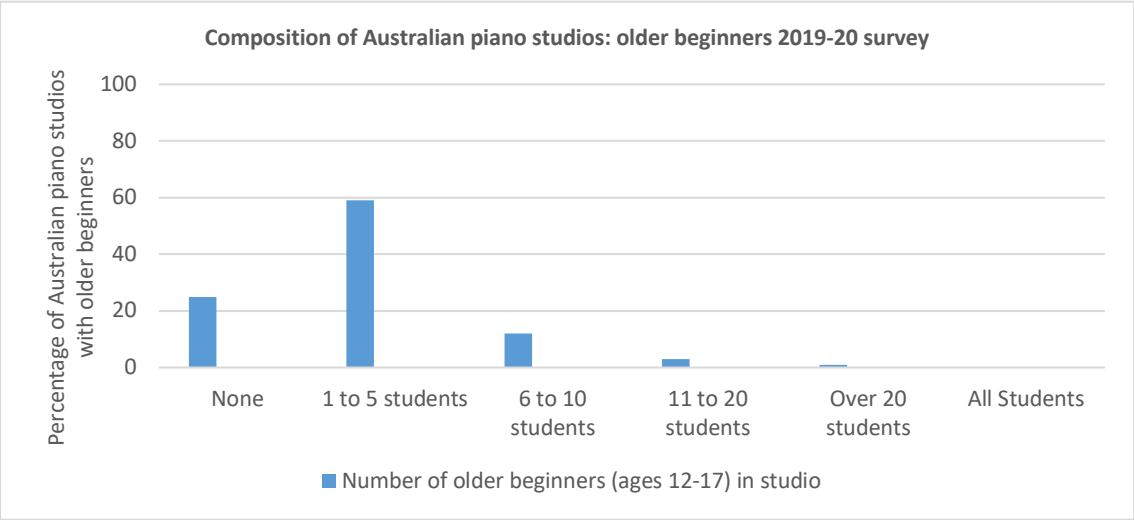

Figure 7: Number of older beginners in Australian piano studios (2019-20).

Teacher profiles

Questions 19 to 28 explored the musical and educational backgrounds of participants. In Question 19, participants were asked to indicate the formal musical training and qualifications which they had completed. Eight choices were provided from which respondents indicated a range of musical and education experiences. The majority of teachers, 74%, indicated that they had completed grades in piano. Bachelor degrees or higher and Diplomas in Music were completed by 42% and 40% of teachers respectively. Other responses included

- Bachelor degree or higher in Creative Arts, 6%;
- Bachelor degree or higher in music on an instrument other than piano, 13%;

- Bachelor degree or higher in Arts, 15%;
- Post Graduate Diploma in Education, 16%; and
- Bachelor or higher degree in Education 23%.

Figure 8 provides a summary of the qualifications of Australian piano teachers in 2019.

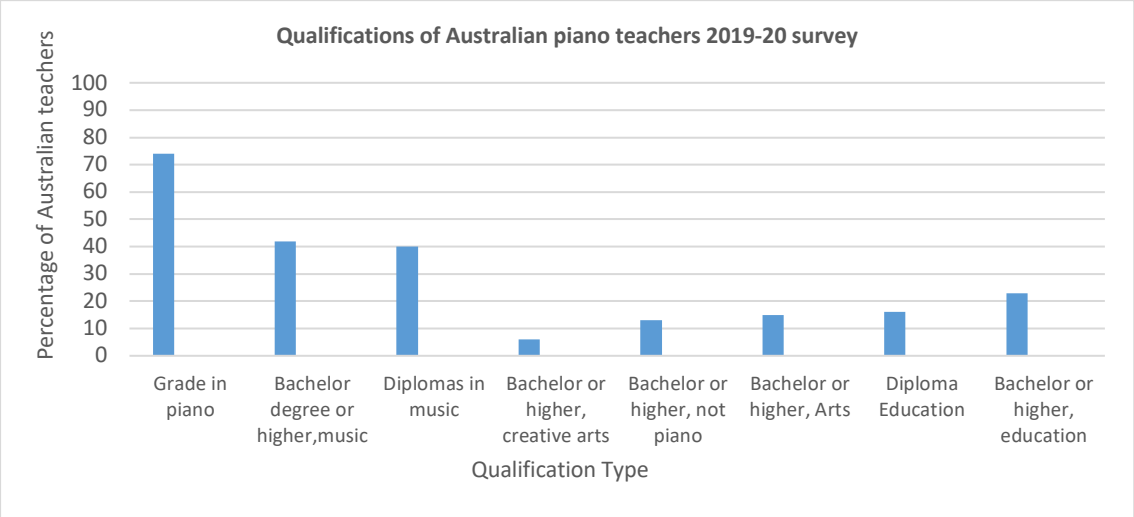

Figure 8: Qualifications of Australian piano teachers (2019-20).

Question 20 investigated the country in which teachers completed their musical training and educational study. The majority of respondents, 90%, had completed formal study in Australia. Other countries where teachers had completed musical or educational training included: United Kingdom (UK) 5%; United States of America (USA) 2%; New Zealand 2%; South Africa, Canada and Russia 1%; and 0.4% indicated other countries including Spain and Netherlands. A summary of the responses to Question 20 is presented in Figure 9.

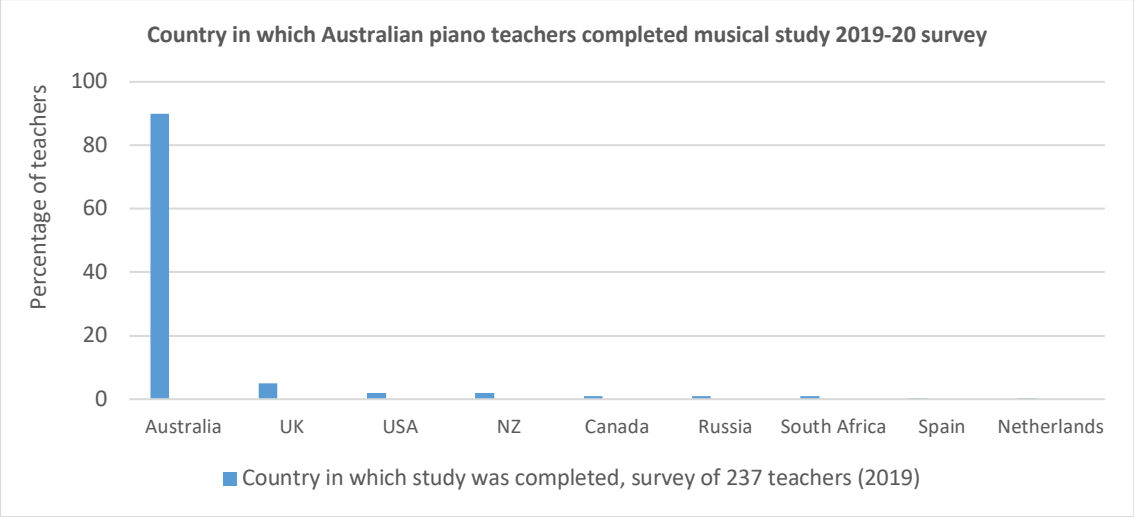

Figure 9: Country in which study was completed by Australian piano teachers (2019-2020).

Question 21 aimed to clarify the responses to some of the previous questions related to teacher training and qualifications. Teachers were invited to indicate the highest piano grade completed through AMEB. Responses reveal the following: 2% of participants had completed a TMusA (Teacher of Music, Australia); 6% an LMusA (Licentiate of Music, Australia); 25% an AMusA (Associate of Music, Australia); 3% a Certificate of Performance; 24% grade 8; 10% grade 7; 6% grade 6; 12% had completed no grades in AMEB and 11% stated not applicable. It is noteworthy that the TMusA completed by 2% of participants is the only AMEB exam that includes a teaching component. Figure 10 provides a graph of teacher responses.

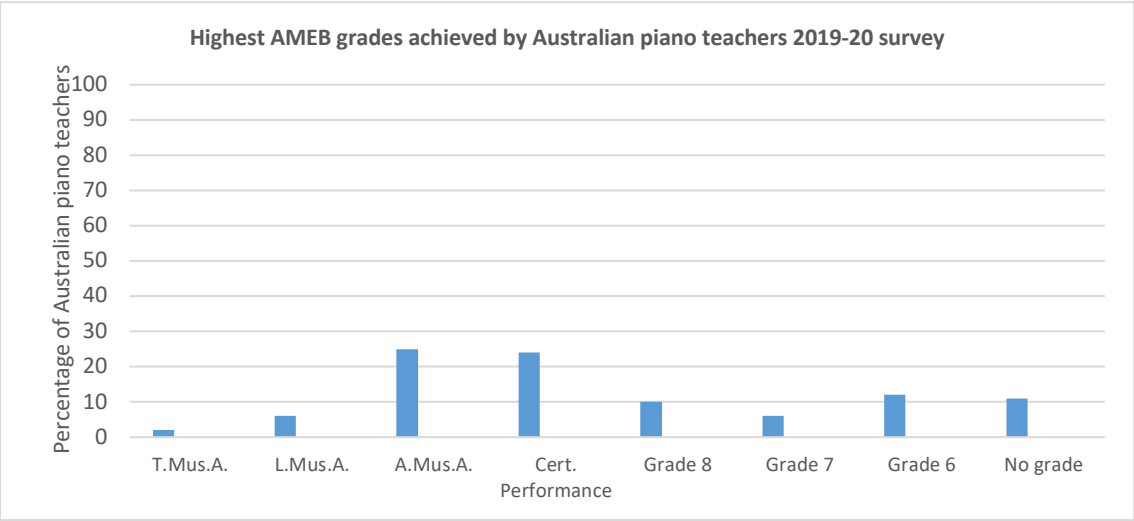

Figure 10: Australian piano teachers' completion of graded piano exams and diplomas (2019-20).

Question 22 explored the qualifications provided by recognised examination bodies outside the AMEB and the Australian tertiary system. The following results were recorded: 5% of teachers had completed grades in ANZCA (Australia and New Zealand Cultural Arts Ltd.); 28% completed grades in ABRSM (The Associated Board of the Royal Schools of Music); 12% had achieved diplomas in ABRSM; 28% had studied grades with Trinity College London; 20% completed diplomas with Trinity College London; and 50% had completed grades or diplomas with other music examination bodies. Figure 11 summarises the answers to Question 22.

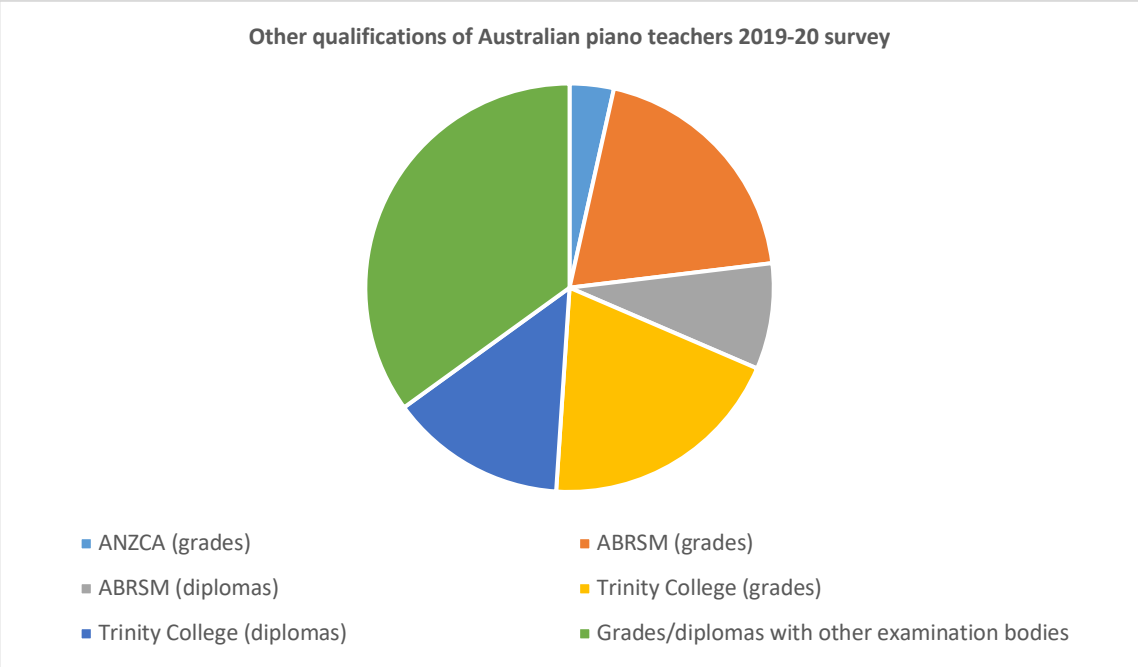

Figure 11: Other qualifications held by Australian piano teachers, related to piano teaching and performance (2019-20).

In Question 23 participants were asked to indicate from a pre-determined list any specialised training or additional qualifications achieved in music education including: Suzuki; Kodaly; Orff; Dalcroze and Alexander Technique (for musicians). Answers revealed that 17%, of the teachers had completed Yamaha Piano Teaching training; 1% the Taubman Method; 3% were qualified in Alexander Technique (for Musicans); 5% in Suzuki teaching; 29% were qualified Kodaly teachers; 23% Orff Schulwerk specialists; 5% were qualified Dalcroze teachers; and 51% indicated other. The other response was included to accommodate other music education courses in which the participant may have engaged. The responses to Question 23 are provided in Figure 12.

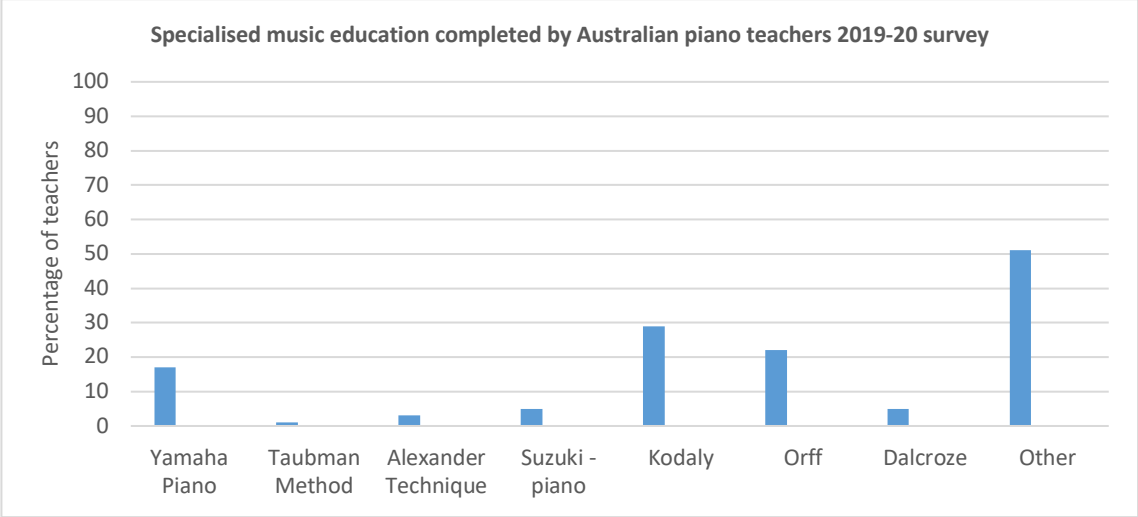

Figure 12: Specialised music education and training completed by Australian piano teachers (2019-20).

Questions 24 and 25 explored the ongoing professional development of Australian piano teachers. In Question 24 teachers were asked to indicate the professional development courses in which they had participated. A pre-determined list was provided and revealed that teacher engagement in professional development included: 58% who had attended piano pedagogy conferences; 82% who had participated in piano workshops and masterclasses; 71% of respondents who were members of a music teacher organisations; 7% had completed additional music education through TAFE; 50% had attended music education conferences; and 28% indicated participation in professional development experiences not included in the pre-determined list provided. Figure 13 provides a pie-chart that summarises the answers to Question 24.

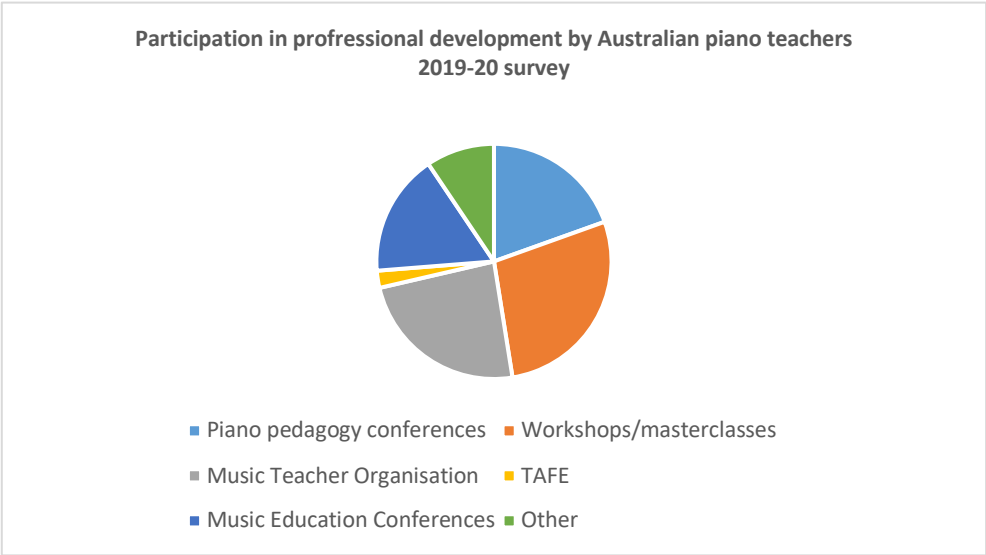

Figure 13: Australian piano teachers' engagement in professional development (2019-20).

In Question 25 participants were asked to provide the most recent year in which they had engaged in professional development. The following responses indicated the completion of professional development:

- 6% in 2019;
- 56% in 2018;
- 12% in 2017;
- 1% in 2015;
- 7%, between 2011 and 2014;
- 4% between 2000 and 2010;
- 3% completed prior to 1999; and
- 4% of answers were unclear or marked not applicable.

Figure 14 Provides a pie-chart summarising the percentage answers to Question 25.

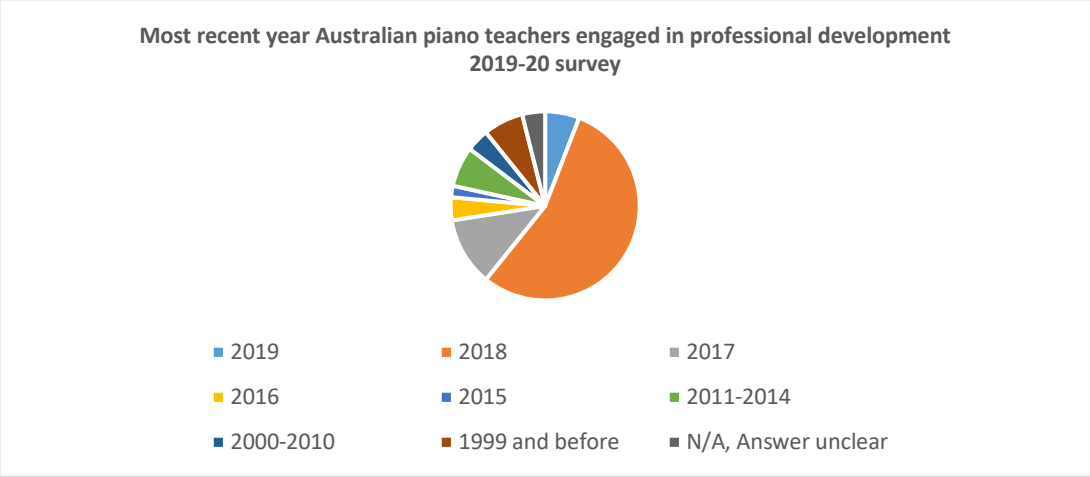

Figure 14: Australian piano teachers most recent professional development (2019-20).

Questions 26 to 28 explored the Australian piano teachers' involvement in professional performance. In Question 26 teachers were asked to indicate their frequency of solo performances, over one teaching year. A range of answers were provided. Approximately a third of teachers, 34%, performed as soloists at least once a year. This included 20% of the participants who performed as a soloist several times per year and the 14% who performed sometimes (once or twice a year). Other teachers, 39%, rarely performed as a soloist (less than once a year) and 27% never gave solo performances. Figure

15 illustrates the distribution of professional, solo performances by Australian piano teachers who participated in this survey.

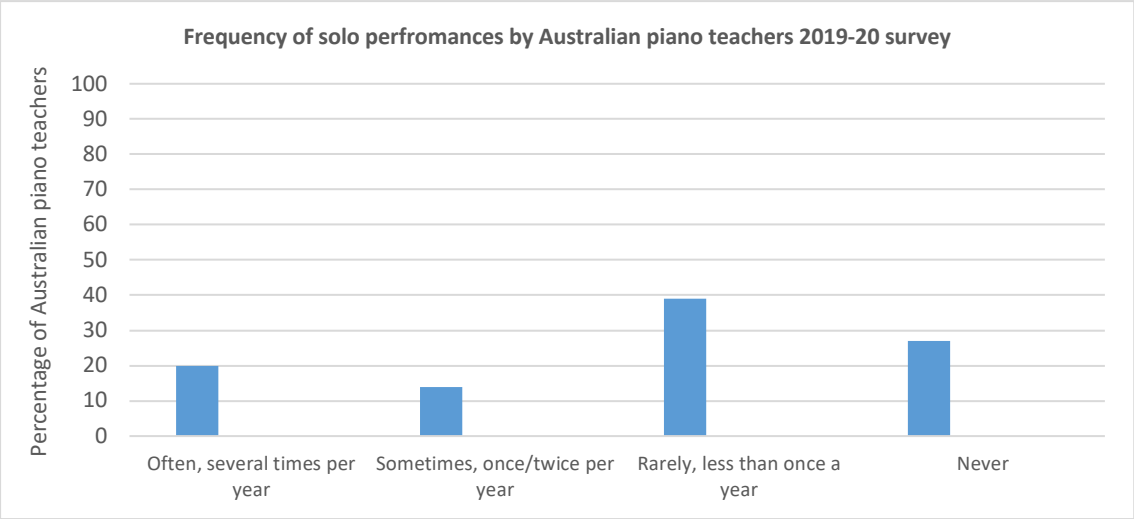

Figure 15: Frequency of professional performances by Australian piano teachers (2019-20).

Responses to question 27 revealed that Australian piano teachers were more involved as accompanists than soloists. Over half of the survey participants provided piano accompaniment for students. The largest percentage of responses, 46%, indicated that they provided piano accompaniments for students several times per year; 23% accompanied students once or twice a year; 16% rarely (less than once a year); and 16% never accompanied students. Figure 16 provides a summary of the Australian piano teachers' role as an accompanist.

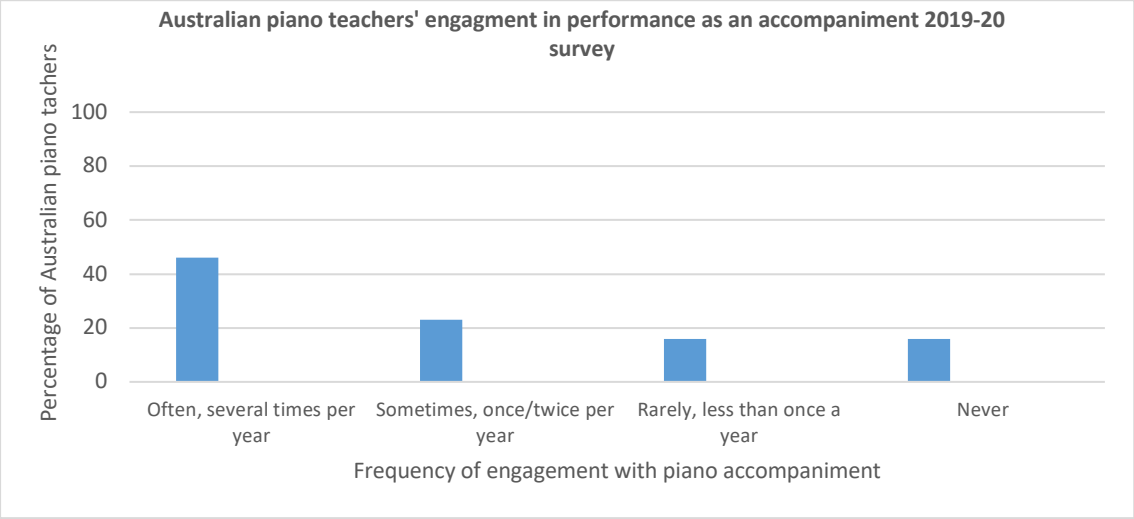

Figure 16: Engagement in piano accompaniment by Australian piano teachers (2019-20).

In question 28 teachers were asked to indicate their engagement in professional performances as part of an ensemble, or with a duet partner. A significant percentage of the responses replied in the negative: 31% never performing as part of an ensemble and 20% rarely performing in music ensembles. Approximately a third of the participants, 27%, performed as an ensemble member several times per year and 22% indicated they performed in ensembles once or twice a year. Figure 17 summarises the answers to Question 28.

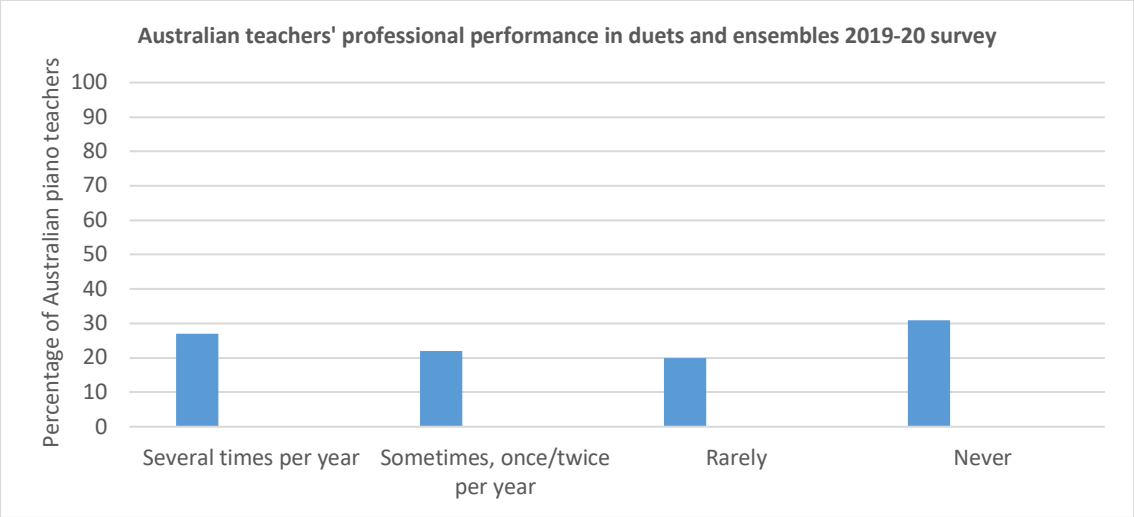

Figure 17: Australian teachers' performances in duets and ensembles (2019-20).

Results of the survey questions related to teacher demographics, education and teaching experience provide a snap-shot of the Australian piano studio and teacher in the twentieth-first century. The age range of the participants was fairly evenly spread across teachers aged 45 and under and those aged 46 and over. A similar trend was reflected in the responses regarding the number of years of teaching experience which was distributed across fewer to many years of teaching. All Australian states were represented. Although the Northern Territory was represented by 1% of teacher responses, the other states were well represented according to population size.

The size of Australian teaching studios ranged from less than 10 students to over 50 students, with the majority of participants teaching between 11 and 35 students. One outcome emerged regarding the numbers of younger and older beginners that comprised each studio. Overall, most respondents reported that their teaching studios comprised of at least one younger beginner student, but more than half the teaching studios also contained at least one older beginner. Further examination of the data revealed that 70% of teaching studios

surveyed included between one to five older beginners compared to 42% of the studios with one to five younger beginners. This result highlights that students aged from 12 to 17 comprise a significant proportion of the beginner piano cohort, at the same time demonstrating the need for research that investigates the teaching resources, teaching practice and learning processes in relation to the older beginner.

Questions regarding teacher training, education and qualifications illustrated that most participants had achieved some level of music performance training with the majority completing studies in Australia. In addition, most teachers who completed the survey had also undertaken some teaching or educational training through one or more of the following:

- The completion of a university degree;
- The achievement of diploma levels through recognised examination bodies;
- The study of established music courses such as Kodaly, Suzuki, or Yamaha; and
- The undertaking of professional development courses.

Teacher performance as a soloist, accompanist or duet/ensemble performer was important to many teachers. Over half the participants were involved in one or more performance activities each year. The portrait of the Australian studio piano teacher drawn from the survey describes a cohort of qualified, interested, motivated pedagogues who participate in performance and the improvement of their teaching practice through specialised training, additional education, workshop participation and ongoing professional development. The simple act of taking time to complete the survey and facilitate research regarding older beginner piano students further reflects their commitment to teaching.

Teaching materials and piano method books

Questions 6 and 8 asked participants to indicate their preferred materials and method books for teaching beginners. Question 6 explored the preferred method books for teaching young beginners, a definition of the young beginner as one who is 11 or under, and learning for a year or less was provided with the question. Participants were offered seven choices from which they could select one or more. The choices included:

- *Piano Adventures,* Faber and Faber;
- *Piano for the Young Beginner,* James Bastien;
- *Lesson Book 1A* and *1B,* Alfred's Basic Piano Library;

- *Alfred's Prep. Course,* Alfred's Basic Piano Library;
- *Suzuki Piano Course*;
- *John Thompson Piano Series*; and
- Other methods.

The following choices were made by teachers: *Piano Adventures* created by Faber and Faber was selected by 43%; Alfred's, *Lesson Book 1A and 1B* chosen by 32%; the *Alfred's Prep Course* recorded 22% of responses; with 19% and 18% indicating a preference for the *John Thompson Piano Series* and *Piano for the Young Beginner* by Bastien respectively. Only 6% cited the use of the Suzuki piano books and a slight majority (47%) indicated the use of other method books or materials. Figure 18 illustrates from the pre-determined list provided the teaching materials and method books preferred for young beginners.

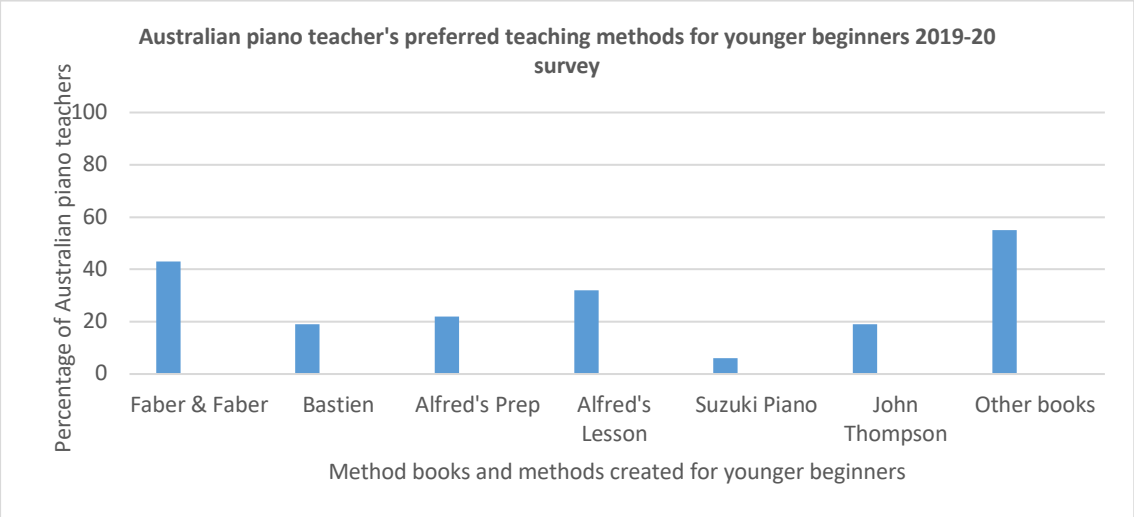

Figure 18: Materials and method books used by Australian piano teachers for younger beginners (2019-20).

Question 8 of the survey directly addressed sub-question one: what piano teaching materials and method books are most often used by Australian piano studio teachers when teaching older beginners (aged 12 to 17 years). A definition of the older beginner describing the student aged 12-17, who has been learning for a year or less, was provided as part of the question. The following five choices were provided and participants were able to select one or more:

- *Accelerated Piano Adventures: For the older beginner, lesson book 1*; Faber and Faber;

- *Alfred's basic piano library: Lesson book, Complete level 1, for the later beginner*
- *Older Beginner Piano Course, Level 1;* Bastien;
- A mix of the Faber and Faber, Bastien and Alfred's methods listed above; and
- Other materials.

Responses to Question 8 revealed a similar trend to those of Question 6. The *Accelerated Piano Adventures: For the older beginner, lesson book 1* was selected by 26% responses and 25% of teachers preferred the *Alfred's basic piano library: Lesson book complete level 1, for the later beginner*. The *Older Beginner Piano Course*, *Lesson Book 1* registered 14%. A preference for a mix of books was recorded for 19% of responses. The highest percentage of respondents, 64%, selected other materials which are explored in question nine and suggests that the use of resources and books other than or in combination with those listed in Question 8. Figure 19 shows the teaching materials and method books created for older beginners, preferred by Australian piano teachers.

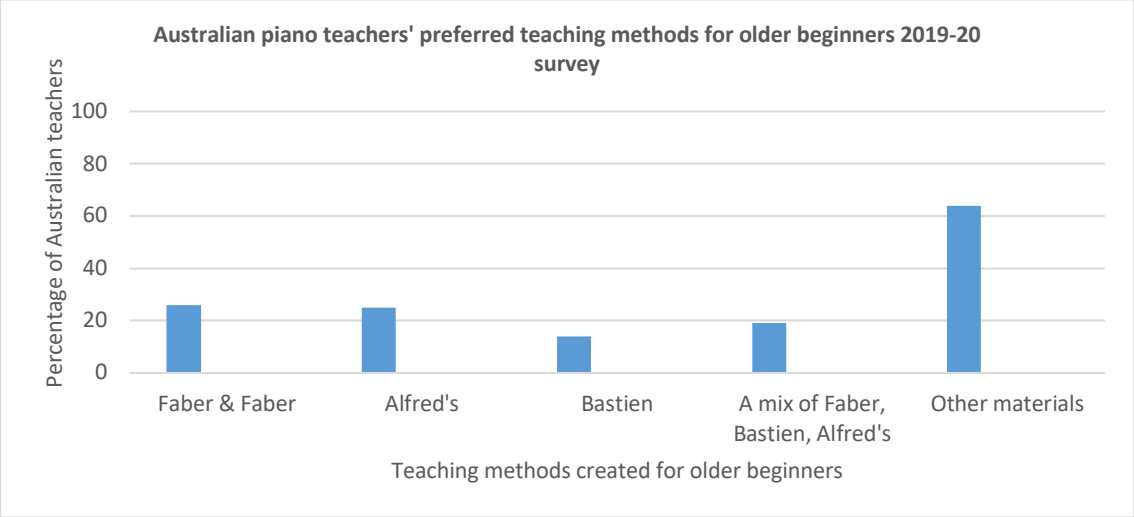

Figure 19: Materials and method books used by Australian piano teachers with older beginners (2019-20).

Although there was a consistent preference for the style and approach of the books created by Faber and Faber and Alfred's rather than those authored by Bastien, answers to Question 8 revealed that teachers also opt for using either a combination of method books or the use of other materials. Details regarding the teacher's choice of teaching materials and method books for older beginners were explored in the open-ended questions included in the survey. The responses to these questions are presented in the next section.

Part Two: Quantitative and qualitative results related to teaching materials

This section presents the results from questions 6, 8, 10, 12, 14 and the themes that emerged from the summative and conventional content analyses of participant answers to the open-ended survey questions. Questions 9, 11 to 18 and Question 29 of the survey invited participants to write a response describing various aspects of the teaching materials and method books available for older beginners. An assortment of general statements and specific descriptions ranging from single word answers to complete paragraphs were made by participants. The key themes that emerged from the dual content analyses of teacher responses to the short-answer questions inform sub-questions two and three.

- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do teachers use the teaching resources with older beginners?

Teaching materials and method books used with older beginners

Question 9 asked participants to itemise the teaching materials and method books they used with older beginners, that were not listed in the pre-determined options for Question 8. Almost every response indicated the use of other teaching materials separate to, or in conjunction with, the choices provided by the researcher. Teacher responses included a range of general and specific statements. Very generalised comments included: “a wide selection”; “my own devised materials” and “my own compositions” indicated by a small number of comments, approximately 2%. Other participants made statements related to the use of chords and lead sheets and the mention of pop, jazz and film genres featured in many responses.

A significant number of respondents listed specific books. The *Supersonics Piano Method, Level One* by Daniel McFarlane was mentioned by 17% of participants and the *Adult Piano Method, Book 1* created by Hal Leonard by 10% of teachers. A number of respondents (4%) cited *Piano Pronto* without specifying to which of the many *Piano Pronto* books their answer referred. Other participants mentioned Internet sourced materials without identifying the repertoire or material by name.

Teacher’s use of materials

The ways in which teachers used their chosen materials with older beginners was briefly explored across several questions (Questions 10 to 15 & 18). These questions were

included to generate a context for the CET evaluation of teacher preferred method books. In Question 10 teachers were asked if they followed their preferred method books in the order provided by the authors. Half the respondents (50%) indicated that they usually followed the method books in the sequence determined by the creators. Approximately a third (33%) stated that they sometimes followed the pre-set order and less than a quarter (14%) never followed the prescribed order of the books. A small number of teachers indicated that they did not use method books (3%). Figure 20 provides a summary of the results from Question 10.

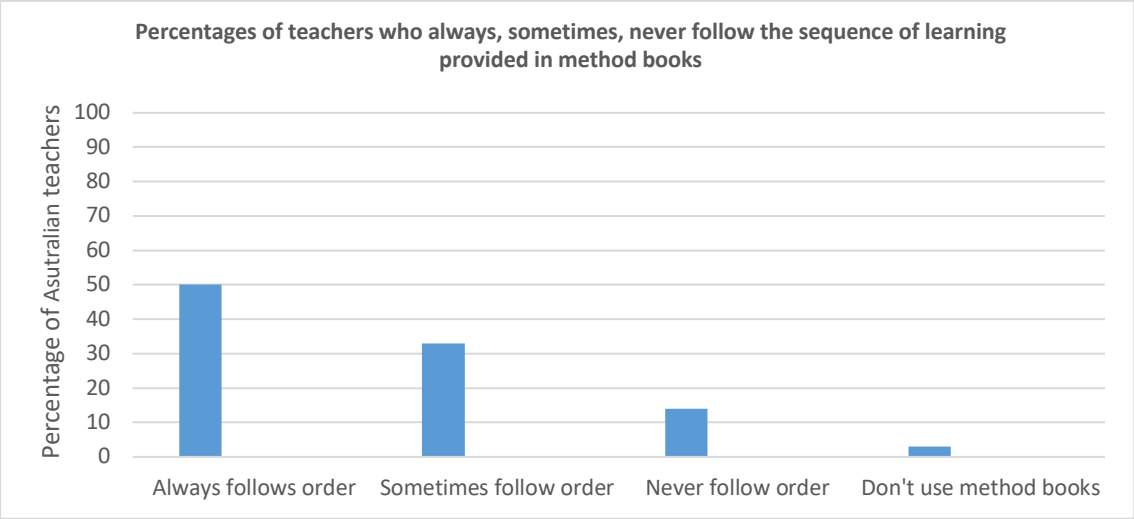

Figure 20: The degree to which Australian piano teachers follow the sequence of learning in method books (2019-20).

In Question 11 teachers were invited to explain why they altered the sequence of learning from that set out in their chosen teaching materials. Explanations included references to repertoire, student interest and engagement, student ability, progress and achievement. Almost half the respondents stated that repertoire choice was a determining factor for changing the order of learning set out in method books. Many responses emphasised the importance of using repertoire that the student finds "relevant" and "engaging". Other responses mentioned the inclusion of improvisation and chords as teaching aids to stimulate student motivation.

Some participants made specific mention of how well the pace and sequence of the chosen methods matched the student's ability and needs. In contrast, other responses referred to the addition of extra material to reinforce skills or accelerate the student; the omission of tasks when the student is progressing rapidly; "coordinating student progress with suitable materials" and accommodating the "student's learning style." Teacher's rationale for

changing the sequence provided in method books included: meeting "student's needs"; matching the pace of the method book with the "individual student's abilities"; adjusting materials to the fit the student's practice routine and frequency of practice; "coordinating student progress with suitable materials"; and fitting materials with the "student's prior learning".

Question 12 asked teachers if they used more than one method book with older beginners. This question aimed to glean additional information regarding the choice of method books and teaching materials for older beginners and allow the researcher to compare participant answers to previous questions. Almost half the teachers, 47%, indicated that they sometimes used more than one book with older beginner students. The remainder was split between 26% of teachers who always used more than one book and 24% who never used more than one book with older beginners. A very small number of participants, 3%, never used method books or created original compositions for their students. Figure 21 provides a graph of the responses to Question 12.

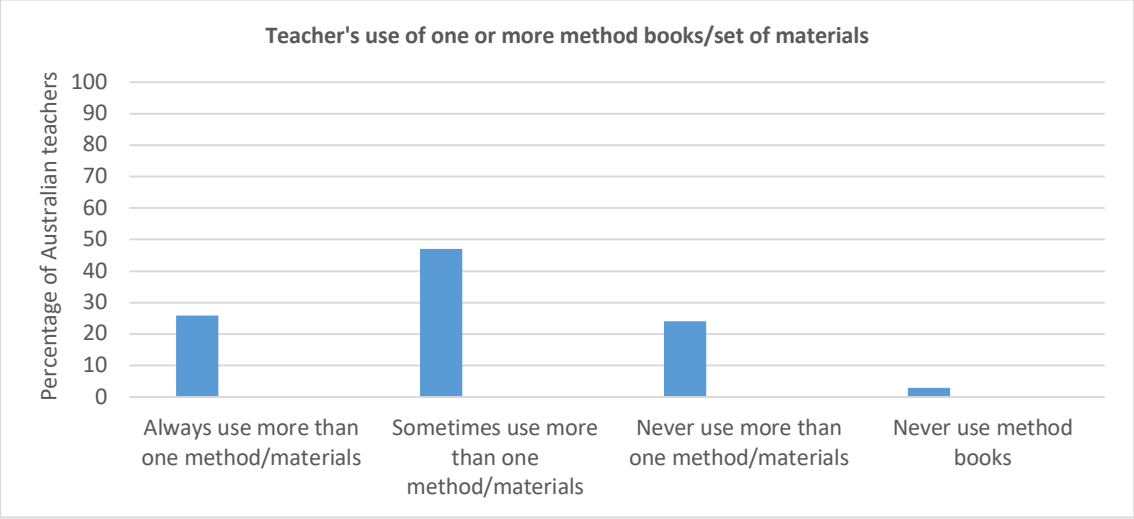

Figure 21: Australian teacher's use of more than one method book with older beginners (2019-20).

Question 13 explored the participant's reasons for using a number of method books with older beginners. Repertoire, student motivation and pedagogy dominated the explanations for the use of multiple books with older beginners. The majority of comments related to repertoire were connected to student motivation and the importance of using "relevant", "appealing" repertoire. The need for the more frequent inclusion of pop and jazz style repertoire was noted. Other explanations, made by teachers, for the use of multiple books included vague statements such as "variety and genre," "technical development" and to

"challenge students." Comments related to pedagogy were often general in nature but typically student-centric, for example, "to meet the needs of the student;" "to accommodate the student's interests and goals;" and "to reinforce concepts."

In Question 14 teachers were asked whether alternative teaching materials were chosen to accommodate different students. Question 14 was included in order to clarify teacher responses made to previous questions. A significant majority (72%) of participants indicated that they did not use the same method book or materials with every student. A quarter (25%) of the responses indicated that they sometimes used alternative materials or method books for different students and 3% indicated that they used the same method books for all students. Figure 22 summaries the responses to Question 14.

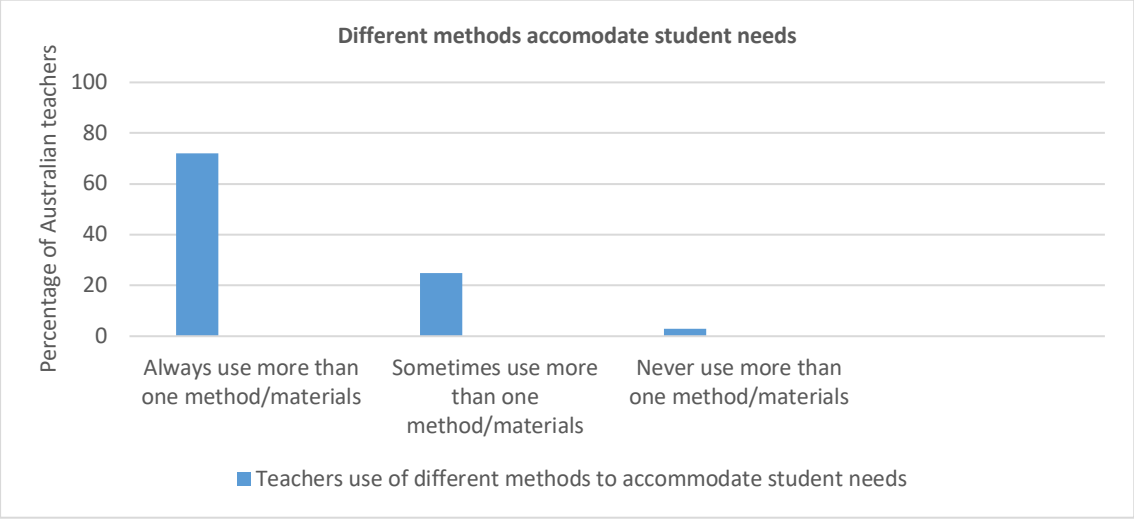

Figure 22: Teacher's use of different method books to suit individual students (2019-20).

Question 15 asked teachers to elucidate the reasons for using a range of different teaching materials and method books. Effective pedagogy dominated teacher rationale for the choice of teaching materials. Almost every response cited the importance of "customising" or "tailoring" the teaching programme to suit each student's individual needs. Smaller numbers of participants emphasised the importance of age and stage appropriate materials, the student's learning style and the facilitation of student progress.

Repertoire choice rated as a significant consideration when choosing a method book or set of teaching materials for older beginners. The comments "variety" and "variety of repertoire" were mentioned without explanation or elaboration by many teachers. Respondents also indicated that the selection of material, particularly repertoire, was often based on "student taste," "student preferences" and the "interests of the student." Other

statements related to repertoire were coupled with qualifiers that linked repertoire choice to student goals, motivation, engagement, encouragement, practice and successful outcomes.

Question 18 further explored the ways in which the teaching materials were used by survey participants when teaching of older beginner students. The question also provided an opportunity for respondents to list any additional materials that would be useful when teaching older beginners. Question 18 received a mix response from participants. Teachers responded to the question in one of four ways:

- a single word answer;
- a personal description of the teaching activities and materials used with older students;
- a single statement without qualifying or explaining the response; and
- suggestions of what would be useful for teaching older beginners.

Repertoire emerged as a significant consideration for many teachers. Some emphasised the importance of relevant and interesting pieces. Some indicated that the repertoire should be contemporary and modern. Many referred to a need for a larger quantity of beginner pop and jazz style repertoire. A search for relatable classical music was noted by a small group and the lack of songs with which students were familiar was mentioned fairly frequently. Other responses centred around allowing the student to choose and play pieces they like or want to learn. A small number stressed the need for more beginner level duets.

The content of the method books was often mentioned. Approximately a third of responses connected the content of method books with aspects of pedagogy. Comments related to method books describing the marginal inclusion of aural based activities, playing by ear, technical exercises, chord playing, lead sheets, improvisation, composition, theory and music reading were made many times. Participants identified that student progress is often influenced by the degree to which aural skills, chord playing and improvisation are incorporated in method books. Responses stressed that the content of method books and teaching materials created for older beginners, must inspire, interest and enable student progress.

Remarks were also made in relation to the ways in which the teaching materials and method books either consolidated learned skills, remediated, challenged or extended students. Other respondents mentioned specific books and teaching aids, including the creation of their

own materials and compositions for students. A small group indicated that the resources available were adequate.

Strengths of preferred teaching materials and method books: teacher's perspective

Teachers were invited to describe the strengths of the materials they currently use with older beginners (Question 16). This question aimed to clarify teacher opinions and identify the Australian teacher's awareness of constructivism via any comments that referred to aspects of the CET as strengths. Questions 16 and 17 facilitated a deeper understanding of the data. The range of responses included one-word answers, general comments, and specific observations which provided data related to sub-question two. The positive features of the teaching materials identified by respondents related to four core areas: repertoire, pedagogy, teaching content and visual presentation. Repertoire and pedagogy were cited by over half the participants, the content of the method books mentioned by almost a third of the teachers and approximately a quarter of teachers commented favourably on visual presentation.

Teacher remarks relating to repertoire included a number of general comments such as: "good music;" "fun pieces;" "variety;" and "interest." Several participants mentioned the need for repertoire to be relevant to the student. Other remarks related to repertoire choice referred to the "individual needs" of each student. Some statements mentioned the inclusion of jazz, pop and contemporary music as a positive in their preferred materials, and a very small number commented on the inclusion of classical repertoire.

A significant number of participants made reference to aspects of pedagogy inherent in their chosen teaching materials. Respondents described their preferred teaching materials as "logical," "suitable" and "well-structured." Some considered the pace at which their preferred method books introduced new skills and concepts suitable for the beginner. Several participants commented favourably on the sequencing of the concepts and foundational skills of their chosen method books. A smaller proportion observed that the language used to explain musical concepts and skills was suitable and easy to read.

Positive observations regarding the specific content of each participant's preferred teaching materials centred around the inclusion of piano technique, the use of chords and repertoire choice. Some teachers stated that the approach to music reading was suitable. Others preferred the way theory was integrated in the method book. The inclusion of backing tracks either as CDs, audio files or video clips (available online) were considered a strength. However, a small but significant number of responses recorded that they either did not use

method books, wrote their own materials or found all method books too narrow, irrelevant and boring.

Weaknesses of preferred teaching materials and method books: teacher's perspective

Question 17 invited teachers to explain any perceived weaknesses in the materials and method books available for teaching older beginners. This was included as a means of discovering whether teachers cited that aspects of the CET were missing, to identify teacher perspectives and enrich the data. A small proportion of respondents stated that nothing was missing. A very small number of teachers were unsure, did not teach older beginners, registered not applicable, wrote their own materials or were extremely negative about all published method books. The majority of participants made reference to three key issues: an absence of particular repertoire genres; a lack of specific content areas; and the need for effective pedagogy.

Repertoire was cited as a weakness in the method books and teaching materials currently available for older beginners particularly in relation to the restricted repertoire choices provided in method books, the mismatch of piano repertoire to the student's interests and musical preferences, and the questionable relevance of nursery rhymes to the older beginner. Other comments related to repertoire included statements citing the dearth of songs that the students liked, listened to and wanted to play. A concern about the lack of modern and contemporary pieces accessible to the older beginner, and a desire for more songs that interest and engage older beginners was expressed. Several participants specifically stated there was not enough repertoire, relevant to the teen age group and suited to the beginner skill level. A few participants mentioned an absence of Australian content and the lack of accessible pop, jazz, film genres was recapitulated by many participants.

Almost half the teachers indicated that relatable, relevant music such as pop, jazz music, lead sheets, chords and creative music making is not adequately represented in the currently published method books. Apart from the specific mention of a deficit representation of pop and jazz genres, other comments related to repertoire were extremely vague. Generalised comments related to the repertoire provided in the teaching resources for older beginners included a need for: "more decent pieces;" "real songs;" "nice music;" "more modern pieces;" "more contemporary songs:" "more repertoire that is interesting;" "additional quantities of current music;" and "more impressive music."

A significant number of the responses to Question 17 (what do you feel is missing from the teaching materials available for teaching older beginners aged 12 to 17?) also revealed a range of teacher perceived inadequacies in the pedagogy of the currently available teaching materials. A small number of classically trained participants mentioned a need for access to professional development that demonstrated the teaching of pop music, improvisation and playing by ear. Other comments described the material created for older beginners as: "too tied to notation;" "too American;" and "deficient in Australian content." Responses also identified, without explanation, that the transitions from skill to skill within and between method books is often problematic. In this context, the learning pace of method books was described by some as too fast and by others as too slow.

In reference to the content of method books created for older beginner students, teacher responses highlighted the following issues:

- the scarcity of easily available lead sheets;
- the lack of creative exercises;
- the need to include a greater number of improvisation activities;
- the inadequate inclusion of technical work;
- the minimal representation of aural exercises;
- the need for additional sight-reading materials; and
- the need for more activities that promoted theoretical understanding.

Final comments by Australian piano teachers

The final survey question invited teachers to share personal ideas and opinions related to teaching older beginner piano students. Some responses included references to the challenges of teaching the teenaged beginner piano student. Others discussed the disconnect between the older beginner's cognitive ability and the developing physical skills which often lagged behind their understanding. A small number of participants commented on the difficulty of where to start older beginners and a significant proportion of teachers observed that older beginners learn differently to younger beginners. Time issues with older beginners who may be working, engaged in sport and other extra-curricular activities was highlighted. Several teachers indicated that teens were harder to motivate. A small group stated a preference for teaching young beginners whereas others "love" and "enjoy" teaching older beginners. Participants mentioned the need for tertiary institutions to provide additional, accessible education and training, specifically related to teaching older beginners. A few

responses mentioned students with learning disabilities and the lack of teacher education in this area.

Other remarks made by participants affirmed responses made in previous questions. Teacher comments recapitulated the following points.

- Teaching content should include a more even mix of technique, music reading, aural skills, improvisation, chords and composition than currently exists in the available teaching materials and method books for older beginners.
- Repertoire choice is of vital significance in terms of student engagement, motivation and continued learning.
- There is an ongoing need for additional relevant and appealing pieces, accessible to the older beginner.
- The provision of suitable pedagogy, in method books and teaching is highly valued.
- The pedagogy of method books impacts student learning, motivation and progress.
- The teacher's choice of method books and teaching materials is guided by the content, pace and sequence provided.
- Teachers described their role in terms of meeting the student's needs and enabling the student to achieve positive outcomes and personal goals.

Summary

A total of 237 Australian and two New Zealand studio piano teachers participated in a survey exploring studio piano teaching in Australia. The survey conducted in phase one provided a mix of quantitative and qualitative data. Analysis of the qualitative data generated by participant responses revealed persistent requests for a greater quantity and quality of jazz, pop and film repertoire. Teachers also petitioned for the inclusion of a greater number of aural, improvisation, chord playing and composition tasks. The aural aspects of musical learning were frequently described as an integral part of musical learning. Concerns regarding the lack of aural in current methods was voiced repeatedly in teacher responses. Participants also indicated a need for the inclusion of a greater number and variety of creative music making opportunities.

The quantitative aspects of the survey identified five method books most often used by teachers with older beginning students. The *Accelerated Piano Adventures, For the older beginner, lesson book 1,* by Faber and Faber; the *Alfred's, Lesson book, Complete level 1, for the later beginner*; and the *Older Beginner Piano Course, Level 1* by James Bastien were the most commonly preferred options from the pre-determined list provided in Question 8. A significant number of participants also mentioned the use of the *Adult Piano Method, Book 1* by Hal Leonard and the *Supersonics Piano Method, Level One*, by Daniel McFarlane. Chapter Five will present the results of phase two, the CET analysis of five method books commonly used with older beginners.

Chapter Five: Results of Phase Two

This chapter presents the results of phase two, part B, application of the CET to selected method books preferred by Australian piano teachers, for older beginners, as identified in phase one. A brief description of the background and content of each method book will precede a presentation of the CET analysis. A summary of the CET examination of each method book will answer the over-arching question: to what degree do the teaching materials, chosen by Australian piano teachers, for older beginning piano students, facilitate constructivist learning?

Selection of Method Books

Over ten different method books, various internet sourced materials and a range of teacher created resources were mentioned by survey participants. Although the majority of teachers reported that they used wide a range and variety of materials, including the combination of several sets of teaching resources, five method books emerged from the survey data as the teaching materials most consistently chosen for older beginners:

- *Accelerated Piano Adventures, For Older Beginners*, *Lesson book 1,* by Faber and Faber;
- *Alfred's Lesson Book, Complete level 1, for the later beginner*;
- *The Older Beginner Piano Course*, *Level 1,* by James Bastien;
- *The Adult Piano Method, Book 1,* by Hal Leonard; and
- *Supersonics Piano Method, Level One* by Daniel McFarlane.

Accelerated Piano Adventures, For the older beginner, lesson book 1 by Faber and Faber

Background and context

The *Piano Adventures* series is an American publication. First published in 1993, *Piano Adventures,* developed by Nancy and Randall Faber, was initially created for young beginners, aged seven to eleven (Piano Adventures Website, 2019a). The original method book was the result of extensive research into piano pedagogy conducted by Randall Faber (Monroe, 2018). According to Monroe (2018), the *Piano Adventures* method was developed in response to the increasing rate of student attrition that occurred in America, between 1970 and 1980. Faber identified that the most common reasons for beginner students opting out of piano lessons included poor reading skills and the outdated, unfamiliar repertoire choices provided in the beginner books of that era (Monroe, 2018).

Prior to the publication of the first *Piano Adventures* lesson book, the Faber's piloted and tested the material with their own piano students (Monroe, 2018; Piano Adventures Website, 2019a). Today, the *Piano Adventures* series includes several books across a range of levels. Students are able to purchase a lesson book, a technique and artistry book, theory book, performance book and other books related to sight reading, duet playing, popular songs and show tunes for each level of study.

The *Accelerated Piano Adventures* series was created for students aged 11 and above in 1998 (Piano Adventures Website, 2019b). Faber and Faber recognised that teens differ significantly from the adult, the child and pre-school aged learner. The *Accelerated Piano Adventures, For Older Beginners*, *Lesson book 1,* is modelled on the original *Piano Adventures* method but the pace, presentation and teaching materials are modified in order to accommodate the older beginner's unique learning needs (Monroe, 2018; Piano Adventures Website, 2019b).

The *Accelerated Piano Adventures, For the older beginner, lesson book 1,* uses a composite approach to note reading which includes note recognition, intervallic reading and multi-key understanding. Students begin by learning a limited number of notes using middle C position, playing the notes with different fingers. According to the website, this approach is designed to:

- prevent the student from equating a particular note to a particular finger;
- teach the exact relationship between the note and the keyboard;
- avoid the overuse of the thumbs on middle C; and
- reduce student dependence on pre-set hand positions.

Concurrent with the above reading approach the student is shown an intervallic method of music reading that uses: steps (reading by seconds), skips (reading by thirds), leaps (fourths and fifths) and jumps (sixths and octaves). The student is also introduced to multi-key reading using fixed hand positions in the keys of C, G, F major and later, D and A minor.

The repertoire selected by Faber and Faber includes a mix of traditional, folk, popular classics, jazz, and pedagogical works. Kim (2005) defines a pedagogical piece as an original composition designed to assist student learning. The *Accelerated Piano Adventures,* series may be used alone or in conjunction with the technique and artistry, theory and performance

books specifically created for the older beginner. Additional repertoire to enable functional playing skills is also available for the older beginner in a range of publications including *Jazz and Blues*, *Show Tunes*, *Rock 'n' roll*, *Ragtime*, *Marches* and *Holiday Selection*.

The *Accelerated Piano Adventures, For the older beginner, lesson book 1* provides a structured, sequenced musical course, presented in 12 units. For each unit several short pieces are incorporated as part of the learning experience. Unit one covers posture, finger numbers, the musical alphabet. The semibreve, minim and crotchet are presented using the American terms: whole note, half-note and quarter note. An exploration of seconds and thirds is introduced using pre-staff notation. Defined as pre-reading, pre-staff notation involves the introduction of reading without the stave. In unit two, the grand staff, treble and bass clef, time signatures 4/4 and 3/4, reading seconds on the staff, repeat sign, legato, and playing hands together are introduced. Unit three focuses on middle C position in left hand, reading thirds (skips) and the dotted half-note (dotted minim).

In unit four, reading skips in the bass and treble clef, the quarter rest (crotchet rest) and tie are covered. Unit five, includes the introduction of the eight note (quaver), dynamics, phrase and anacrusis. Unit six, moves to reading and playing in C position in the left hand, the introduction of a five-note scale, described by Faber and Faber as the penta-scale (comprising the first five notes of the major scale), reading steps and staccato playing. The introduction of treble clef A concludes the unit. In unit seven, the notes FACE on the treble clef are shown and the half and whole rests (minim and semibreve rests) are the focus of study. Unit eight uses skills developed earlier in the method: C position, staccato, legato and reading skips and steps as a basis for an introduction of the 8va sign and imitation.

In unit nine, first and second time endings, musical form and intervals of the fourth and fifth are introduced. Unit 10, introduces the sharp, flat, natural, dynamics of piano *(p),* mezzo piano *(mp),* mezzo forte *(mf),* forte *(f),* crescendo and diminuendo. Unit 11 covers: tempo changes, ritardando *(rit);* consolidates the C penta-scale; and introduces the tonic and dominant chords of C major. Unit 12, further develops an understanding of tempo, introduces the tonic and dominant chords of G major, the G pentatonic-scale and G position in three octaves across the piano. The method book concludes with a two-page dictionary of all the musical terms used in the method book.

Piano Adventures for the older beginner, lesson book 1 is imbued with the same philosophical foundation that shaped the authors' original method book. Thus, the method book is characterised by:

- an understanding that repertoire needs to be relevant and engaging;
- the development of expressive piano playing;
- the encouragement of student self-reflection;
- the improvement of the student's self-esteem; and
- the enhancement of student enjoyment (Monroe, 2018).

In future discussions the *Accelerated Piano Adventures: For the older beginner, lesson book 1,* will be described by the authors as Faber and Faber.

CET application: Faber and Faber

Category one: the approach to learning, the learner's personal cognitive lens

Descriptors: VARK learning styles model

Visual learning is used in 100% of the Faber and Faber method. Every page of the method includes one or more of the following to enhance student learning and compliment the text-based information:

- diagrams (Faber & Faber[1], p. 10);
- symbols (Faber & Faber, p. 16);
- musical notation or music symbols (used on every page);
- drawings and illustrations (Faber & Faber, p. 34); and
- songs with lyrics (Faber & Faber, p. 30).

The use of reading and writing as a vehicle for learning is also extensively used throughout the method. Text-based information and a range of written tasks are included to provide: instructions (Faber & Faber, p. 7); information (Faber & Faber, p. 14); and explanations (Faber & Faber, p. 34) in 99% of the method book. Kinaesthetic learning, where the student is required to physically respond by playing, clapping, singing or tapping is used in 97% of the method. Faber and Faber include a wide range of repertoire, a number of technical exercises, various discovery and creative tasks to facilitate student learning.

[1] This method book appears in the reference list under Faber, R., & Faber, N. (1998). *Accelerated piano adventures: For the older beginner, lesson book 1.* Ann Arbor, MI: Hal Leonard.

Aural learning is used for 18% of the total method, mostly via a selection of creative activities or in the form of text-based advice for the student to: listen (Faber & Faber, p. 61); observe (Faber & Faber, p. 29); and notice (Faber & Faber, p. 49). Figure 23 summarises the facilitation of constructivism in terms of the student's personal cognitive lens, represented by the VARK learning styles model.

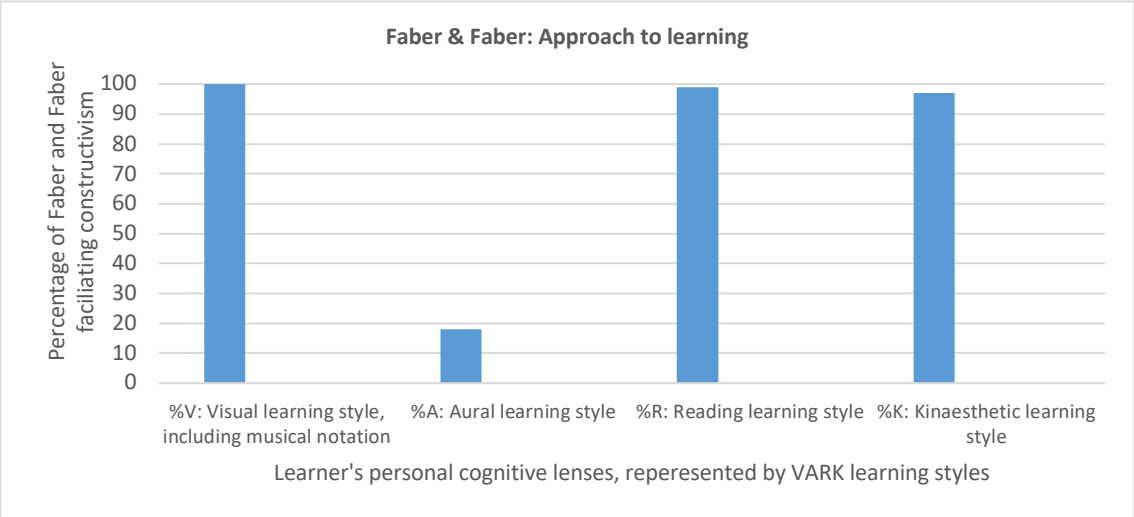

Figure 23: The approach to learning, the learner's personal cognitive lens (Faber & Faber).

Category two: the structure of learning

Relevance

This descriptor evaluated the degree to which new knowledge and skills clearly links to the student's age, stage and daily experiences. For the Australian student (defined previously) 63% of the Faber and Faber method book facilitated a connection with the older beginner's age, stage and daily experiences. New knowledge, concepts and skills are relevant to the older beginner through the inclusion of a 'get to know you page' and the varied repertoire selection which includes:

- song titles describing every-day life, for example, *Scenic Train Ride* (Faber & Faber, p. 21);
- traditional folk songs, for example, *Row Row Row Your Boat* (Faber & Faber, p. 79);
- songs based on rock, pop and jazz genres, for example, *Hard Drivin' Blues* (Faber & Faber, p. 89); and
- popular and well-known classical excerpts, for example, *Morning* by Grieg (Faber & Faber, p. 38-39).

The variety of genres, styles and repertoire provides opportunities for students from different backgrounds to connect to the music. The use of simple language and the pictures associated with each song title provides a way of connecting new knowledge with the student's daily experiences, age and stage. The remaining 37% of the book is rated N. The use of folk songs from America, *O Susanna* (Faber & Faber, pp. 40-41); ethnically based songs from Hawaii, *Aloha*, (Faber & Faber, p. 54); and pieces inspired by Latin America music are examples of repertoire that may provide tenuous connections with the Australian student. Thus, the degree to which an Australian student may be familiar with these aspects of American culture is not known. American cultural references, colloquialisms, spelling and musical terminology are not necessarily or overtly relevant to the Australian student. Figure 24 provides a summary of descriptor one.

Prior learning

The Faber and Faber method uses the student's prior learning as a basis for new learning in approximately half of the method with 58% of the materials rating a Y. This includes:

- the use of generalised prior knowledge including the English language, reading skills, numbers, right, left, up, down, higher, lower; and
- reference to, and use of knowledge and skills learnt in earlier sections of the book as a basis to build new skills, technique and knowledge (Faber & Faber, pp. 25 & 36).

In the remainder of the method book new concepts and skills are introduced without connection to the student's prior learning, thus, 42% of the total book does not facilitate this aspect of constructivism. Figure 24 provides a summary of descriptor two.

Student-centred learning

In this descriptor the ways in which the materials are presented is examined to determine the manner in which student-centred learning is facilitated. The inclusion of discovery and creative tasks in 18% of the method provides opportunities for student-centred learning. In these tasks the student may choose the parameters of the learning in terms of time, tempo, notes, length and complexity. Examples include; a discovery task exploring the interval of a fifth (Faber & Faber, p. 21) and creative tasks involving composition (Faber & Faber, pp. 23 & 46). Directive, instructional material (Faber & Faber, p. 20) is used in the larger portion of the book rating N for 82% of the method. In these sections of the method

book, the sequence and pace of learning is pre-determined by the author, resulting in a teacher-led and teacher-directed approach. Figure 24 provides a graph showing the facilitation of constructivism in terms of the structure of learning.

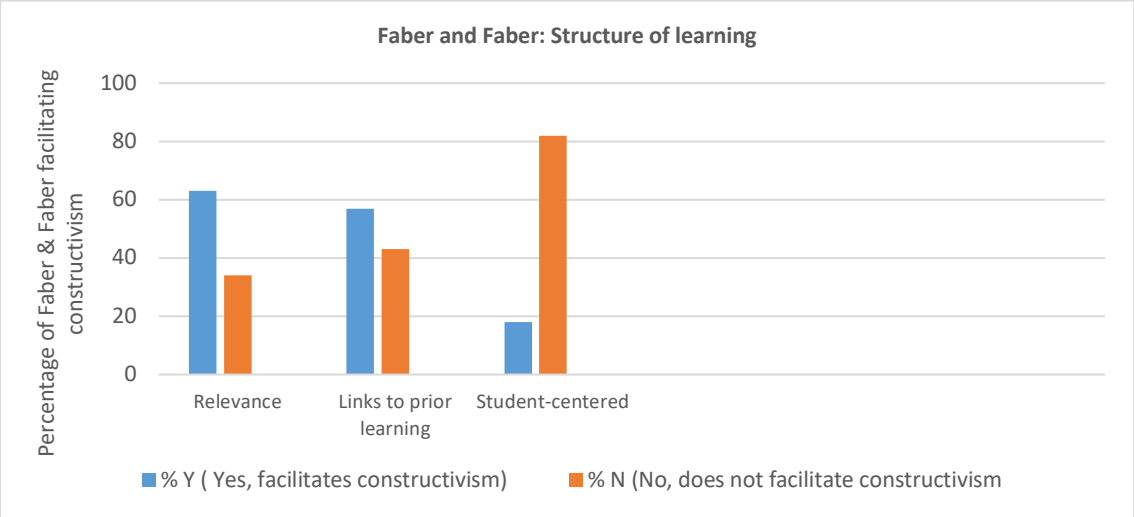

Figure 24: The structure of learning (Faber & Faber).

Category three: cognitive learning

Questioning and analysis

The use of tasks that require the student to actively engage are used frequently throughout the Faber and Faber method. Closed questions requiring a single correct answer, the occasional open-ended question and analysis tasks are included throughout 78% of the book. Examples include:

- questions to establish the starting notes and hand positions of repertoire (Faber & Faber, p. 24);
- analytical tasks to find the thirds (Faber & Faber, p. 27); and
- question tasks to identify tonic and dominant notes (Faber & Faber, p. 77).

The remaining 22% of the book characterised by directions and text based information does not facilitate this descriptor of constructivism. Figure 25 provides a summary of descriptor one.

Application and transferal of skills and knowledge

Tasks that ask the student to apply and transfer knowledge are included in 35% of the Faber and Faber method, rating a Y, for over a third of the materials. A range of tasks involving the application and transferal of knowledge are provided, including:

- playing a section of the right hand with the left hand (Faber & Faber, p. 39);
- transposing the piece, *Pep Rally* (Faber & Faber, p. 69); and
- playing *Row Row Row Your Boat* as a round between the right and left hand (Faber & Faber, p. 79).

The larger proportion of the Faber and Faber (65%) does not facilitate this aspect of constructivism as it is dedicated to rote learning, the repetitive practise of new skills and repertoire. Figure 25 provides a summary of descriptor two.

Problem solving

Tasks that facilitate the student's ability to identify and solve problems are included in 18% of the Faber and Faber method. Suggestions and questions are provided in ways that assist the student to identify potential problems. Examples include reminders for the student to:

- check the accents (Faber & Faber, p. 29);
- count aloud to keep in time (Faber & Faber, p. 29);
- observe the fingering (Faber & Faber, p. 19); and
- notice the hand position changes (Faber & Faber, p. 66).

The majority of the method (82%) does not facilitate this aspect of constructivism and no text-based information to assist the student to identify potential problems is provided in this section of the method. Figure 25 provides a summary of category three, cognitive learning.

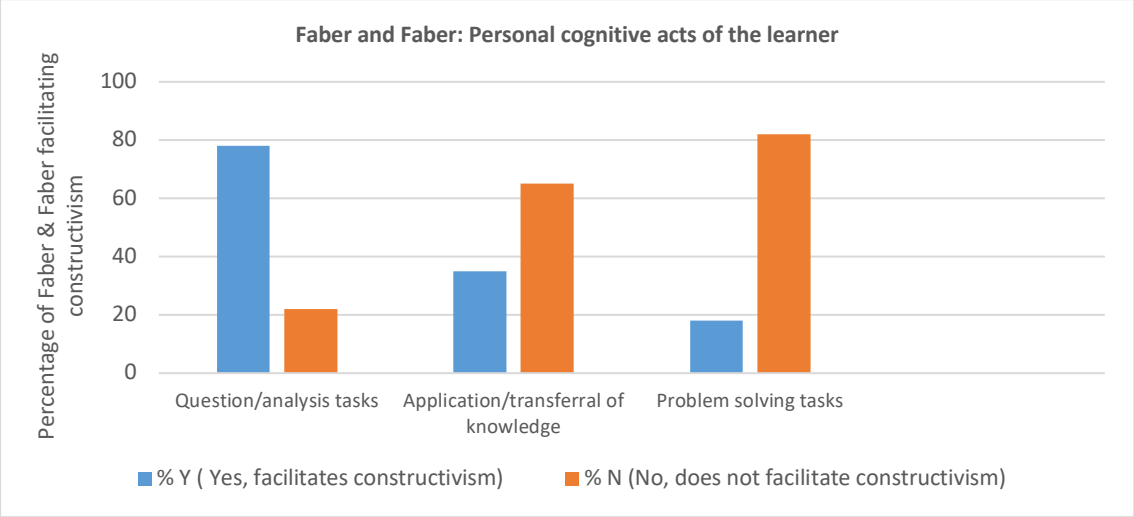

Figure 25: The personal cognitive acts of the learner (Faber & Faber).

Category four: social learning experiences

Discussion

A range of creative and discovery activities in 22% of Faber and Faber method provide opportunities for student/teacher discussion. Examples of activities that promote discussion include: an improvisation task to create a *Dreamscape* (Faber & Faber, p. 50); and a compositional task for the student to create a technical exercise (Faber & Faber, p. 88).

The majority of the method (78%) does not include tasks that facilitate discussion as a part of the social learning inherent to constructivism. In the larger portion of the method, the student is required to complete tasks that attract teacher feedback and critique, primarily through the performance of pieces provided in the lesson book. Figure 26 provides a summary of descriptor one.

Collaborative learning

Constructivism, through the employment of collaborative tasks is facilitated in 59% of the method. This percentage includes student-teacher duets and the provision of additional discovery and creative tasks throughout the method book. The remaining 41% of the method requires solo practice or individualised learning and the materials do not facilitate the collaborative aspects of constructivism, for example:

- *Exploring Seconds* (Faber & Faber, p. 12);
- Reading three penta-scales (Faber & Faber, p. 86); and
- *Toccatina* (Faber & Faber, pp. 90-91).

Figure 26 provides a summary of descriptor two.

Scaffolding

Scaffolding to support the beginner student is included in 78% of the Faber and Faber method. The authors provide hints in the form of diagrams, arrows, circles, additional finger numbers and text-based reminders to scaffold the learning. Examples include:

- diagrams of the keyboard and music staff (Faber & Faber, p. 17);
- arrows to attract learner's attention to important details in the score (Faber & Faber, p. 90);
- circled notes to highlight a change of position, finger change or cross over of the thumb (Faber & Faber, p. 69);
- text-based reminders relating to a change of finger (Faber & Faber, p. 92-93);
- additional finger numbers (Faber & Faber, p. 85); and
- the inclusion of a glossary, for quick reference.

The remaining 22% of the method book does not scaffold the learning and the student is required to learn using her or his own knowledge and skills. Figure 26 provides a summary of the facilitation of constructivism in terms of social learning.

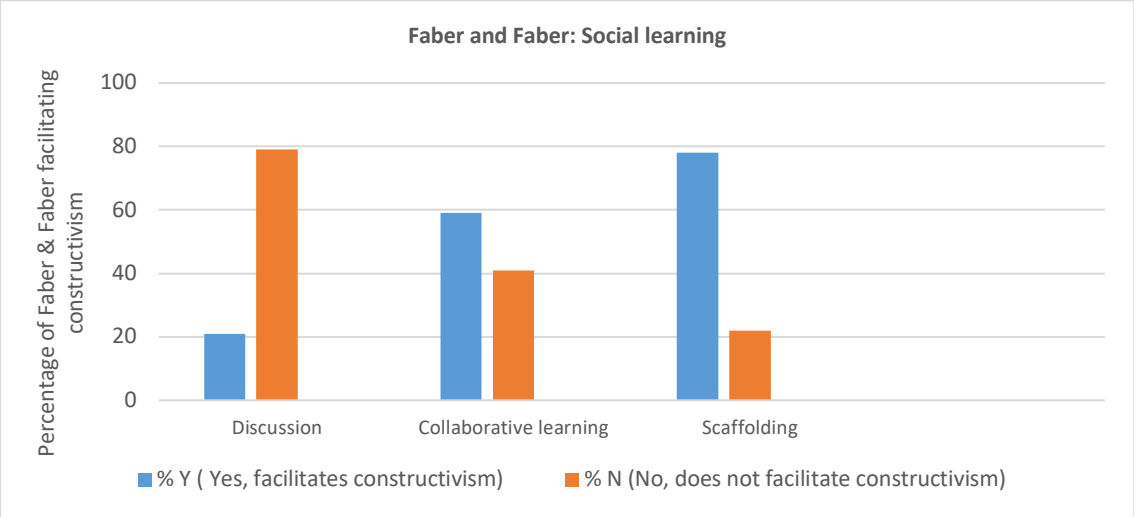

Figure 26: Social learning (Faber & Faber).

Category five: the focus of learning

Self-reflection and self-evaluation

The focus of the learning in the Faber and Faber method is generally on the achievement of skills and performance of repertoire. The authors include in 25% of the tasks,

small opportunities that prompt the student to self-evaluate and self-reflect. For example, students are asked to:

- check (Faber & Faber, pp. 37 & 46);
- observe (Faber & Faber, p. 29);
- listen (Faber & Faber, p. 90);
- notice (Faber & Faber, p. 80); and
- watch (Faber & Faber, p. 25).

Suggestions that the student notices, checks, observes, watches are sporadic and the majority of the Faber and Faber method (75%) does not facilitate this aspect of constructivism. Figure 27 provides a summary of descriptor one.

Student ownership of the learning

In terms of student ownership of learning, Faber and Faber provides several creative and discovery tasks. These activities allow the student some ownership of the learning in 10%, of the method. Tasks facilitating student ownership include:

- Make up your own rhythm (Faber & Faber, p. 33); and
- Create your own melody for measures 5-8 (Faber & Faber, p. 62).

The majority (90%) of the method including the glossary, does not facilitate student ownership as the student is offered no choice of repertoire, content or sequence of learning. Figure 27 provides a summary of descriptor two.

Goal setting

The setting and monitoring of goals by the student is facilitated in 1% of the Faber and Faber method, via a 'get to know you page' provided at the start of the method (Faber & Faber, p. 3). The remaining 99% of the method does not facilitate this aspect of constructivism. Students are not offered opportunities to set personal goals in relation to skill level, skill type, performance or repertoire choice. Figure 27 provides a summary of the facilitation of constructivism in terms of the focus of learning.

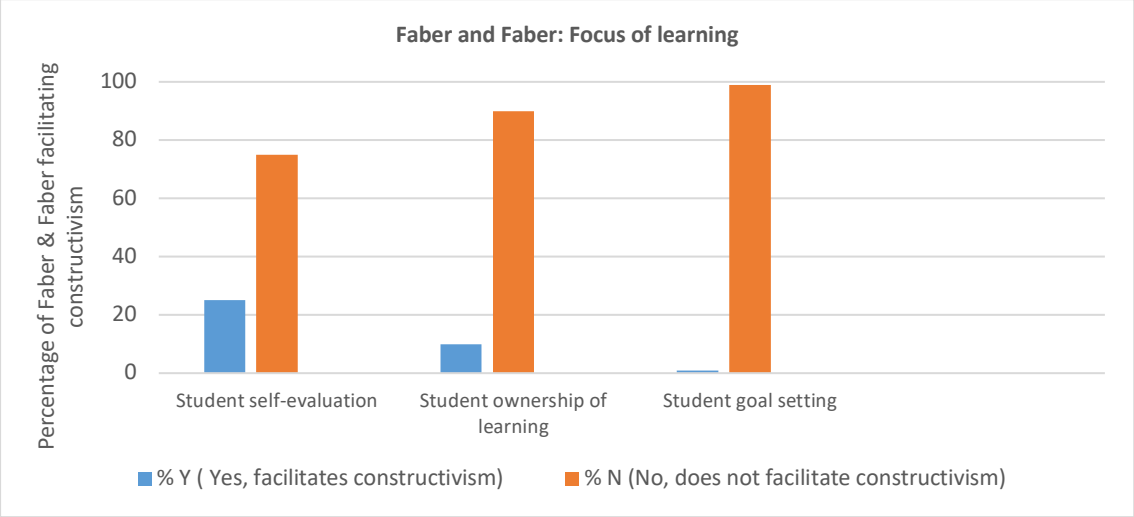

Figure 27: The focus of learning (Faber & Faber).

Summary: Faber and Faber

The Faber and Faber method facilitates and supports in varied degrees, several aspects of constructivism including:

- Very strong support (over 95%) for the learner whose personal cognitive lens includes a preference for visual, read/write and kinaesthetic learning styles;
- A moderately strong degree of relevance to the older Australian beginner student's daily activities, age and stage through varied tasks, activities, language and repertoire (over 60%);
- The moderate use of personal and prior learning as a basis for new learning (over 50%);
- The frequent use of questioning and analysis (over 70%);
- Some use of tasks requiring the application and transferal of knowledge (35%);
- Support for some aspects of collaborative learning predominantly in the form of teacher-student duet options with the periodic inclusion of creative and discovery tasks (over 50%); and
- The frequent provision of scaffolding (over 70%).

Aspects of constructivism that are under-represented or not facilitated in Faber and Faber include:

- An aural learning style which is used infrequently throughout the method (less than 20%);
- Limited facilitation of student-centred learning, despite the inclusion of creative and discovery tasks (less than 20%);
- Sporadic use of problem solving tasks (less than 20%);
- Limited provision for facilitating student-teacher or student-student discussion (21%);
- Infrequent inclusion of activities that encourage self- reflection, self-evaluation (25%)
- Very limited opportunities for student ownership of learning (10% of the method); and
- No opportunities for student goal setting (1% of the method).

Alfred's Lesson book, Complete level 1, for the later beginner

Background and context

Alfred's Lesson book, Complete Level 1, for the later beginner, is part of the Alfred's basic piano library which includes four different method book courses created by pedagogues, Willard A. Palmer, Morton Manus, and Amanda Vick-Lethco.

- Alfred's Basic Piano Course;
- Alfred's *Prep Course for Young beginners*;
- Alfred's *Basic All in One course*; and
- Alfred's *Lesson Book Complete Level 1, for the later beginner*.

The original Alfred's *Basic Piano Course* was first published in 1983 (Alfred's Website, 2019a). This first book evolved into a seven-book series: Levels 1A, 1B, 2, 3, 4, 5, 6, now described as the Alfred's *Basic Piano Library*. According to the creators, the Alfred's *Basic Piano Course*, and the Alfred's *Basic All in One course* are best suited for the average aged beginner, described by Alfred's, as ages 9 to 11 (Alfred's Website, 2019a, 2019c). There are four core books for each level: a lesson book, theory book, recital book and technic book. Supplementary instructional books that may be used in conjunction with any one of the method books include ear-training, sight reading, flash cards and composition.

Additional performance repertoire is available in various books, for example, *Fun Solos*, *Top Hits*, and a *Merry Christmas* album.

The Alfred's *All in One Course* was written in response to many requests by teachers for a single book that would include material from the lesson, theory, and solo repertoire books. The authors combined the concepts from the three lessons books of the original Alfred's *Basic Piano Course* with selected pages from the supplementary theory and recital books to create one book for each level. Later, the Alfred's *Piano Prep Course* was created for children as young as five and the materials were adapted to accommodate the smaller hands and shorter attention span of the younger student. The Alfred's *Piano Prep Course* includes: simple, clear explanations provided in pink boxes; illustrations that accompany each piece; the inclusion of lyrics for many pieces; and the provision of duet parts for the teacher to assist the student develop a sense of beat.

Alfred's Lesson book, Complete level 1, for the later beginner was developed in 1999. According to the authors, this method is designed for students who start learning piano later than the average beginner, that is, after 11 years of age. The Alfred's website also suggests that the later beginner method books may be used with a younger student who demonstrates musical aptitude (Alfred's website, 2019b).

All Alfred's method books are based on the same fundamentals which are presented in a step by step method. The aim of the authors is to encourage correct technique, develop note reading through intervallic recognition and ensure a secure foundation in musical theory (Alfred's Website, 2019a, 2019b). A multi-key reading approach is also used so that the student learns to play in several positions. Each course is paced differently however, the four different courses designed for younger beginners, inter-connect so that the student may change from method one to another in order to accommodate varied rates of learning (Alfred's Website, 2019b, 2019c). Illustrations, covers and course names are also different allowing members of the same family to use different books suited to personality and taste.

Alfred's Lesson book, Complete level 1, for the later beginner includes the same material presented in the course books mentioned previously but is faster paced. The method includes:

- simple, easy to read language to explain musical terms and symbols;
- clapping exercises, used to introduce new musical symbols;
- colourful illustrations; and

- lyrics for a number of songs (Alfred's website, 2019a, 2019b).

The introduction of each new technical skill is usually preceded by a short preparatory exercise for the student to practice prior to its incorporation within a performance piece. The concepts and skills introduced in the *Alfred's Lesson book, Complete level 1, for the later beginner* are very similar to those presented in the Faber and Faber, Hal Leonard and Bastien methods but the course content is not set out in units.

The *Alfred's Lesson book, Complete level 1, for the later beginner* commences with an explanation of the correct posture for sitting at the piano, finger numbers, note names, musical alphabet and basic rhythms. The early repertoire uses black keys (pp. 5–7) and introduces rhythmic notation using American terminology: quarter notes (crotchets), half notes (minims) note values, whole notes (semibreves). Simple dynamics, forte, *(f)* and piano *(p)* are included at this point. The use of pre-staff notation for black key tunes is followed by four bar melodies in C position. On every page of the first half of the book, a new musical concept is introduced, for example, repeat sign, time signature, and mezzo forte *(mf)*.

Following the pre-stave and rhythm reading, the stave is introduced using first the bass clef then treble clef in C major position. The grand staff is shown, followed by the introduction of reading by second, thirds, fourths and fifths in C position. Triple meter and the introduction of the tie, legato playing, the dotted half-note (dotted minim), quarter rest (crotchet rest) and whole rest (semibreve rest) is then presented. Repertoire using G position, ensues. The six songs using G position also include the introduction of several new concepts including anacrusis, sharp, flat and accent.

Staccato playing is explained and two songs in C position are provided to consolidate the previous learning of earlier pages. Middle C position is introduced in combination with tempo marks, the fermata, eighth notes (quavers) and the time signature of 2/4. Next the damper pedal, octave sign and eighth rest (quaver rest). Half steps (semitones) and whole steps (tones) are explained simultaneously using the concepts of sharps, flats and naturals previously encountered in the method book. The tetra-chord and major scales of C and G follow.

The final section of the method includes a small range of repertoire which requires the student to use more than one hand position within a piece of music. Key signatures are briefly mentioned and a list of the musical terms and symbols is provided on the final page. The

Alfred's *Lesson Book Complete Level 1, for the Later Beginner* will subsequently be referred to as Alfred's.

CET application: Alfred's

Category one: the approach to learning, the learner's personal cognitive lens

Descriptors: VARK learning styles

Visual learning is used in 100% of the Alfred's method book. Every page includes one or more of the following to assist student learning through visual representations of the skill or concept that relates to each step of musical learning:

- diagrams (Alfred's[2], p. 11);
- symbols (Alfred's, pp. 17 & 19);
- musical notation (throughout the entire method);
- pictures and illustrations throughout the entire method; and
- drawings used to illustrate the mood or genre of selected repertoire throughout the book.

Instructive and descriptive text is provided in 82% percent of the book, thus, reading as a means of learning is used extensively. Examples of text-based learning include: the staff (Alfred's, p. 12), staccato playing (Alfred's, p. 40), and a new time signature (Alfred's, p. 56). Many of the songs include lyrics, which accommodates students with a preference for the read/write learning style as the lyrics often foster an understanding of the rhythmic patterns used in the song (Alfred's, p. 41).

Kinaesthetic learning, which includes all tasks that use physical actions, is used prominently throughout the method book. Performance of repertoire, technical skills and other exercises are included in 96% percent of the Alfred's method. Activities that involve kinaesthetic learning include:

- clapping (Alfred's, p. 19);
- playing (Alfred's, p. 29); and
- singing (Alfred's, p. 35).

[2] The Alfred's method book appears in the references under Palmer, W., Manus, M., Vick Lethco, A. (n.d.). *Alfred's basic piano library: Lesson book complete level 1, for the later beginner* (3rd ed.). Van Nuys, CA: Alfred Music. For ease of reading, all quotes and citations made from this method book will be identified by the publisher rather than the authors.

Aural learning is sparsely included in the Alfred's method accommodated primarily in brief, text-based references to dynamics and volume (Alfred's, p. 25), note values (Alfred's, p. 2) and an occasional suggestion to listen (Alfred's, p. 26). An aural learning style is facilitated in 11% of the total method book. Figure 28 provides a summary of category one, the learner's personal cognitive lens.

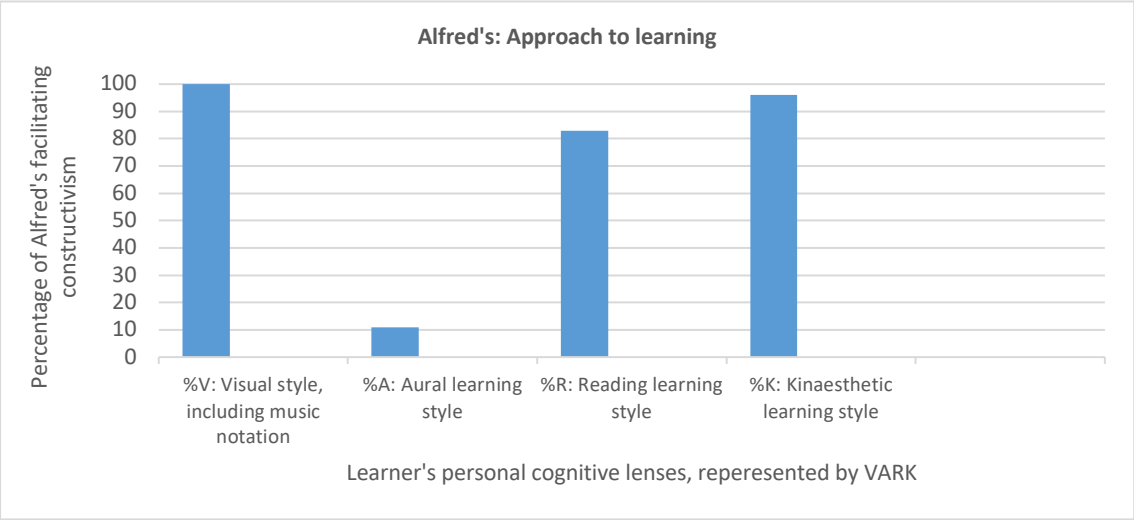

Figure 28: The approach to learning, the learner's personal cognitive lens (Alfred's).

Category two: the structure of learning

Relevance

The Alfred's book facilitates constructivism through a connection with the student's age, stage and daily experiences in 60% of the method. This includes specific questions about the type of piano the student uses at home (Alfred's, p. 2) and references to holding a bubble to describe hand shape (Alfred's, p. 3). Other means of making learning piano relevant to the student is achieved through the song titles, repertoire genres and inclusion of traditional songs. Song titles that reference every-day activities, are used extensively, indicating attempts to connect learning with the student's daily life, for example:

- *Our Clever Pup* (Alfred's, p. 10);
- *Rain Drops* (Alfred's, p. 40); and
- *The Rainbow* (Alfred's, p. 45).

Other repertoire relevant to the older beginner includes the provision of the popular musical genres such as boogie, blues and rock and the inclusion of traditional songs that are part of the communal knowledge from the Anglo-European heritage. Examples include:

- *Rock Song* (Alfred's, p. 25);
- *For He's a Jolly Good Fellow* (Alfred's p. 31); and
- *Jingle Bells* (Alfred's, p. 33).

The remaining 40% of the book, does not directly connect with the Australian student's age, stage and daily experiences. American musical terminology, spelling, cultural references and folk songs are used throughout the method. Note values are described using the American terms: quarter note, half-note, whole note. Selections of repertoire also reference various aspects of American culture: *Christopher Columbus* (Alfred's, p. 8), a song referencing the discovery of America; *Yankee Doodle* (Alfred's, p. 50), a traditional American folk song referencing the American civil war; and *Indians* (Alfred's, p. 50), a song that draws on the culture of the native American first peoples. Although some students may be able to draw on their exposure, through movies and television shows, to American culture, other Australian students may find the repertoire, language and terminology less relevant to their daily experiences. Figure 29 provides a summary of descriptor one.

Prior learning

The Alfred's book uses previously learned concepts and skills as the basis for new learning in 68% of the method. This includes the re-use of concepts and skills presented earlier in the method as a basis for new learning, and the student's generalised knowledge such as the ability to read text, recognise patterns, use diagrams, and count; concepts usually acquired by the age of 12. An example of connecting prior learning with new learning includes *Good Morning to You* (Alfred's, p. 46) which uses the same melody in a different key, as *Happy Birthday to You* (Alfred's, p. 47).

The remaining 32% of the method does not clearly link new learning to the student's prior knowledge. In these sections of the method book, new skills and concepts are introduced in one of three ways: arbitrarily, very rapidly, or several new concepts are introduced simultaneously. Figure 29 provides a summary of descriptor two.

Student-centred learning

The Alfred's book is characterised by directive and instructional material rating N for 81% of the method. Examples include:

- explanations (Alfred's, p. 3);
- directions (Alfred's, p. 4);
- specific instructions (Alfred's, p. 29); and

- teacher-directed tasks provided in the method book.

A small number of pages of the method book, 19%, facilitates constructivism through a more student-centric approach. Student-centred learning is achieved through the provision of tasks that offer options for the learner such as, a choice to repeat as many times as you like (Alfred's, p. 55), or play an octave higher (Alfred's, p. 52). Figure 29 provides a summary of category two in terms of relevance, prior learning and student-centred learning.

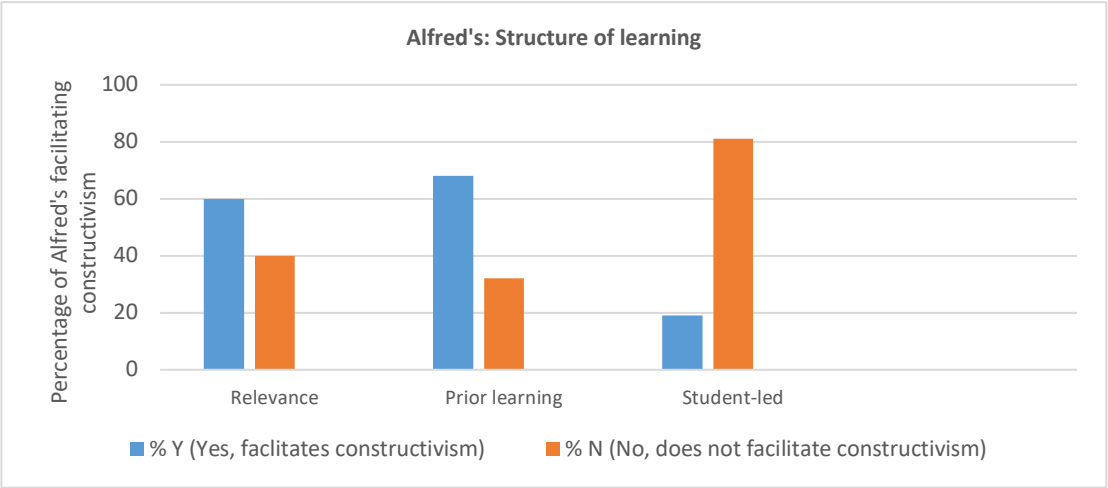

Figure 29: The structure of learning (Alfred's).

Category three: cognitive learning

Questioning and analysis

The use of questions and analysis tasks, requiring the student to actively engage, are used sparingly in the Alfred's method. Activities that directly facilitate constructivism through questioning and analysis include:

- identify the flat (Alfred's, p. 30);
- circle the sharp (Alfred's, p. 36); and
- analyse the harmonic intervals (Alfred's, p. 34).

Analysis tasks and questions comprise 7% of the Alfred's method. The method does not include review pages, theory tasks or other forms of analytical learning, thus, 93% of the method does not facilitate these descriptors of constructivism. Figure 30 provides a summary of descriptor one.

Application and transferal of skills and knowledge

A range of tasks that require the application and transferal of knowledge, thus facilitating constructive learning, are included in 37% of the Alfred's method. Examples include tasks asking the student to re-play parts of a song up an octave (Alfred's, p. 53) and music reading tasks (Alfred's, pp. 31 & 46). The remaining 63% of the Alfred's does not facilitate this aspect of constructivism as activities related to harmonisation, transposition to other keys and review pages are not included. Figure 30 provides a summary of descriptor two.

Problem solving

Tasks that explicitly require the student to identify and solve problems are absent from the Alfred's method. None of the activities, tasks or learning approaches listed in the delimits are included in the Alfred's method. Potential problems are pre-empted and possible solutions offered through pre-learning exercises, hints and reminders. Figure 30 provides a summary of category three, the personal cognitive acts of the learner.

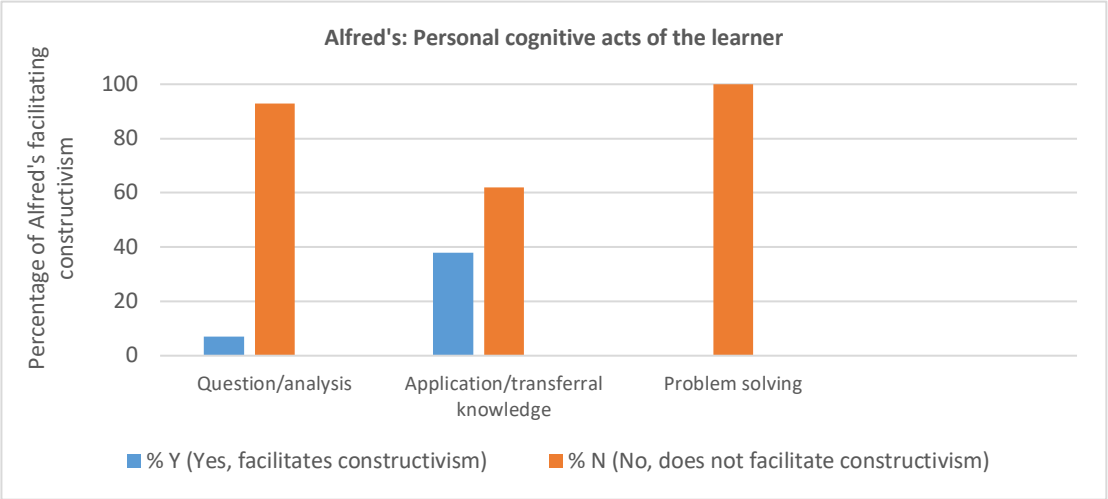

Figure 30: Cognitive learning (Alfred's).

Category four: social learning

Discussion

The Alfred's method includes no activities or tasks that offer or prompt teacher-student discussion rating a zero for facilitating this facet of constructivism. New concepts, information, new skills and techniques, tasks and activities are presented as instructions, explanations, descriptions, definitions, suggestions or directions. Figure 31 provides a summary of descriptor one.

Collaborative learning

Collaborative learning as a core characteristic of constructivism is used in 23% of the method book, solely in the form of teacher-student duets. The other 77% of the materials do not facilitate this aspect of constructivism. There are no peer-to-peer learning opportunities, no ensemble options and no other forms of collaborative learning provided in the Alfred's methods. Figure 31 provides a summary of descriptor two.

Scaffolding

This aspect of constructivism is more prominently supported in the Alfred's method book. Various forms of scaffolding to support learning are provided in 51% of Alfred's method book: additional text reminding students to remember the sharp; arrows to show direction changes in pitch; text-based hints about fingering and hand shifts; and the provision diagrams showing the starting note or hand. The scaffolding becomes less as the student progresses through the method book with the result that 49% of the method book does not provide scaffolding for the student. Figure 31 provides a summary of each descriptor in category four.

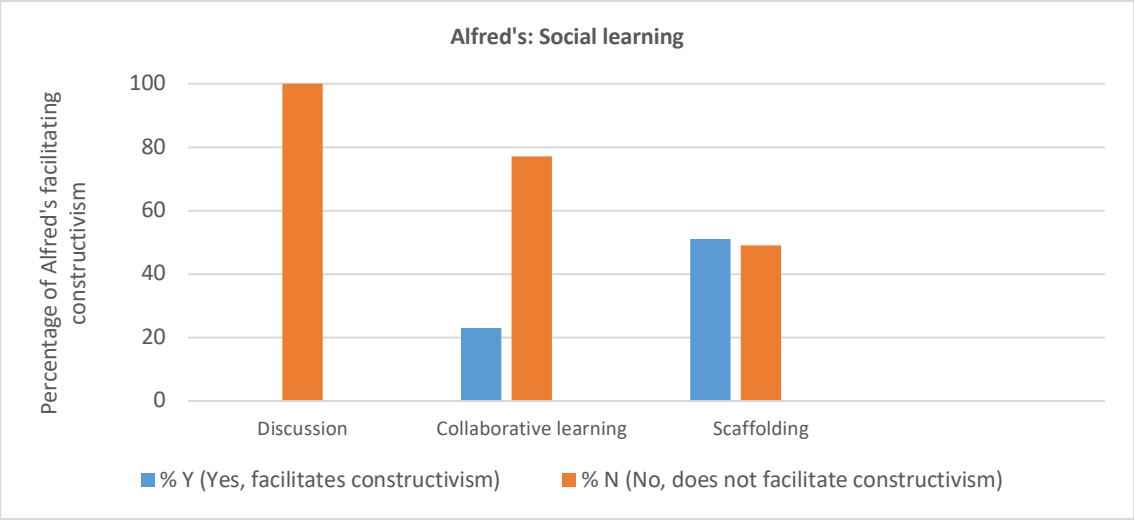

Figure 31: Social learning (Alfred's).

Category five: the focus of learning

Self-reflection and self-evaluation

The focus of the learning in the Alfred's book leans toward the achievement of skills, through the performance of repertoire and completion of method book tasks. There are very few direct questions that ask the student to self-reflect, self-evaluate, self-correct or self-redirect. A small number of activities allude to this form of learning rating an Y which?

facilitates constructivism for 9% of the method. Text-based suggestions such as playing legato, using staccato or playing the accompaniment softer than the melody, are scattered throughout the method prompting the student to self-evaluate her or his own performance (Alfred's, p. 21 & 26). The remaining 91% of the book does not facilitate this aspect of constructive learning. Apart from the aforementioned suggestions, there are no other text based references that encourage the student's self-observation of her or his performance and development of technical skills. Figure 32 provides a summary of descriptor one.

Student ownership

The Alfred's method provides few choices of tasks or repertoire from which the student may select a preference. Ownership of learning tends to rest with the method book authors and by proxy, the teacher, in 93% of the method book. A small number of creative tasks offer options for student choice. The provision of these creative tasks that enable student ownership occurs in 7% of the method. Figure 32 provides a summary of descriptor two.

Goal setting

Goal setting is not overtly encouraged in the Alfred's method book. No opportunities are provided for students to set personal goals. The Alfred's method is directive and prescriptive in 100% of the presentation. The prevailing assumption of the CET is that the method book is used without deviation or adaption, in the sequence set by the authors, thus, the determination of goals is made by the method book creators. In this context the successful completion of each new skill, concept, activity, task, technical exercise and performance piece becomes the goal for the next lesson. Figure 32 provides a summary of the three descriptors: self-evaluation, self-reflection, student ownership, and goal setting.

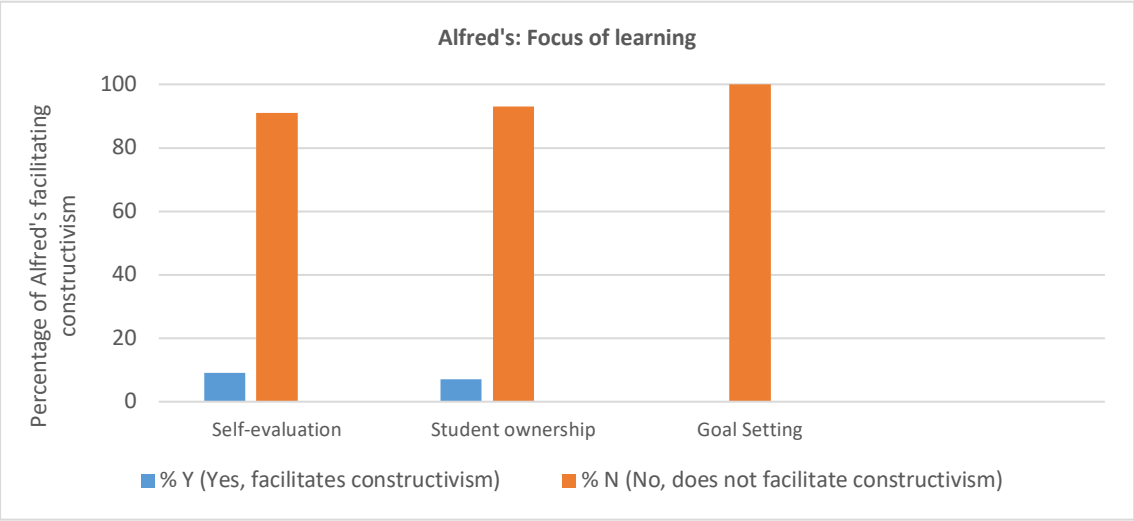

Figure 32: The focus of learning (Alfred's).

Summary: Alfred's method book

The Alfred's method supports several aspects of constructivism, each in varying degrees, including:

- Very strong support for students with a personal cognitive lens favouring a kinaesthetic, reading or visual learning style (over 80%);
- Support for the structure of learning in terms of relevance and connections with each student's age, stage, daily experiences (60%);
- Moderate use of prior learning as a foundation for new learning (over 60%);
- Some facilitation of the personal cognitive acts of the learner, through the use of the application and transferal of knowledge (over 30%); and
- Moderate support for social learning, largely in the provision of scaffolding and the inclusion of teacher-student duet options (50%).

Aspects of constructivism that are under-represented or not facilitated in Alfred's include:

- Limited accommodation of the learner with a personal cognitive lens that prefers an aural learning style (less than 15%);
- Marginal support for student-centred learning (less than 5%) with teacher-led, teacher-directed learning dominating the structure of learning;
- Very restricted facilitation of the personal cognitive acts of the learner through the use of questioning and analysis (less than 10%);
- No facilitation of problem solving;
- No facilitation of discussion as a component of social learning,
- Very few opportunities, for the student to self-reflect or self-evaluate (less than 10%);
- Very limited facilitation of student ownership (less than 10%);
- No opportunities for goal setting; and
- A marginal focus on the processes of learning as the learning is driven by the product, that is, an achievement of a skill or performance.

The Older Beginner Piano Course, Level 1 by James Bastien

Background and context

James Bastien published the first of his method books, *Piano Basics*, for young beginners, in 1963. The original lesson book designed for young children includes larger notation and bigger print, colourful pictures, diagrams, simple instructions and songs with words. Subsequent method books providing a sequence of piano instruction that covered the first lessons to the fourth year were devised over the following decade. The single lesson book for each level of study later evolved to include five books: the lesson book, a performance book, technique book, theory book and sight reading book. The publication of additional repertoire books exploring other musical genres, for example, jazz, boogie, popular music, Christmas songs and famous classical works followed (Fox, 2006; Bastien Website, 2019)

In 1977, Bastien published an integrated course for older beginners. The course designed for ages 12 and above includes two method books, namely, *The Older Beginner Course, Level 1* and *The Older Beginner Course, Level 2*. According to the Bastien Website (2019) *The Older Beginner Course, Level 1* assumes no prior knowledge of music or the piano. Basic keyboard fundamentals are introduced through text, diagrams and simple illustrations. Skills and concepts are presented in a step by step sequence commencing with pre-staff reading, chord playing and the gradual introduction of a multi-key reading approach. The multi-key approach to reading utilises the interpretation of musical notation in various hand positions. In addition, the *Older Beginner Course, Level 1* uses a chordal approach to learning and aims to enable students to play and harmonise melodies from the first lesson (Bastien Website, 2019; Kjos Website, 2020b).

The *Older Beginner Course, Level 1,* also incorporates in one book the technical, theoretical and performance activities requisite for the first stage of learning, thus, students need only purchase one book (Bastien Website, 2019; Kjos Website, 2020c). Recommendations for additional support materials are provided by the creator throughout the book. For example, the student is ready to begin *Music Flashcards* on page 15; the student may commence *Notespeller, Level 1* at page 48; and the student may begin *Favorite Melodies the World Over, Level 1* from page 53. Completion of the *Older Beginner Course, Level 1* indicates readiness to start *Pop, Rock 'n' Blues*, Book 1.

The content of the *Older Beginner Course, Level 1* is organised into ten units. Each unit has a specific focus. Unit one provides an introduction to the keyboard, posture, finger numbers, the musical alphabet, C position, the concept and notation of various rhythmic values. American terminology is used: quarter note (crotchet), half-note (minim), and whole note (semibreve). Measures (bars), bar lines and legato playing are also introduced at this point. Other than rhythmic notation, pre-staff reading is used in this unit and a selection of simple nursery rhymes and traditional folk songs are provided for student to learn to play. A review page concludes unit one.

Unit two introduces the grand staff, treble and bass clefs, reading notation in C position, chords I and V7 in C, the dotted half-note (dotted minim), time signatures and the repeat sign. Repertoire including folk tunes and author created pieces are provided on the staff with chordal accompaniment. A review page concludes unit two. In unit three, playing out of the five-finger position by moving the thumb down or fifth finger up, eighth notes (quavers), chord IV, the fermata, *Da Capo*, and simple dynamic symbols are introduced. Most of the repertoire of unit four includes American folk tunes, for example, *Down in the Valley*, *Clementine*, *Mary-Ann*. Repertoire also includes a selection of traditional English melodies such as *Lavender's Blue*. A review page concludes unit three.

In unit four, sharps, flat, naturals, enharmonics, G major position, key signature and chords I, IV, V7 in G are introduced. A range of repertoire including folk tunes from various countries, nursery rhymes, and pedagogical pieces reflective of rock and jazz styles are included, in combination with preparatory drills that encourage the development of requisite technical skills. A review page is provided at the end of unit four. Unit five includes the *dal segno* sign, F major position, chords I, IV, V7 in F major, the key signature of F, dotted crotchet-quaver patterns and transposition. Repertoire includes folk tunes and Christmas carols. A review page concludes unit five.

Unit six, teaches the staccato touch and its notational symbol, first and second time bars, crescendo, diminuendo, ritardando, accent, block and broken chords. In this unit changing hand positions is introduced using C, F and G positions. Additional technical exercises and short, simple, etudes are included. A review page concludes unit six. In unit seven, the student learns the half step (semitone) and whole step (tone) and C major scale which requires passing the third finger over the thumb and passing the thumb under the third finger. Scale drills and melodies based in scale patterns are provided. Common and cut common time are introduced before the review page for unit seven.

Unit eight, focuses on G major, shifting hand positions, the introduction of 6/8 time and a selection of songs in this meter. A review page concludes unit eight. Unit nine, revisits the key and position of F major then introduces the keys of D, A and E major including the key signatures, chords I, IV, V7 in each key and one performance piece in each new key. Repertoire is drawn from American folk music and well-known classical works. A review page is provided at the end of unit nine.

Unit ten, is the final unit in *Older Beginner Course, Level 1*. The damper pedal is explained and introduced along with minor chords, the octave above symbol (8va) and a review page. The remainder of the book includes six pieces drawn from well-known classical works. These works provide supplementary repertoire for the student to read, learn and perform. A glossary of terms and the scales of D, A and E major are included on the last pages of the method book. The *Older Beginner Course, Level 1*, will hence forth be described by its author, Bastien.

CET application: Bastien

Category one: the approach to learning, the learner's personal cognitive lens

Descriptors: VARK learning styles

The Bastien method [3], utilises a visual learning style through the use of symbols, diagrams, pictures and musical notation in 100% of the activities. Every page of the method book includes pictorial and diagrammatic representations in combination with various musical symbols. The use of a read/write learning style through the inclusion of text and written activities is included in 72% of the method. This includes text-based explanations, directions, suggestions, instructions and various written tasks included in the review pages for each unit. A kinaesthetic learning style is used in 94% of the course. The majority of the skill and technical learning involves physical actions and responses such as, singing, clapping, counting, playing and performance of repertoire. An aural learning style is used in 1% of the Bastien in the form of occasional text-based suggestions: to sing the melody, listen carefully, and make the melody sing above the accompaniment. Figure 33 illustrates the degree to which various cognitive lens represented by the VARK learning styles are accommodated in the Bastien method.

[3] The Bastien method book appears in the reference list under the composer of the method, Bastien, J. (1977). *The older beginner piano course, level 1*. San Diego, CA: Kjos.

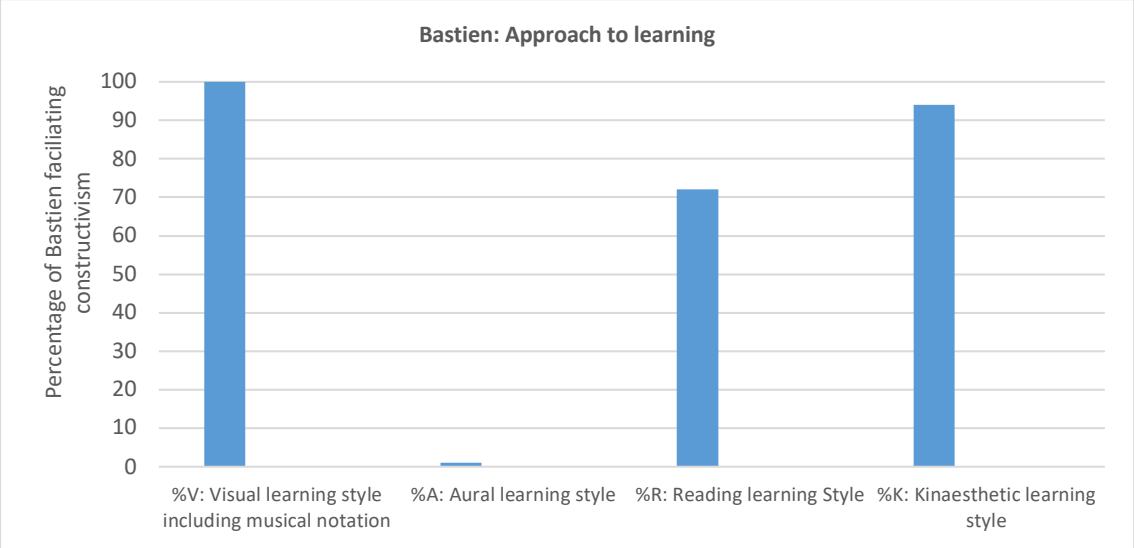

Figure 33: The approach to learning, the learner's personal cognitive lens (Bastien).

Category two: the structure of learning tasks

Relevance

The Bastien method has a strong American flavour. Traditional American folk tunes, for example, *Darlin' Clementine* and *Red River Valley,* form a large proportion of the repertoire used in the method book. Folk songs commonly found in both American and Australian cultures, from a shared British heritage, may be familiar to Australian students with an Anglo-European heritage for example, *London Bridge, Pop Goes the Weasel,* and *Mary Had a Little Lamb*. The Bastien method also includes a variety of Christmas carols.

The American tone of the method book is reinforced by the author's use of American terminology such as, quarter note, half-note, whole note to describe the crotchet, minim and semibreve and measure to describe the bar. The employment of American spelling in combination with American terminology indicates an attempt by the author to provide material that connects with the age, stage and daily experiences of the American student. The language explaining the music skills and concepts is also more adult than the method books created for younger children and the absence of cute pictures and cartoons likewise reflects a respect for the older student who may find such illustrations childish.

Bastien facilitates constructivism through the use of relevant materials which connect new knowledge and skills to the student's age, stage and daily experiences in 54% of the method book. The remaining 46% rates an N. In these sections of the method book the materials are either too strongly American or offer no clear opportunities for the teacher to

connect the content and activities with the Australian student's age, stage and daily experiences. Figure 34 provides a summary of descriptor one.

Prior learning

The student's prior learning as a basis for new learning occurs in 64% of the Bastien book. This includes generalised learning, specific knowledge related to musical learning and the use of concepts and skills covered earlier in the method as a foundation for subsequent learning. Many tasks incorporate a previous concept as a platform for the introduction of a new concept and careful sequencing of the review pages, sight reading and technical exercises is evident. An example of prior learning as basis for new learning occurs with the re-use of *Merrily, We Roll Along*, first presented in pre-staff notation and later using staff notation to support the acquisition the of chordal accompaniment skills (Bastien, pp. 9 & 17). The remaining 36% of the method does not use prior knowledge as a basis for new learning. New concepts are either introduced without reference to previous learning or several new concepts are presented simultaneously (Bastien, p. 22). Figure 34 provides a summary of descriptor two.

Student-centred learning

The Bastien Method book is strongly didactic with 91% of the method using directive, instructional and rote learning approaches. Students are frequently given a mandate to memorise information and the provision of specific, detailed practice procedures result in a teacher-dominant approach (Bastien, p. 6). In 9% of the method there are small opportunities to facilitate student-centred learning in the form of creative tasks sometimes included in the review pages and the provision of supplementary repertoire (Bastien, pp. 87-94). Figure 34 provides a summary of the facilitation of constructivism through the structure of learning.

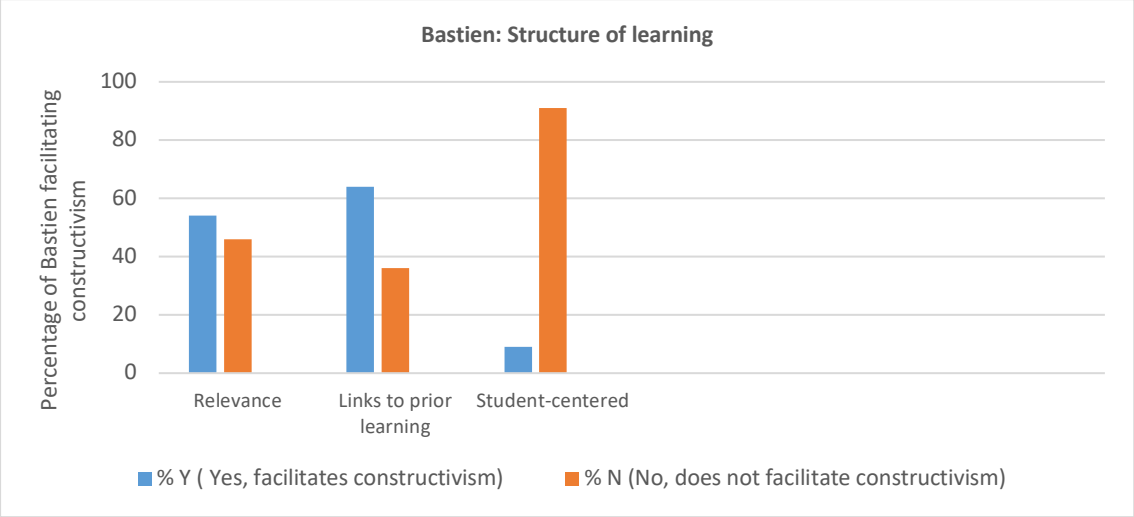

Figure 34: The structure of learning (Bastien).

Category three: cognitive learning

Questioning and analysis

The Bastien method facilitates constructivism through the use of questioning and analysis in 14% of the method. These tasks comprise closed questions, one analysis task and a review page for each chapter in which additional questioning and analytical tasks are provided. The remaining 86% of the book is rated an N. In the larger part of the method book, personal cognitive acts are not stimulated through questioning and analysis. Figure 35 provides a summary of descriptor one.

Application and transferal of skills and knowledge

Tasks that require the student to apply and transfer knowledge in order to learn: transposition tasks, creative tasks, harmonisation and sight reading are included in 35% of the Bastien method. The remaining 65% of tasks do not facilitate this aspect of constructivism. Many activities are characterised by repetitive practices, including note recognition tasks, theory drills and technical exercises, each of which emphasise rote learning and information recall. Figure 35 provides a summary of descriptor two.

Problem solving

Tasks and activities requiring the student to identify and solve problems are not a feature of the Bastien materials. No part of the method book facilitates constructivism through problem solving. The presentation of skills and concepts is predominantly instructive and directive. Potential problems are pre-emptively approached before or, as part of the student's learning. The frequent provision of detailed practice directions provides examples

of pre-emptive problem solving: “clap and count the rhythm aloud before playing” (Bastien, p. 65); “think ahead” (Bastien, p. 48); and “practice slowly at first” (Bastien, p. 55). Figure 35 provides a summary of each descriptor of category three illustrating the degree to which constructivism is facilitated through personal cognitive acts of the learner.

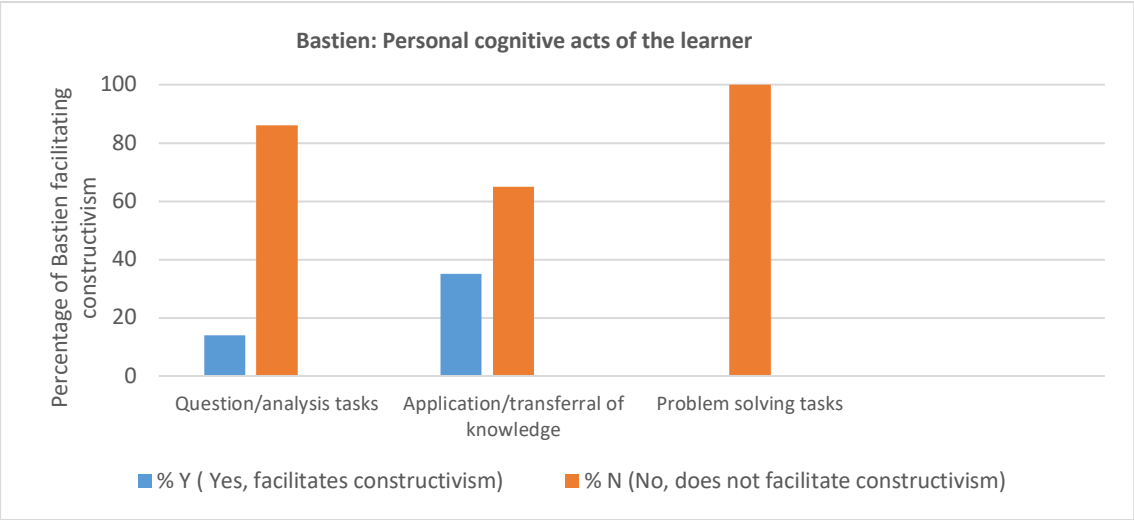

Figure 35: Cognitive learning (Bastien).

Category four: social learning

Discussion

The use of discussion is not included in the Bastien method. Concepts and skills are presented as facts to be learned and skills to be developed. Activities and tasks are specific and directive. The student is instructed to memorise and rote learn for a large proportion of the materials. Creative tasks, such as composition, which may generate discussion between the teacher and student, are sparingly included in the review units and generally take the form of summative tasks that require a correct answer. The facilitation of discussion is not evident in the Bastien method, resulting in a 0% Y. Figure 36 provides a summary of descriptor one.

Collaborative learning

The Bastien method offers no opportunities for collaborative or shared learning. There are no duet playing, improvisational or ensemble options provided by Bastien. The method, therefore, does not facilitate the collaborative aspects of constructivism. The content of the method book consists of a range of technical exercises, varied solo repertoire and theory exercises, each of which involves solo practice and individualised learning. Figure 36 provides a summary of descriptor two.

Scaffolding

Support for student learning in the form of scaffolding is evident in 34% of the Bastien method. Coloured arrows, text-based hints, reminders, suggestions, finger numbers above the musical notes, circled notes and visual diagrams are provided to prompt and assist the student with the development of a new skill or concept. The frequency of arrows, diagrams, and other helpful text reduces as the student progresses through the method book, thus, 66% of the book does not scaffold the learning as previously described. Figure 36 provides a summary of each descriptor of category four.

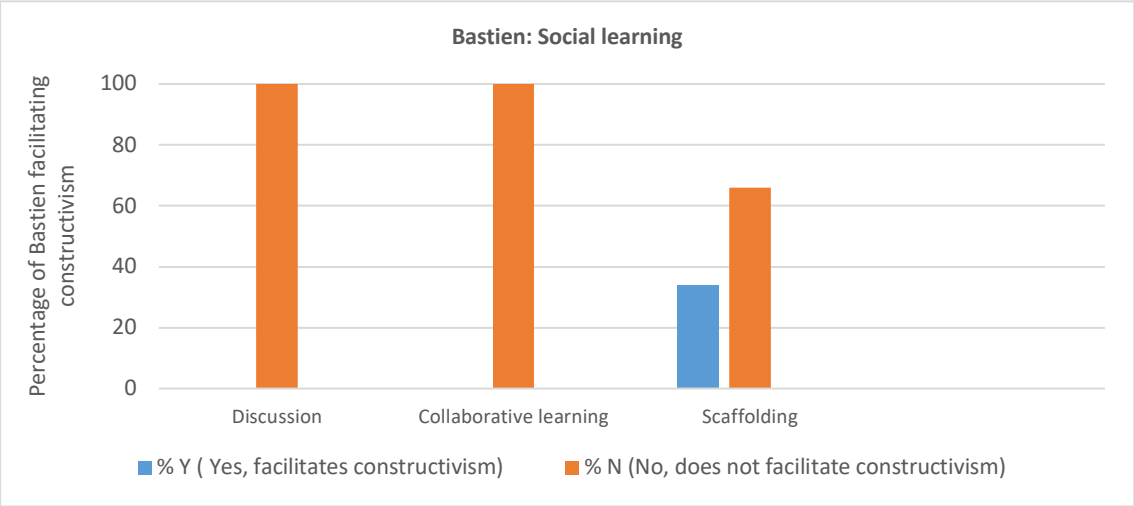

Figure 36: Social learning (Bastien).

Category five: the focus of learning

Self-reflection and self-evaluation

Bastien provides no opportunities where students are invited or encouraged to reflect on their own performance, practice and skill development. In terms of self-reflection and self-evaluation practices, the Bastien method rates a 100%, N. The strongly didactic tone of the Bastien method does not support this aspect of constructivism. Figure 37 provides a summary of descriptor one.

Student ownership

Student ownership of the learning in the form of the opportunities to choose the task, repertoire, content, skills and sequence of learning rates a Y in 9% of the Bastien method. The occasional creative task and the provision of additional pieces in the form of supplementary repertoire offers the student a small degree of choice and ownership over the learning. The content, sequence of learning, activities and other repertoire provided in the

various units of work is intended to be completed without adaptation or modification, thus, 91% of the method, rates N. Figure 37 provides a summary of descriptor two.

Goal setting

The learning goals in the Bastien method are pre-determined by the author in terms of content, musical concepts, performance skills, repertoire, pace and sequence of learning. In addition, detailed practice instructions are frequently included (Bastien, p. 14). Suggestions regarding tone and touch are often provided such as, aim for a crisp staccato (Bastien, p. 42). In these contexts, the author establishes the performance and practice goals for the student, thus, 100% of the Bastien rates an N for this descriptor of constructivism. Figure 37 provides a summary of category five.

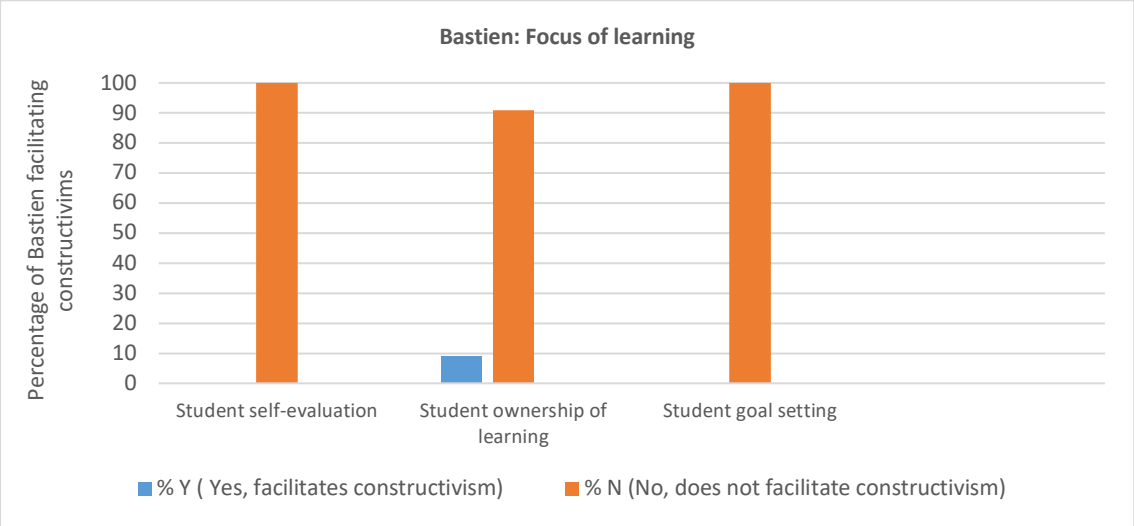

Figure 37: The focus of learning (Bastien).

Summary: Bastien Method book

The Bastien method facilitates some aspects of constructivism including:

- significant accommodation of the learner's personal cognitive lens predominantly, the visual, and kinaesthetic style learner (over 90%);
- strong support for learners preferring a read/write learning style (70%);
- a moderate attempt to connect with the student's age, stage and daily experiences through repertoire choice, adult language and absence of cartoon drawings (approximately 50%);
- moderate use of prior learning as a basis for new learning (approximately 60%);

- some facilitation of the personal cognitive acts of the learner through tasks requiring the application and transferal of skills and knowledge (over 30%); and
- mild use of scaffolding for approximately a third of the book (over 30%).

Aspects of constructivism that are under-represented or not facilitated in the Bastien method include:

- extremely limited accommodation of students with a preference for an aural learning style (less than 5%);
- limited facilitation of student-centred learning (less than 10%);
- limited use of questioning and analysis (less than 15%);
- an absence of problem solving exercises;
- no clear opportunities for discussion;
- no collaborative learning opportunities;
- no opportunities to facilitate self-reflection, self-evaluation;
- limited support for the focus of learning to facilitate student ownership (less than 10%); and
- no facilitation of student goal setting.

Adult Piano Method, Book 1 created by Hal Leonard

Background and context

The Hal Leonard company was founded in 1947 and for many years published band and choral arrangements for school students. In 1970, the Learning Unlimited division was established to create a range of instructional music products for other instruments. The results included the renowned Organ Pointer System and a range of piano method books for young children and adult beginners (Hal Leonard Website, 2019a, 2019b).

The piano method books created for beginner pianists have several co-authors: Barbara Kreader-Skalinder; Mona Rejino; Phillip Keveren and Fred Kern. According to the Hal Leonard Website (2019a, 2019b), multiple authorship of the piano method books aims to facilitate the inclusion of a wider range of repertoire and musical styles. Following the publication of the Hal Leonard method books for beginner pianists, Keveren, Kreader-Skalinder and Rejino recognised that young beginners and adult beginners learn

differently. In 1992, the *Adult Piano Method, Book 1* was created in order to accommodate the unique learning needs of the adult learner.

The *Adult Piano Method, Book 1* provides an all in one, structured approach, which combines lesson content, solo performance repertoire, technical exercises, and music theory into a single book. The adult book is faster paced than the original, younger beginners' method and uses a more sophisticated visual layout that excludes cute pictures, employs adult language and includes repertoire more suited to the adult learner (Hal Leonard Website, 2019c). The *Adult Piano Method, Book 1* also provides access to online audio and MIDI-files to support student learning and as a means for the student to learn autonomously between lessons. Backing tracks, featuring Playback+, a program that allows the student to slow down the tempo without changing pitch, or to loop challenging passages, provides additional support for home practice (Hal Leonard Website, 2019a, 2019b).

There are five units in the *Adult Piano Method, Book 1*. The basic skills and concepts central to learning to play the piano that are presented in the *Adult Piano Method, Book 1* are almost identical with those included in the Faber and Faber and Bastien methods but the visual presentation, repertoire, sequence and pace in which these core concepts and skills are provided differs.

Analogous to Faber and Faber, and Bastien, unit one of the *Adult Piano Method, Book 1* introduces correct posture, the keyboard, finger numbers, the crotchet, crotchet rest, bar, minim, semibreve. It is noteworthy that the *Adult Piano Method, Book 1* uses Australian/English terminology to describe musical terms and note values. Unit one also includes range of pieces to be played on the black keys prior to an introduction to the music alphabet (C-D-E-F-G-A-B on the white keys), minimum rests, repeat sign, staccato, legato and the time signature of 4/4. A range of online MIDI-files are included.

Unit two introduces music reading, bass and treble clef, the grand stave, reading lines and spaces, the two note slur, various dynamic markings, mezzo piano (*mp*) and mezzo forte (*mf*), intervals of the second and third in the context of reading steps and skips on the stave, the dotted minim, the time signature of 3/4 and the tie. In unit three the semibreve rest, crescendo, decrescendo, C position and intervals of the fourth and fifth in the context of music reading are introduced. New dynamic markings are presented, namely, fortissimo (*ff*) and pianissimo (*pp*), 8va and the concept of playing an octave higher, and 15ma, playing two

octaves higher, symbols for the accent, sharp, flat, natural, pause and pedal, and the concept of *Da Capo*, al fine (D.C., *al fine*).

Unit four introduces the concepts of ritardando, joined quavers, hand to hand legato, anacrusis, G position, the dotted crotchet-quaver pattern, the interval of a sixth and 8ba, playing an octave lower than written. Unit five, the final unit in the method book, includes a range of repertoire choices, an introduction to the sustain pedal and triads. A glossary is provided on the last two pages of the book. In future discussions, the *Adult Piano Method*, *Book 1* will be described by the publisher, Hal Leonard.

CET application: Hal Leonard

Category one: the approach to learning, the learner's personal cognitive lens

VARK learning styles model

The Hal Leonard method book utilises a visual learning style in 100% of tasks. Symbols, diagrams, musical notation and visual representations are included on every page. Text-based information, instructions and explanations and written activities are included in over half the method book, 64%, encompassing a read/write learning style. Clapping, singing, playing and movement occurs frequently and a kinaesthetic learning style is used in 93% of the learning.

There are a number of listening tasks scattered throughout the Hal Leonard method such as, *Style Clip* (Hal Leonard [4] p. 40). In this activity, the student is asked to listen as the teacher performs a Viennese waltz. Audio files are included for almost every song and a speaker symbol provided to indicate access to recorded examples. However, only the printed materials were evaluated by the CET. In this context, the use of an aural learning style occurs in 15% of the Hal Leonard method. Figure 38 provides a summary of the degree to which each learner's personal cognitive lens is accommodated in the Hal Leonard method book.

[4] Hal Leonard appears in the references under the composers of the materials: Kern, F., Keveren, P., Kreader, B., Rejino, M. (2005). *Adult piano method, book 1*. A. Brovan (Ed.). Milwaukee, WI: Hal Leonard. In order to achieve a clear, uncomplicated reading of the text, all quotes and citations of the method book are made using the publisher, Hal Leonard.

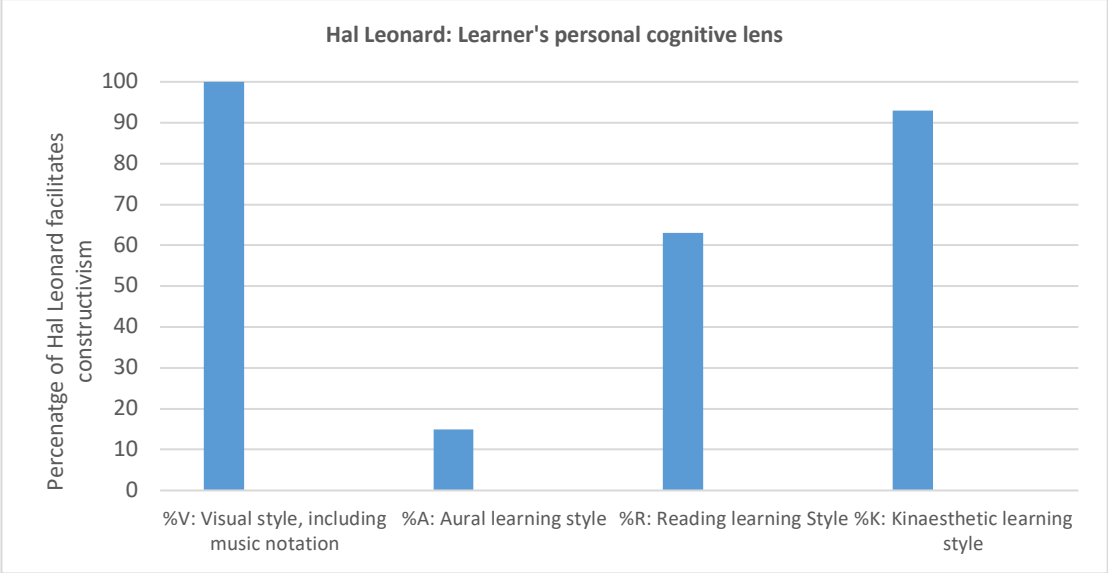

Figure 38: The approach to learning, the learner's personal cognitive lens (Hal Leonard).

Category two: the structure of learning tasks

Relevance

For the older beginner Australian student, 74% of the method connects to the Australian student's daily experiences, age and stage. Examples that demonstrate a link to the daily experiences of the Australian student include: a comparison of the beat of music with the human heart beat; various song titles describing familiar experiences, *Sunny Day*, *At the Beach* (Hal Leonard, pp. 17 & 27); the use of folk songs from the Anglo-European tradition, *Alouette, Ode to Joy*, (Hal Leonard, pp. 72 & 76); and the inclusion of well-known classical excerpts, *Surprise Symphony* by Haydn (Hal Leonard, pp. 33).

The language used in textual explanations is clear, direct and suited to the adult learner. Musical concepts, crotchet, minim and bar are described using Australian/English terminology. Language usage in combination with an absence of child-like illustrations and the inclusion of genre songs in jazz and boogie styles renders significant portions of the method book appropriate for the older beginner student.

Aspects of the method that are less relevant to the Australian student comprise the remaining 26% of the method which rated an N. Repertoire referencing specific aspects of American culture such as: *Hoe Down* (Hal Leonard, p. 50) an informal American farm dance; songs from American ethnic groups such as *La Cha Cha,* which draws on Mexican folk music (Hal Leonard, p. 51); and pedagogical songs, *Mystic Mood* (Hal Leonard, p. 89) may not be familiar to the Australian student. Figure 39 provides a summary of descriptor one.

Prior learning

Hal Leonard uses the student's prior learning as a basis for new learning in 57% of the method. Generalised prior learning, the ability to read, write, recognise patterns and interpret symbols is used in combination with sequential learning. Hal Leonard structures student learning in ways that use musical concepts and skills from earlier in the method as a basis for next step of learning. An example of prior learning as a basis for new learning is the use of the song *Shooting Hoops* firstly to consolidate staccato playing (Hal Leonard, p. 69) then re-used in a different key to facilitate an understanding of key signatures and transposition (Hal Leonard, p. 71). The remaining 43% of the method does not facilitate constructivism through prior learning and is characterised by one of the following: the arbitrary introduction of new skills and concepts; very rapid progress through the musical content; or the simultaneous explanation of several new concepts and skills. Figure 39 provides a summary of descriptor two.

Student-centred learning

A small portion of the Hal Leonard method, 8%, encourages student-centred learning in the form of simple creative activities mostly using improvisation such as *Ad Lib* (Hal Leonard, pp. 12 & 47). In the ad lib tasks the student is free to choose a range of parameters that meet her or his interest and tastes, resulting in a student-centred learning approach and outcome. The majority of the method employs instructional and descriptive text rating an N for 92% of the Hal Leonard book. Figure 39 provides a summary of the facilitation of the CET descriptors: relevance, prior learning and student-centred learning.

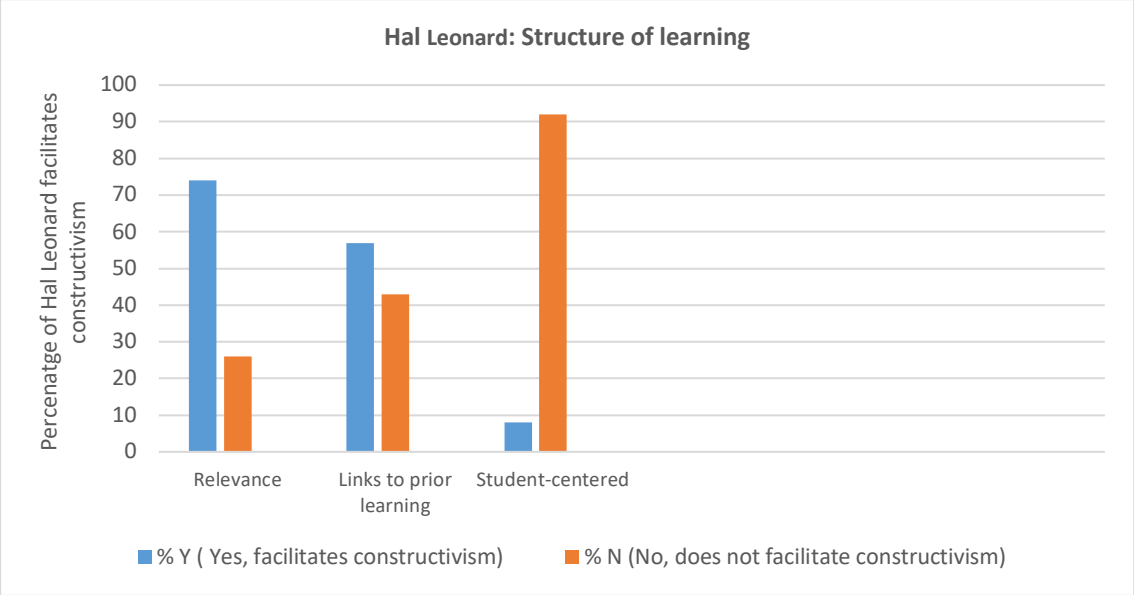

Figure 39: The structure of learning (Hal Leonard).

Category three: cognitive learning

Questioning and analysis

The Hal Leonard method provides very few activities that involve questioning and analysis. The inclusion of five theory pages and the rare question or analysis task comprises 5% of the total book. The smattering of closed questions used in the theory revision pages that follow the introduction of a new concept generally provide a summative assessment of the student's learning (Hal Leonard, p. 54). Other learning is in the form of practicing new skills, music reading and to a lesser degree the exploration of musical style (Hal Leonard, p. 77). The majority of the method (95%) rates N as questioning and analysis is rarely part of the learning process. Figure 40 provides a summary of descriptor one.

Application and transferal of skills and knowledge

The application and transferal of knowledge, through composition, improvisation, transposition, harmonisation and sight reading tasks, is more frequently included in the Hal Leonard method. A range of different activities are provided in 51% of the method. Examples include: *Ad lib* tasks requiring the student to apply and transfer what is known to new musical settings (Hal Leonard, pp. 12, 15, 47); suggestions that the student plays an octave or two octaves higher (Hal Leonard, pp. 26 & 58); and transposition tasks (Hal Leonard, p. 71). The remaining 49% of the method, including the glossary, employs didactic text which does not offer an opportunity for the student to apply and transfer knowledge. Figure 40 provides a summary of descriptor two.

Problem solving

Problem solving tasks are not included in the Hal Leonard method. No activities or tasks facilitating the student's problem solving skills are included. Potential problems are generally approached via pre-emptive text reminding students to watch, observe and notice (Hal Leonard, p. 8). Other examples of a pre-emptive problem solving include: *Technique Tip*, "prepare to shift" (Hal Leonard, p. 28); and *Technique Tip*, "look ahead" (Hal Leonard, p. 65). The facilitation of the student's ability to identify common problems such as incorrect rhythms, inaccurate note reading, tempo fluctuations and technical issues is not facilitated from the materials alone. The Hal Leonard method rates 100% N for the problem solving descriptor of category three. Figure 40 provides a summary of the degree to which cognitive learning is facilitated in the Hal Leonard method.

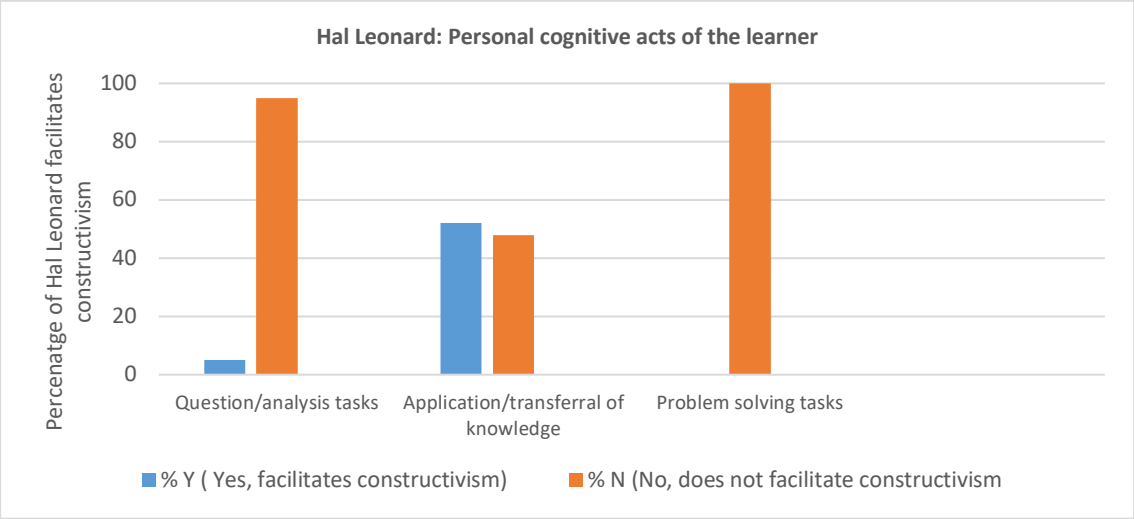

Figure 40: Cognitive learning (Hal Leonard).

Category four: social learning experiences

Discussion

The inclusion of several composition, improvisation and listening activities in Hal Leonard provides opportunities for student-teacher discussion. Student's creative music making occurs in 15% of the Hal Leonard method rating a Y for these portions of the method book. It is likely that in the process of one of the aforementioned creative tasks, some measure of discussion with the student will occur. The Hal Leonard includes a number of *Ad Lib* tasks that offer opportunities for student-teacher dialogue. The larger part of the method does not offer scope for discussion as it is more task and skill orientated, thus, (85%) of the Hal Leonard rates N. Figure 41 provides a summary of descriptor one.

Collaborative learning opportunities

Collaborative music making, in the form of duets, and online accompaniments, are included in the majority of the activities provided. Printed duet parts for the teacher to accompany the student occurs frequently in the first two-thirds of the method. The facilitation of collaborative learning as part of the inherently social nature of the piano lesson comprises 66% of the method, excluding the online audio files. The other tasks provided in the remaining 34% include different forms of solo practice and individualised learning and do not support this aspect of constructivism. Figure 41 provides a summary of descriptor two.

Scaffolding

The learning of new concepts and skills is well supported. Scaffolding in the form of text-based suggestions: *Playing a Two-Note Slur* (Hal Leonard, p. 28); the provision of finger numbers; *Scottish Air* (Hal Leonard, p. 38); written reminders "prepare to move left hand" in the song, *Canyon Echoes* (Hal Leonard, p. 65); and other hints are provided in 45% of the book. The earlier sections of the method are more heavily scaffolded than later sections, thus, 55% of the method book does not include scaffolding in any of the forms described above. Figure 41 provides a summary of each descriptor of category four illustrating the degree to which the social aspects of constructivism, discussion, collaboration and scaffolding are facilitated.

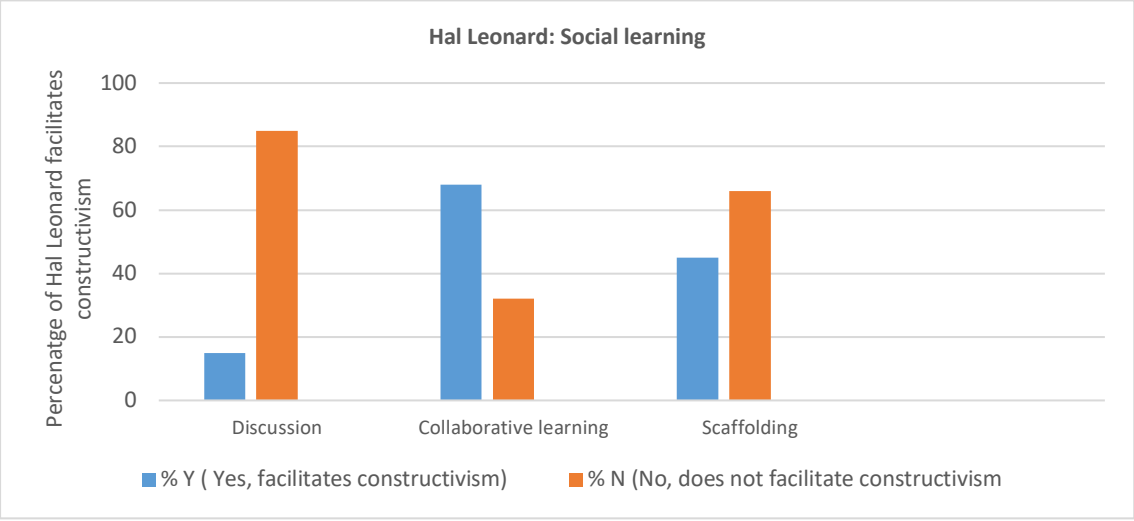

Figure 41: Social learning (Hal Leonard).

Category five: the focus of learning

Self-reflective and self-evaluative

The provision of creative tasks facilitates a degree of student self-reflection and self-evaluation. Creative tasks such as improvisation, harmonisation and composition require the student to make musical choices which she or he will consider successful or unsuccessful, thus, requiring a degree of self-evaluation and self-reflection. In a small way, the creative options provided in 8% of Hal Leonard facilitate the student's self-reflective and self-evaluative skills. The remaining 92% of the materials do not enable the student to self-reflect or self-evaluate her or his own performance, practice strategies and development. Figure 42 provides a summary of descriptor one.

Student ownership of the learning

Descriptor two, student ownership of learning reflected a similar degree of facilitation as descriptor one. Less than a tenth (8%) of the activities incorporated in the Hal Leonard method facilitate student ownership. There are no options for the student to skip any of the learning content, omit tasks, or alter the sequence of learning. Apart from the creative tasks, which necessitate a degree of student ownership, additional repertoire options, alternative tasks and substitute exercises, from which the student may choose, are not provided in the method book evaluated. The majority of the method (92%) does not facilitate student ownership. Figure 42 provides a summary of descriptor two.

Goal setting

Goal setting is not overtly or explicitly encouraged in the Hal Leonard method. Achievement goals are pre-determined by the authors in terms of the technical skills, musical concepts and performance repertoire that comprise the book. Improved music reading ability, the performance of new repertoire and the acquisition of specific technical skills become the goals for each successive lesson. Progression through each unit, the attainment of each skill and completion of each learning task, are the goals set by the method book authors. In the context of constructivism, the facilitation of goal setting the Hal Leonard rates N for 100% of the method. Figure 42 provides a summary of each descriptor of category five.

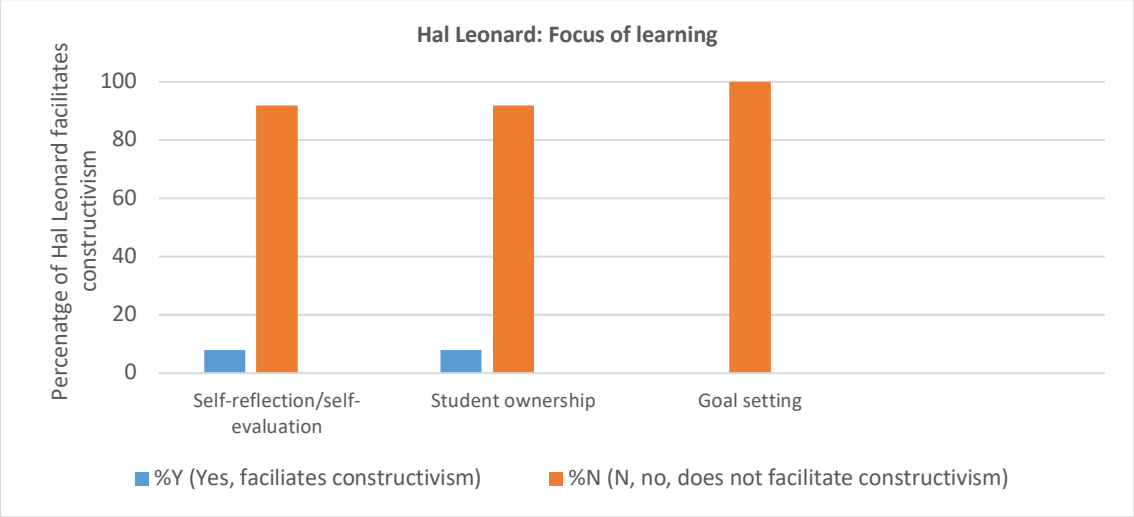

Figure 42: The focus of learning Hal Leonard

Summary: Hal Leonard method book

The Hal Leonard method facilitates some aspects of constructivism including:

- very strong accommodation of the learner's personal cognitive lens, for the student with a preference for visual, kinaesthetic learning styles (over 90%);
- moderately strong use of the read/write learning style (60%);
- strong recognition of the student's age, stage and daily experiences in the structure of the learning (over 70%);
- moderate use of prior learning as a foundation for new learning (over 50);
- moderate facilitation of the learner's personal cognitive acts, in relation to the application and transferal of knowledge (over 50%);
- strong support for social learning in terms of collaborative tasks (over 60); and
- scaffolding of the learning, in the form of additional, temporary support, provided in almost half the material (over 40%).

Aspects of constructivism that are under-represented or not facilitated in the Hal Leonard method include:

- mild support for aural learning (less than 20%);
- limited facilitation of student-centred learning (less than 10%), with a pre-dominance of instructional and directive approaches used throughout the method;

- inadequate inclusion of tasks related to the personal cognitive acts of the individual, specifically, the facilitation of questioning and analysis processes (less than 10%);
- no facilitation of problem solving skills;
- some use of discussion as a social aspect of learning (less than 20%);
- limited facilitation of the process of learning in terms of encouraging self-reflection, self-evaluation and student ownership (less than 10%); and
- no facilitation of student goal setting in any of the method book activities.

Supersonics Piano Method, Level One by Daniel McFarlane

Background and context

The *Supersonics Piano Method, Level One,* by Australian, Daniel McFarlane will hence forth be referred to as *Supersonics*. McFarlane (2019), explains that he started working on the *Supersonics* method in 2017 in response to teacher requests (Private email to researcher). According to McFarlane (2019), the sequence of concepts in *Supersonics* follows the progression he has used in his own teaching over the last 20 years (Supersonics Website, 2019). He explains that he wanted the reading and technical progressions to be as smooth as possible. Prior to the creation of the *Supersonics* method book, McFarlane researched existing piano methods and was influenced by the technical approaches of the Russian School. The development of rhythm and musicianship in the *Supersonics* method is shaped by the work of Kodaly and Dalcroze (McFarlane, 2019, private email to researcher). Modern technology also allowed the inclusion of online materials for each unit of study, which can be accessed by the student to support her or his learning at home.

Eleven modules of study are provided in the *Supersonics* method. At the start of each module McFarlane includes a one-page text-based description of the specific technique or techniques that are the focus of the unit. The text-based information is supported via online materials that demonstrate and explain each technical skill providing support for the student to access at home or during the piano lesson.

Unlike the four American method books, McFarlane does not commence the method with a plethora of diagrams related to keyboard geography, pictures of the hands showing finger numbers or drawings of correct posture. The large quantity of text typically found in method books to explain notes values, the stave, note names and other aspects related to

reading of music is not included in *Supersonics*. McFarlane (2019) assumes that the piano teacher has the skills and means to introduce, explain and teach students the core music concepts as needed throughout each unit.

Module one includes one page of text comprising basic information regarding the wrist, joints, fingers, posture and the introduction one basic technique, described as *rocket launch*. A number of short, simple melodies are provided for the right and left hand alone. Basic notational values such as semibreve, minim, crotchet, the time signatures of 4/4 are used in eight songs and one creative task with the option of an online tutorials for further technical instruction.

Module two introduces the slur and the lift off, or arm weight technique in the text-based introduction. The time signature of 3/4 and playing hands together are included in the 13 songs and one creative activity which comprise the unit. In module three, staccato technique described by McFarlane as *blast off*, is introduced along with the crotchet rest. Folk songs, traditional songs and pedagogical repertoire (songs composed by the author for teaching specific skills) are provided as a vehicle for learning the new concepts and skills. Module four focuses on right and left hand co-ordination, revisits 3/4 time and introduces the flat symbol through a range of songs that include two traditional songs and one creative task.

Module five introduces the reading of four joined quavers, repeated notes, syncopation, reading seconds through several songs in 4/4 and one creative task. In module six the technique McFarlane describes as *radar wrist*, the note of A♭ and improvisation using C and G in the bass are introduced through pedagogical four songs, two traditional folk songs and one creative task. Module seven focuses on the technique of passing over the thumb (finger tricks), dotted crotchet patterns, the re-use of previous techniques, addition of bass using three songs, two traditional songs and one creative task. In module eight previously learnt skills are consolidated including: time signature 3/4, crotchet, quaver, staccato, the flat symbol, semibreves in bass, hands together, imitation. There are six songs, two traditional songs and one creative task provided in module eight.

Module nine re-focuses on staccato playing (*blast off* technique), the development of left/right hand independence, slurs, rests and accents. There are five songs and one traditional song provided. Module 10 introduces harmonisation, revises quavers, sharp, flat, chord symbols, intervals of fifths and thirds. Seven songs and three traditional songs are included. Module 11 introduces the technique of rotation (*robot wrist*), focusing on alternating quavers

over an interval of a fifth, the chords of C, Em, Am and G, the performance of six songs, some left-hand improvisation and the reading of simple chord charts. A one-page dictionary summarises the terms introduced throughout the course.

The *Supersonics* method stands apart from the other four methods. First, it is an Australian created and published method. Second, all repertoire in the 11 modules are in C position. Third, there is a conspicuous absence of textual explanations, pictures, and diagrams, implying that the teacher will provide these as needed to assist student learning. Fourth, there is a specific focus on performance techniques. Although the *Supersonics* method encompasses several of the concepts and skills also covered in Bastien, Faber and Faber, Alfred's and Hal Leonard, it is the only method that does not include copious amounts of text-based information, a plethora of diagrams, the use of multiple hand positions, or the promotion of a specific reading approach. Neither the middle C, intervallic or hand position reading methods are featured in the printed materials. However, like the other four method books *Supersonics* provides a carefully sequenced program of instruction that emphasises reading musical notation, the development of foundational technical skills and the performance of varied repertoire selections.

Supersonics method is supported by an extensive library of online materials. Each book comes with a code that provides access to additional resources including sheet music, videos and audio files. As stated, it was outside the scope of the study to complete an analysis of the online materials, however a brief search of the printed on-line materials suggests that the *Supersonics* method examined in this research is representative of the materials.

CET application: *Supersonics*

Category one: the approach to learning, the learner's personal cognitive lens

VARK learning styles

The CET assessment of the visual learning style as it is used in the *Supersonics* proved problematic. Applications of the CET explored the printed materials alone of a single method book, thus, the delimits of the CET preclude counting the visual learning incorporated in the online video demonstrations provided to support student learning. The absence of the other visual mediums such as diagrams, arrows and pictures, commonly used in visual learning, in combination with the exclusive use of note reading as a means of learning basic pianistic skills and musical concepts, renders the Y and N ratings ambiguous. As previously mentioned, the *Supersonics* method does not include diagrams of keyboards,

pictures of the hands with finger numbers, drawings or illustrations to communicate concepts and skills. However, pianistic and music reading skills are developed and refined through the decoding of musical symbols and the varied music notation used in different repertoire. The decoding of music notation is a process that entails the use of a visual learning style. The extensive use of music notation and musical symbols was ultimately considered, as per the delimits, to provide support for the visual learner in 91% of the method.

Each of the 11 modules includes a one-page, text-based introduction describing the technical skills and concepts that are the focus of the module. The reduced frequency and number of reading and writing activities incorporated in the method book renders limited accommodation of those learners who prefer a read/write learning style. A total of 10% of the method includes written tasks or reading as a pathway to learning.

The *Supersonics* method is very physical with 90% of the book dedicated to repertoire through which the student learns the skills and concepts related to the initial stages of piano playing. The printed components of method alone do not directly use aural learning, however, ten of the 11 modules include improvisational tasks that utilise a degree of aural learning. Although the online videos are not included in the delimits of the CET, the provision of the online audio-visual material may provide an additional level support for the aural learner. An application of the CET, which explores the printed materials alone reveals that 9% of the method book accommodates the aural learner. Figure 43 provides a summary of the descriptors in category one, the learner's cognitive lens and the degrees to which different learning styles are accommodated.

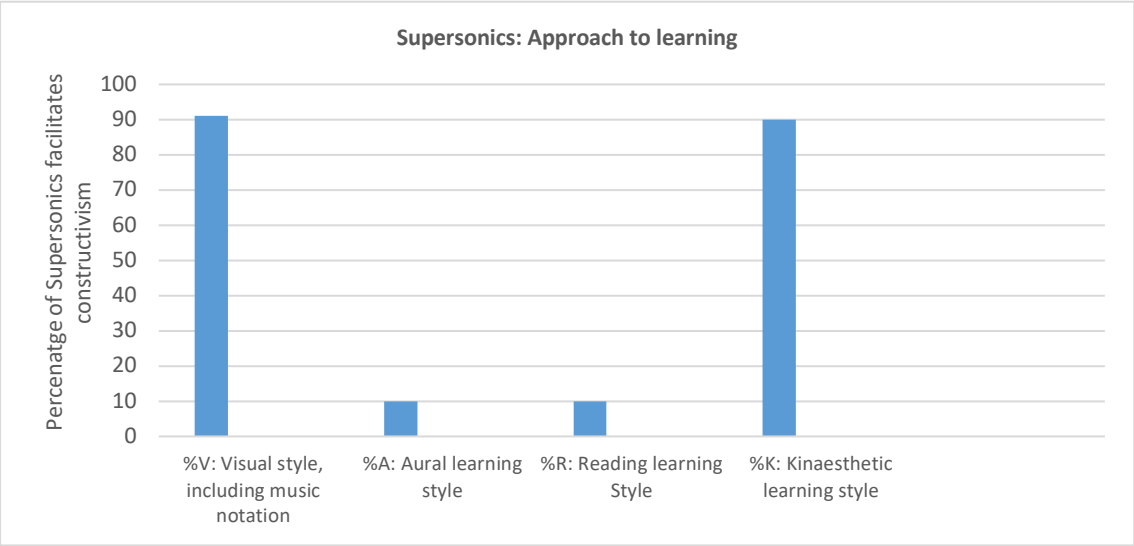

Figure 43: The approach to learning (Supersonics).

Category two: the structure of learning tasks

Relevance

The relevance of the *Supersonics* method to the older beginner's daily experience, age and stage predominantly occurs via the repertoire selection. Song titles referencing school, basketball, games and other daily activities and genre songs imitating rock, pop and jazz connect the musical learning to the some of the student's daily experiences form the core of the method. The inclusion of traditional folk songs from the Anglo-European tradition, *Mary Had a Little Lamb*, *Hot Cross Buns* and *Twinkle, Twinkle Little Star* reflect the author's intent to provide familiar melodies that the student can learn.

Supersonics includes extensive repertoire with each piece contributing to the development of basic piano technique. One page of text is used at the beginning of each module introducing the technical focus for that module. The minimal use of text-based information, absence of pictures, diagrams and other symbols often included in other method books results in an uncluttered page. A clear, clean page enables a focus on the printed music and may be more appealing to the older beginner. The *Supersonics* method looks more like a volume of music rather than a method book which reflects a fresh approach to the presentation of learning materials for older beginners.

The *Supersonics* method facilitates constructivism, in terms of relevance to age, stage and daily experiences in 77% of the method. This is achieved through repertoire choice and in part, the presentation of the materials. The remaining 23%, which includes a range of pedagogical repertoire, lesser known classical works and text based information was deemed less relevant to the student's age, stage and daily experiences. Figure 44 provides a summary of descriptor one.

Prior learning

The *Supersonics* method does not overtly link students generalised knowledge with new skills but does assume that the student has acquired by the age of 12 the ability to read text, knowledge of left and right hands, an understanding of higher or lower, and the ability to count. The method book is thoughtfully and carefully structured. Repertoire is presented sequentially to match the skill, technique and musical concepts that are the focus of each module. Skills and concepts from the earlier modules often provide a basis for the new concepts and skills introduced later in the method, such as *Hot Cross Buns* presented in

module three (*Supersonics*, p. 31[5]) and re-used as a basis for new learning in module five (*Supersonics*, p. 40). Links between the skills and concepts covered in earlier units of work with new learning covered in later modules is evident in 92% of the method. The use of prior learning is also evident via the use C position for almost all the repertoire provided in the method. There is no direct link to prior learning as a basis for new learning in the remaining 8% of the method. Figure 44 provides a summary of descriptor two.

Student-centred learning

The allocation of a Y or N rating for this descriptor in relation to the *Supersonics* method was difficult due to the lack of text-based content. In some methods text-based content generally places the direction, sequence and pace of learning in the control of the author of the method book and by proxy, the teacher. The scarcity of text, and total absence of practice directions and explanations allows for the learning to be either student-centric or teacher-dominant. Therefore, the following process was used to facilitate an evaluation of this descriptor consistent with those made of the other four methods.

A small number of creative activities in the form of improvisation and composition tasks, included in the method provides clear opportunities for student-centric learning. The Y rating for 10% of the *Supersonics* is in accordance to the delimits previously mentioned. The provision, by the creator of the *Supersonics*, of a page of instructional content per module, results in a clear N for these sections of the method. This measure reflects the delimits which define text-based directive and instructional approaches as forms of teacher-led, teacher directive learning. The absence of additional explanations, instructions and directions in *Supersonics* therefore, may provide opportunities for student-centred learning, but this cannot be verified as it depends on the teacher's approach. Thus, the remaining 90% of the method was allocated an N. This is an assumption generated from the delimits which describes an N rating as an absence of tasks that overtly facilitate student-centric learning. Figure 44 provides a summary of each aspect of category two, the structure of learning.

[5] *Supersonics* is listed in the references under the author, McFarlane, D. (2018). *Supersonics piano method: Level one.* Queensland, Australia: Supersonics Piano Pty Ltd. To assist in the clear and simple presentation the CET results, all quotes and citations will be described using the title of the method instead of the author.

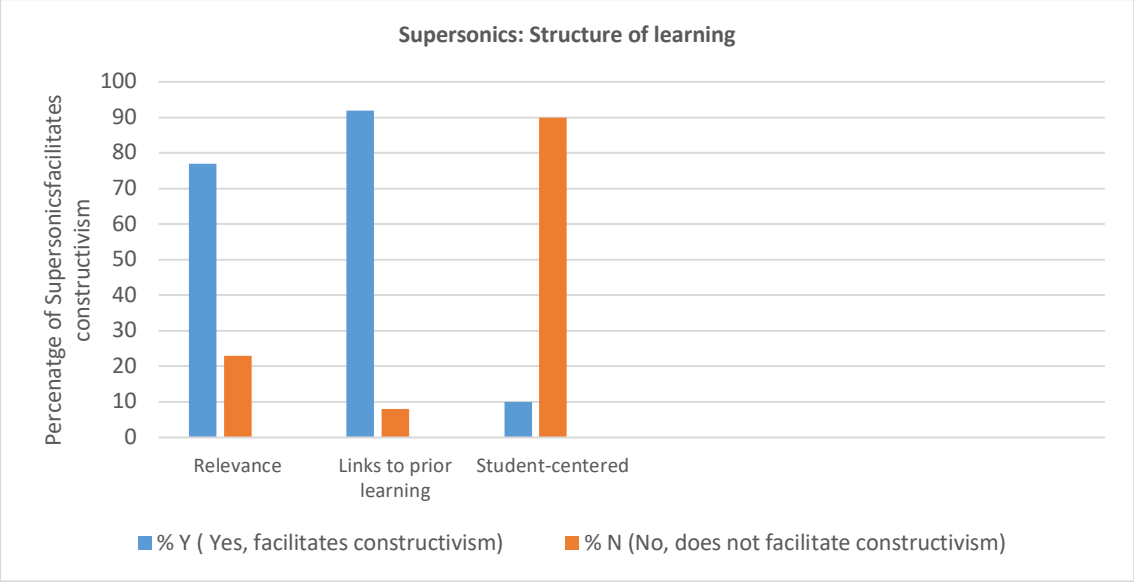

Figure 44: The structure of learning (Supersonics).

Category three: cognitive learning

Questioning and analysis

Supersonics is primarily a collection of carefully sequenced repertoire. No questioning or analytical tasks are included in the method and this aspect of constructivism is not facilitated by the materials alone. While the absence of question and analysis tasks does not preclude the inclusion of such activities by the teacher, the CET assessment applies to the printed materials alone. Thus, the content of the method rates 100% for N in terms of questioning and analysis tasks. Figure 45 provides a summary of descriptor one.

Application and transferal of skills and knowledge

The application and transferal of skills and knowledge is facilitated in 9% of the *Supersonics* method mostly through a small range of creative, improvisational and compositional tasks included in the method. Occasional exercises that include the invention of a bass line and harmonisation are occasionally incorporated within a unit of work and each module concludes with a creative task. The remainder of the method comprises varied repertoire selections. According to the delimits, 91% of *Supersonics* rates an N for the application and transferral of knowledge. Figure 45 provides a summary of descriptor two.

Problem solving

There are no tasks provided in the *Supersonics* method that specifically require, or facilitate student problem solving skills. It is inevitable that the beginning student will encounter problems. The dearth of supportive pedagogical, instructive or explanatory text

suggests that either the problem solving will occur via teacher feedback and critique, or that students encountering problems will ask for help. The absence of any material that aids the development of problem solving skills results in a 100% N for the *Supersonics* method. Figure 45 provides a summary of the degree to which questioning, analysis, application and transferal of knowledge and problem solving, is facilitated.

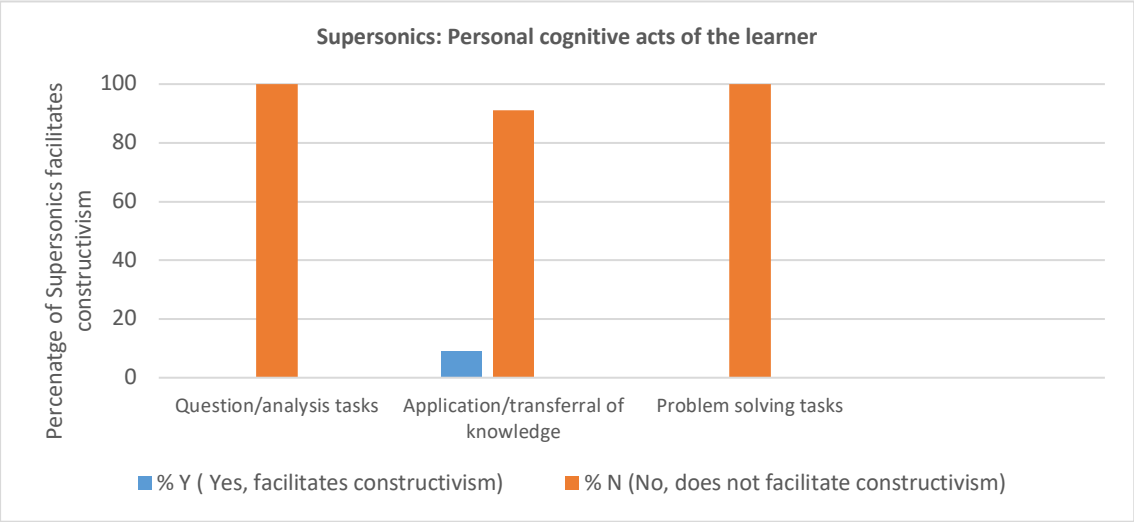

Figure 45: Cognitive learning (Supersonics).

Category four: social learning

Discussion

The *Supersonics* method is primarily a collection of performance pieces (90%) with instructive text provided in the remaining 10% of the book. There is no facilitation of discussion in any part of the materials, resulting in 100% N for this descriptor of constructivism. Figure 46 provides a summary of descriptor one.

Collaborative learning

Collaborative learning is not a strong feature of the *Supersonics* method. There are some pieces which include a call and response activity but no duet parts are included in the book. The small number of creative tasks may allow for some degree of collaborative learning resulting in a 9% Y rating for the method. The majority of the *Supersonic* (91%) is dedicated to individualised learning and does not facilitate the collaborative learning aspects of constructivism. Figure 46 provides a summary of descriptor two.

Scaffolding

Scaffolding, the provision of additional, temporary support for the learning of new skills and concepts is almost non-existent in the printed components of the *Supersonics*. The

online video demonstrations and explanations may offer scaffolded learning for some students, but an evaluation of the online materials adjunct to the method are outside the scope of this research. The bulk of the scaffolding provided from the printed materials alone exists in the one-page explanations for each module of the method and the occasional inclusion of finger numbers for selected pieces of music. A total of 9% of the *Supersonics* facilitates constructivism through the provision the aforementioned forms of scaffolding. The remainder of the method requires the teacher to scaffold the learning as needed. Subsequently, 91% of the materials rate an N. Figure 46 provides a summary of each descriptor in category four.

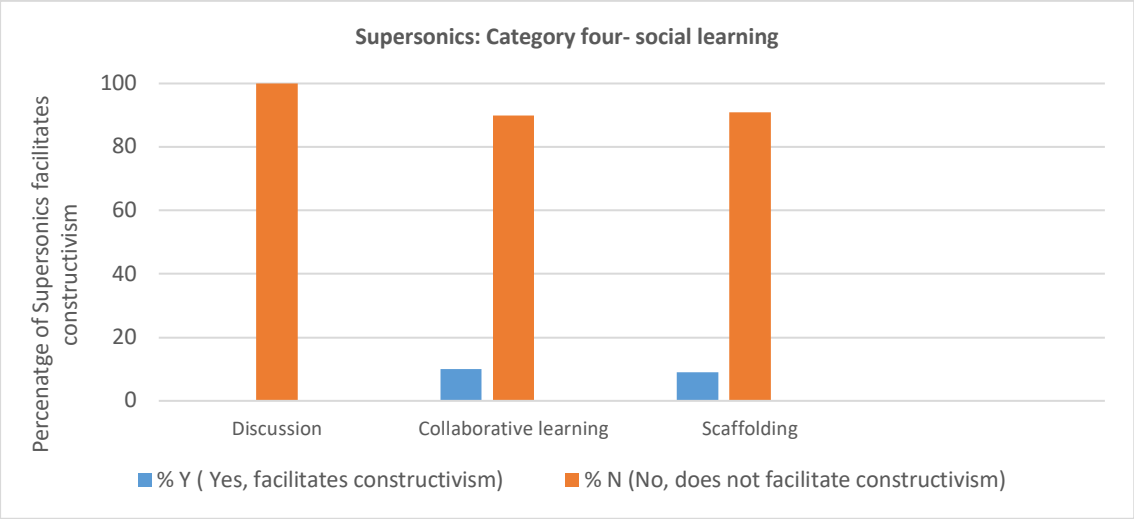

Figure 46: Social learning (*Supersonics*).

Category five: the focus of learning

Self-reflection, self-evaluation

There are no explicit tasks or activities that facilitate student self-reflection and self-evaluation. The printed components of the *Supersonics* offer no prompts for the student to check, observe, listen or notice in relation to her or his performance, technical development or progress. The creative tasks included in at the conclusion of each module offer some scope for self-reflection and self-evaluation resulting in a Y for 9% of the *Supersonics*. The remaining 91% of the method rates an N. Figure 47 provides a summary of descriptor one.

Student ownership of the learning

In the *Supersonics* method, student ownership is primarily facilitated through the provision of creative and improvisational activities. In such tasks the student has choice over various aspects of the learning including tempo, length of piece, choice of rhythms, key and to some degree, style. A small number of creative opportunities facilitate student ownership

as a facet of constructivism in 9% of the method. The remaining 91% of the method does not clearly facilitate this aspect of constructivism. There are no options from which the student may choose the repertoire, sequence, pace, or style of learning. Figure 47 provides a summary of descriptor two.

Goal setting

There is no clear or direct evidence for student goal setting and goal monitoring in the *Supersonics* method. The format comprises an eleven-module structure. All the teaching discourse is provided on the first page of each module with supplementary material provided online. Opportunities for student goal setting in relation to repertoire, piano skills, technical development and creative music making are non-existent in the printed materials. The *Supersonics* rates an N for 100% of the method, and does not facilitate constructivism through student goal setting. Figure 47 provides a summary of category five.

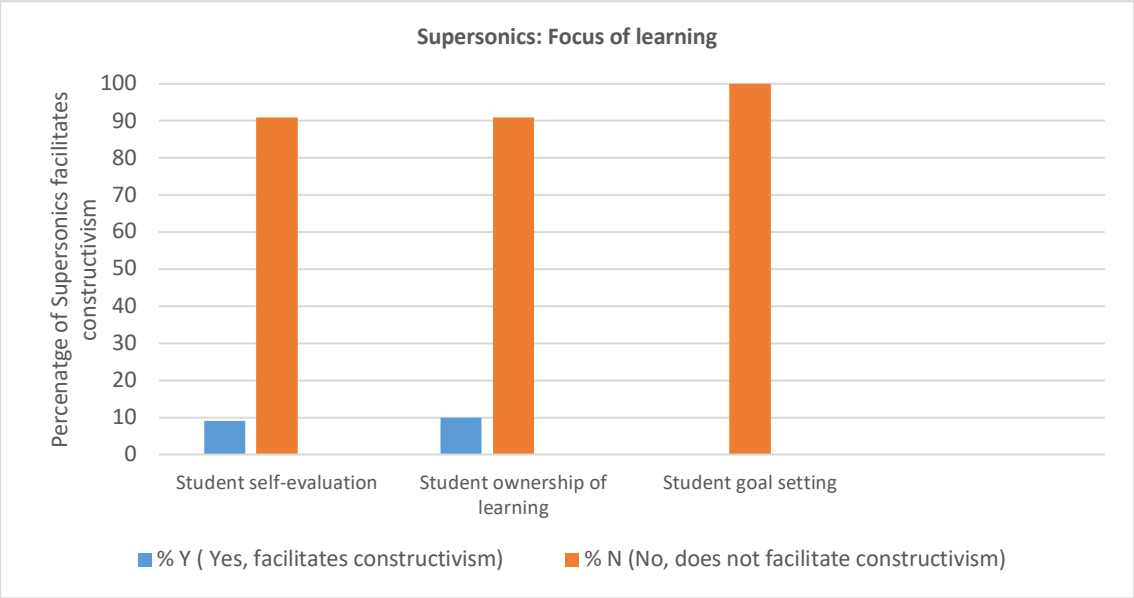

Figure 47: The focus of learning (*Supersonics*).

Summary of *Supersonics* method book

The *Supersonics* method facilitates some aspects of constructivism including:

- very strong accommodation of the learner whose personal cognitive lens prefers a visual or kinaesthetic learning style (over 90%);
- strong recognition of the student's age and stage in terms of presentation and language, and relevance to the Australian student's daily experiences chiefly

through repertoire that includes Anglo-European folk songs, jazz, pop and boogie styles (over 70%); and

- extensive use of prior learning as a basis for new learning in the structure and sequence of the materials (over 90%).

Aspects of constructivism that are absent, under-represented or indeterminable in the *Supersonics* include the following:

- limited support for the student's whose personal cognitive lens includes a preference for an aural or read/write learning style (10%);
- sporadic opportunities for student-centric learning (less than 10%);
- limited facilitation of the application and transferal of knowledge (less than 10%);
- no evidence of questioning, analysis;
- no facilitation of problem solving;
- no evidence of social aspects of learning related to discussion;
- minimal inclusion of collaborative learning and scaffolding as part of the social dimensions of learning (less than10%);
- limited facilitation of student self-reflection, self-evaluation and student ownership of learning (less than10%); and
- no facilitation of the process of learning as it pertains to student goal setting.

Summary

This chapter presented the results of phase two, part B, the CET assessments of five method books. The five methods commonly used with older beginners were identified from the survey in phase one. The methods created by Faber and Faber, Alfred's, Bastien, Hal Leonard and the *Supersonics* method were evaluated by an application of the CET, which aimed to determine the degree to which each method facilitated constructivism in the piano lesson. The following chapter will draw together the data from phase one and two, present a discussion of the findings and answer the primary research question and sub-questions. Conclusions and recommendations for further research will complete Chapter Six.

Chapter Six: Discussion and Conclusions

This chapter will answer the over-arching research question: to what degree do the teaching materials, chosen by Australian piano teachers for older beginning piano students, facilitate constructivist learning? A brief discussion of the survey results will address the three sub-questions that define the parameters and scope of the central research question.

- What piano teaching materials and method books are most often used by Australian piano studio teachers when teaching older beginners (aged 12 to 17 years)?
- What do Australian piano teachers consider to be the strengths and weakness of these resources?
- In what ways do Australian piano teachers use their preferred materials with older beginner students?

The primary research question will be answered by a discourse of the results of the CET examinations of five teacher preferred method books. The conclusions of this research are drawn by the insights gained from the research of phases one and two. The limitations of this project are acknowledged. Recommendations for further research related to constructivism, teaching resources for older beginners and studio piano teaching in Australia will complete the chapter.

Survey of Australian Studio Piano Teachers

Survey responses indicate that participating teachers share a keen interest in teaching piano to students of all ages. Statements reiterated across a number of survey questions reveal five key themes.

- *Relevant repertoire*: the requisite that repertoire is relevant and accessible.
- *Pedagogy*: the importance of student-centric teaching to ensure that the structure, sequence and pace of learning is suited to the student's learning needs and abilities.
- *Student ownership and student goals*: the achievement of successful student outcomes.

- *Teaching content*: a need to more equitably include technique, aural, improvisation, composition, theory, music reading and familiar repertoire in teaching materials for older beginners.
- *Motivation*: the challenge of stimulating student motivation.

Relevant Repertoire

Teachers reported that learning was more effective when the content and repertoire is relevant, familiar or of the student's choice. Repertoire choices for the older beginner was the most common response from teachers in relation to both the positive and negative features of participant preferred teaching materials (Questions 16 to 18). The more general responses across these three questions described a need for greater quantities of relevant repertoire, which included: "more impressive pieces"; "more modern music"; "relevant music" "interesting pieces"; "appealing songs" and "more contemporary pieces". Such vague comments created ambiguity in the data. Relevant, interesting and impressive are open to subjective and personalised interpretations. Contemporary and modern appellations may describe pop songs, jazz pieces, well-known classical music, neo-romantic art music, music from films or twentieth century minimalistic styles. Despite the nebulous nature of these statements, the data indicates that the selection of suitable repertoire is of foremost importance to teachers of older beginners.

Many participants also provided comments emphasising the requisite that repertoire is familiar and appropriate to the older beginner student. These comments are difficult to interpret as music that is familiar and appropriate will vary from student to student. Frequent mention was made of the scarcity of beginner level pieces in the more relatable and accessible jazz, rock, pop, film music and blues genres. Some comments linked appropriate and relevant repertoire with the motivational significance of allowing the student to learn songs with which they are familiar. Copyright prohibits the arrangement of popular songs, musicals and film music often preferred by the student thus, teachers cited the use of several different books and internet sourced songs to supplement method book repertoire in order to make the learning relevant and appropriate, use familiar music, or to accommodate the student's choice of repertoire. Overall, the survey responses provide evidence that finding relevant, familiar, accessible repertoire, suited to the older beginner's skill level, is of paramount interest and concern to Australian piano teachers.

Pedagogy

Respondent comments to survey questions related to the choice and the use of teaching materials (Questions 11, 13, 15 and 18) indicate that many teachers understand the individualised nature of learning. Although the phrase 'learner's personal cognitive lens' was not specifically used by participants, responses demonstrated that many Australian teachers are cognizant that each student's learning style is unique. The majority of participants referenced the need for the teacher to individualise student learning and accommodate the student's ability, practice routine and commitment to music. Phrases used several times by different respondents describing aspects of teacher practice include: "accommodate different learning styles"; "adapt teaching materials"; to "suit individual learning needs"; and to "customise the learning".

In order to "tailor" the teaching to suit the student, many teacher statements described the simultaneous use of more than one method book (Questions 11 and 13). This suggests that most teachers do not restrict older beginner students to one method book or a single set of teaching materials. Responses further illustrate that the choice of teaching materials for older beginners is primarily influenced by the teacher's determination to meet the student's needs, enable progress and achieve positive outcomes. Additionally, survey participants mention altering the sequence or pace of learning from that provided in the method book in order to accommodate personal learning needs. The use of multiple method books or a change in the sequence and pace from that provided in the method book was cited a means of either accelerating, remediating or motivating student progress. Responses describing the reasons why teachers used multiple books or parts of books suggests that teachers are governed by a desire to:

- meet the perceived needs and interests of each student;
- effectively accommodate each student's personal learning style;
- choose repertoire that stimulates and motivates the student;
- use pedagogy that facilitates student progress; and
- support student learning.

Student ownership and goals

Statements made in relation to student ownership and learning outcomes were usually connected to the achievement of the student's goals. Frequent mention was made of student ownership and goal setting in terms of:

- repertoire choice;
- successful outcomes;
- student motivation; and
- continued learning.

Many teachers described the use of multiple method books, internet sourced repertoire and original compositions as a means of facilitating student ownership and enabling goal achievement.

Teaching content

Analysis of participant responses revealed a consensus regarding the core content areas required for learning piano. Aural skills, note reading, technique and theory were described as foundational skills and knowledge for playing the piano. Teachers stressed the need for these core skills to be covered more equitably, frequently and in more engaging ways than provided by the current method books. Teaching content, in terms of the deficit number of tasks related to aural learning, was identified as a weakness by many participants. Comments declaring a need for the inclusion of a greater number of auditory based activities included the specific mention of improvisation, playing by ear, transposition, harmonisation, and the realisation of music charts and lead sheets.

Responses revealed persistent concerns in relation to the content of the teaching materials available for older beginners (Questions 17, 18 and 29). A larger quantity of tasks involving aural activities, chords, creative music making, composition, technique, sight reading and theory were mentioned as requisite teaching content for the older beginner. Additionally, an imperative to include a greater number of jazz, pop and contemporary styles suited to beginner skill level was reiterated in teacher responses.

Motivation

Student motivation to learn, practice and continue piano lessons was a common thread connecting many comments. Responses often related to student engagement, student interest, student choice and ways to inspire students. Statements intimated that the choice of teaching

materials, method books, repertoire, teaching content, learning sequence, and pace were considered in terms of facilitating student motivation.

Likewise, comments describing the adaptation of method books, the addition of supplementary materials and repertoire, and modifications to the sequence and pace of method book content were often associated with student motivation. The majority of participants indicated they were constantly seeking relevant, contemporary, modern, interesting material and repertoire to motivate their students. Overall, responses demonstrate that the teachers' choice of teaching materials is influenced by a commitment to effectively motivate the student's learning.

Summary

The teacher's choice and use of teaching materials and method books for the older beginner student is influenced by the degree to which:

- the repertoire is relevant, engaging and accessible;
- the pedagogy is student-centric and suited to the student's needs;
- the teaching content pertinent to the student's goals and supportive of student ownership; and
- the material is motivational.

Survey respondents exhibited a deep commitment to their students, an enthusiasm for teaching piano and an interest in enriching their pedagogical skills. Although some comments related to repertoire, method books and teacher practice tended to be vague, teacher statements were predominately student-centric. Observations and statements made by participants throughout the survey reveal a cohort of teachers whose choice of teaching materials for older beginners is both considered and informed. The survey results indicate that the Australian piano teacher's rationale for their choice of teaching materials is guided by the following attributes: how best to facilitate student progress; a strong desire for the student's continued enjoyment of learning; and an awareness that effective pedagogy promotes positive student outcomes.

CET Assessment of Five Method Books for Older Beginners

The approach to learning: the learner's personal cognitive lens

The degree to which the learner's personal cognitive lens, is supported in the five piano methods predominantly used by Australian teachers with older beginners was explored in category one of the CET. The VARK learning styles were chosen to describe a range of

cognitive lenses. The CET examined the frequency and manner in which visual, aural, read/write and kinaesthetic learning styles are utilised in each method book.

A visual learning style dominates all five of the method books. Each method uses music notation and the reading of musical symbols as a core component of, and vehicle for, acquiring pianistic skills. Diagrams, pictures, illustrations, arrows, lines and teacher demonstration are also used to provide and supplement text-based explanations and instructions, in four of the five methods examined. Bastien, Alfred's, Hal Leonard and Faber and Faber include a range of diagrams, text and other symbols in combination with the extensive use of musical notation. Hal Leonard, Faber and Faber and *Supersonics* ask the teacher to demonstrate and show the student various piano techniques. *Supersonics* omits the use of pictures and diagrams but does provide extensive repertoire for student interpretation. The student who prefers a visual learning style is well accommodated in all five method books.

The use of a read/write learning style, which incorporates text-based information and written activities ranges from 10% in *Supersonics* to almost 100% in Faber and Faber. The four American methods offer strong support for the student with a preference for a read/write learning style. Faber and Faber, Alfred's, Bastien and Hal Leonard methods use a read/write learning style through the inclusion of:

- written theory tasks;
- text-based information;
- text-based instructions and directions; and
- the inclusion of songs with lyrics.

Supersonics provides very little support for the student with a preference for a read/write learning style which is marginally accommodated by the inclusion of one page of text per module.

All five methods very strongly support kinaesthetic learners. The use of a kinaesthetic learning style: playing, tapping, singing, clapping, counting aloud, performance and physical activities, are core tasks in over 80% of each method. Examples of tasks that utilise a kinaesthetic learning style include:

- playing the white notes and saying aloud the musical alphabet (Hal Leonard, p. 11);

- clapping and counting the rhythm aloud (Bastien, p. 8);
- playing and singing the finger numbers (Bastien, p. 8);
- playing the notes B and A in the left hand using different fingers (Faber & Faber, p. 28);
- playing single line melodies in right and left hand (*Supersonics*, p. 4); and
- clapping, tapping and counting the rhythm aloud and playing the song (Alfred's, p. 19).

Students with a preference for a kinaesthetic learning style are very well accommodated in these method books.

An aural learning style is less often used in the five books evaluated by the CET. Hal Leonard and Faber and Faber utilise an aural learning style more than the other methods, but usually in the form of directions for the student to listen. Overall, the five methods generally employ less direct forms of aural learning through the inclusion of an assortment of tasks that require a measure of auditory monitoring, for example:

- directions to "listen carefully" (Alfred's, p. 21);
- instructions to "listen and let your ears guide you" (Faber & Faber, p. 82);
- transposition tasks (Bastien, p. 41) and *Shooting Hoops* (Hal Leonard, p. 71);
- harmonisation activities (*Supersonics*, p. 101);
- improvisational opportunities (Faber & Faber, p. 46), *Ad Lib* (Hal Leonard, p. 15);
- creative tasks (Faber & Faber, p. 50; Hal Leonard, p. 7); and
- the completion of an answering phrase (*Supersonics*, p. 10).

Students with an aural learning style are not strongly accommodated in any of the five method books. Despite the provision of exercises that involve a measure of aural learning, the five books incorporate aural learning in less than a third of each method. Apart from various creative and improvisational activities, other delimits such as playing by ear, recalling a melody, realising a chord progression, are not included in any of the methods. Additionally, aural related tasks are sometimes offered in smaller print at the bottom or side of the page.

It is important to note that the method books often use more than one learning style for a single task. Visual, aural, read/write and kinaesthetic learning experiences are used in various combinations throughout the five method books. The following examples illustrate

the use of bimodal (two learning styles) and multi-modal learning styles (several learning styles).

- Introducing the flat symbol (Alfred's, p. 38). This activity involves the reading of text, a written answer (R), interpretation of musical symbols (V) and playing (K).
- Staccato (Faber & Faber, p. 46). Text-based information, instruction and directions are provided (R), physical exercises are included (K) and the symbol for staccato playing is introduced (V).
- The tie (Hal Leonard, p. 42). Textual information is used to explain the tie symbol (R), the musical symbol, music notation and a diagram of the hand position for the piece, *Ocean Breezes* is provided (V), and the student is required to play the song as part of the learning (K).
- Each review unit in the Bastien method incorporates reading text and written answers (R), the use and interpretation of symbols (V) and playing (K).
- Each module of the *Supersonics* includes text to explain the next phase of learning (R), musical symbols and notation (V), and the playing of musical examples (K).
- Sound check (Faber & Faber, p. 29). The student is asked via text (R) to listen (A) and observe the accent marks (V) when they play (K) the piece.
- Music theory (Hal Leonard, p. 17). The student is presented with text-based instructions (R), asked to interpret music notation and visual symbols (V) and listen (A).
- Call and response six (*Supersonics*, p. 58). The student is asked to play and listen to an opening phrase then create an answering phrase. The task requires reading text (R), reading music notation and symbols (V), playing (K), and listening (A).
- Transposition exercise (Bastien, p. 41). The student is asked via text (R) to read the music notation (V), and play the song (K), then play the song in a new key (A, K).

An evaluation of the five method books, to determine the degree of support for the learner's personal cognitive lens described by the VARK learning styles model, reveals that students with a preference for aural learning are not readily accommodated in any of the

method books. Students preferring a visual or kinaesthetic learning style are extensively supported in all five methods. Students who are predisposed toward a reading learning style are strongly supported in four of the five methods. The use of more than one learning style on many pages of the method books suggests that students with multi- modal or bimodal learning preferences may be adequately accommodated in the five methods evaluated.
A comparison of the degree to which each learner's personal cognitive lens is accommodated in each of the five method books is presented in Figure 48.

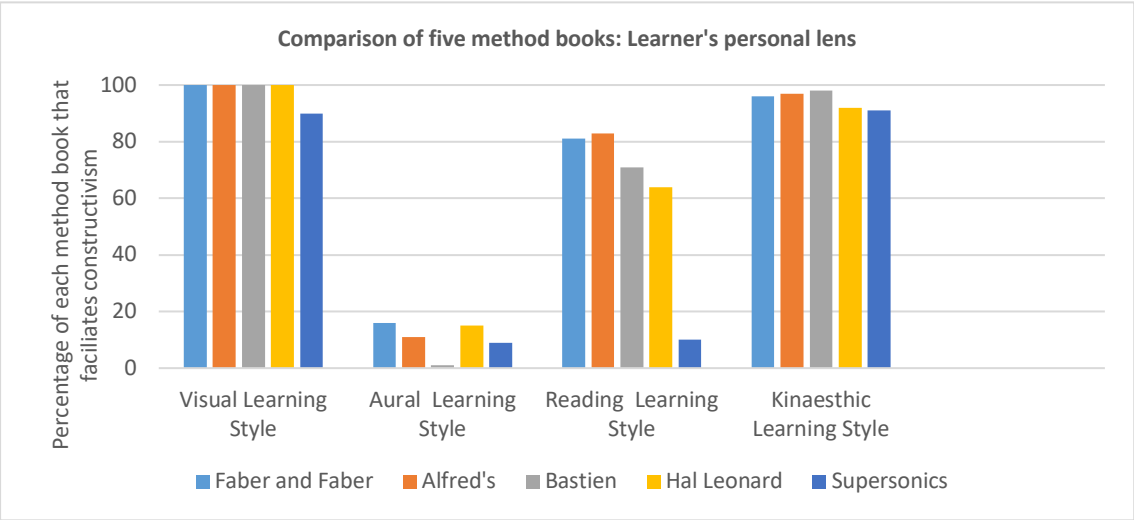

Figure 48: Facilitation of learner's personal cognitive lens in five method books for older beginners.

A CET analysis of five method book reveals a disproportionate focus on visual and kinaesthetic learning styles and to a lesser degree a read/write learning style. All five methods strongly favour visual and kinaesthetic learners. Four of the five methods support the student preferring a read/write learning style. However, despite the auditory nature of musical learning, an aural learning style is marginally used in one method and minimally accommodated in the other four methods. The infrequent use of an aural learning style by method book authors raises an important question regarding content of method books. Additional research that explores the possibilities of incorporating, in the form of printed materials, a greater percentage of tasks that use an aural learning style is an area for further study.

The structure of learning

Descriptors: relevance, prior learning, student-centred learning

The structure of the learning in terms of the degree to which new knowledge and skills are relevant to the student's age, stage and daily experiences, the use of prior learning, knowledge and skills as the basis for new learning, and opportunities for student-centred learning, were explored in category two of the CET.

An evaluation of five popular method books demonstrated a moderately strong degree of relevance to, and connection with, the Australian student's daily experiences.
An examination of each method illustrates attempts by the authors to connect piano lessons with the student's age, stage and daily experiences. The four American methods feature aspects of American culture, daily life and songs. Repertoire selections including, *Batter Up* (Alfred's) which references baseball, a popular American sport and *America* (Bastien, p. 42) indicate an endeavour of method book authors to make learning relevant and engaging to the American student.

Americanised English is used in Faber and Faber, Alfred's and Bastien. Note values and other aspects of music notation use American terms describing the crotchet as a quarter note, and the bar as a measure. Additionally, a large proportion of the repertoire included in the four American publications is drawn from traditional American folk tunes:

- *Oh! Susanna*, an American traditional song (Faber & Faber);
- *Camptown Races* an American folk song (Faber & Faber; Hal Leonard);
- *Aloha Oe,* a song referencing traditional Hawaiian melodies (Faber & Faber);
- *Hoe Down,* a reference to an American dance held in a farm shed (Hal Leonard); and
- *Clementine,* an iconic song from a classic American western film (Bastien).

Other more universal ways method book authors attempt to connect with the student are itemised below.

- Faber and Faber includes a 'getting to know you' at the beginning of the method as a means of linking musical learning with the student's daily experiences.
- Hal Leonard makes an overt connection between musical beat and the human heart beat, connecting musical learning to the student's daily experiences.

- Alfred's includes a question about the type of piano the student uses at home.

Apart from these isolated examples, connections with the student's age, stage and daily experiences are principally achieved through repertoire titles that reference daily life and the inclusion of lyrics in some songs used in the Alfred's and Faber and Faber methods. Examples of titles of songs that reference daily life include:

- *Scenic Train Ride* (Faber & Faber, p. 21);
- *Ocean Breezes* (Hal Leonard, p. 44); and
- *Happy Birthday to You* (Alfred's, p. 47).

In addition to songs that reference the daily experiences of most students, all five method books include a range of traditional, folk and nursery tunes common to the Anglo-European culture, an inheritance shared by Australia and America. Some of these songs may be familiar to the Australian student, for example:

- *Good King Wenceslas*, a traditional English Christmas carol (Alfred's, p. 44);
- *For He's a Jolly Good Fellow,* originally a French tune, popularised by Marie Antoinette (Bastien, p. 26);
- *Twinkle, Twinkle Little Star*, an English poem, later set to the tune *Ah, vous dirai-je, Maman* by Mozart (*Supersonics*, p. 75); and
- *The Donkey* which uses the tune of *Au clair de lune*, a French folk song from the eighteenth century (Alfred's, p. 31, Bastien, p. 6).

All five methods include songs that reflect a range of boogie, jazz, pop and rock genres, usually familiar to the older beginner. These styles are commonly used in music related to film, television, and radio, for example,

- *Rock Song* imitates rock rhythms and chord progressions (Alfred's, p. 25);
- *Pop School* uses pop chord progressions and tropes (*Supersonics*, p. 91);
- *The Blues* uses the 12 bar blues structure (Bastien, p. 48);
- *Sugar Foot Rag*, a ragtime piece (Faber & Faber, p. 74); and
- *Boogie Woogie*, a style clip reflecting the boogie style (Hal Leonard, p. 78).

Other repertoire included in the five method books that may be relevant to the student is drawn from traditional music of different countries, folk songs of various countries and

popular classics. Examples are listed below. It is noteworthy that there is some over-lap in the choice of repertoire provided in the five methods.

- Excerpt from the *Surprise Symphony,* Haydn (Faber & Faber; Hal Leonard; Bastien).
- *Ode to Joy*, (AKA, *Song of Joy*) Beethoven (Faber & Faber; Hal Leonard).
- *When the Saints Go Marching In* (Faber & Faber; Alfred's, Bastien).
- *Row Row Row Your Boat* (Faber & Faber; Bastien).
- *Mary Had a Little Lamb* (*Supersonics*; Alfred's Bastien).
- *Light of the Moon* (Tune of *Claire De Lune*) (*Supersonics*; Bastien).
- *Lightly Row* (*Supersonics*; Bastien).
- *Sweetly Sings the Donkey* (Tune of *Claire De Lune)* (*Supersonics*; Alfred's).
- *Aura Lee* (*Supersonics*; Bastien).
- *Brother John* (*Supersonics*; Bastien).
- *Alouette* (Faber & Faber; Hal Leonard; Bastien).
- Excerpt from *March Slav*, Tchaikovsky (*Supersonics*; Bastien).
- *Lavender Mood* (Hal Leonard; Bastien).
- *Theme* from *New World Symphony*, Dvorak (Goin' Home) (Hal Leonard; Bastien).
- *Jingle Bells* (Alfred's; Bastien).
- *Russian Folk Song* (Faber & Faber; Hal Leonard).

The visual presentation of the method books also appears to be carefully considered by the authors, each of whom acknowledge that older beginners learn differently to younger beginners (Alfred's Website, 2019a, 2019b, 2019c; Bastien Website, 2019; Piano Adventures Website 2019a, 2019b, 2019c; Hal Leonard Website, 2019a, 2019b; *Supersonics*, 2019, private email from Daniel McFarlane). Faber and Faber and Alfred's include various drawings related to the song titles and add lyrics to several pieces that describe aspects of daily life (*Rain, Rain*, Alfred's, p. 13). *Supersonics*, Bastien and Hal Leonard do not include pictures or lyrics, but use more formal, adult language in order to accommodate the older beginner.

The degree to which any of the five methods provide repertoire, music notation, music reading, theory of music, and piano technique in ways that are relevant to the student,

depends on several factors. For an Australian student, degrees of relevance are influenced by the student's ethnic background, familiarity with American culture and the shared Anglo-European tradition, family background, previous musical experiences, motivation for learning piano, the visual presentation of the method book, and the teacher's approach as shaped by the method book. The multi-ethnic composition of Australia and rapidly changing nature of twenty-first century society in combination with the vast choice of available music, renders the choice of relevant repertoire problematic. Additional research is required to make more definite conclusions related to relevance of piano method books as it pertains to the Australian student and constructivism in the piano lesson.

The CET results reveals mixed levels of relevance and age/stage appropriate content across the five method books. Figure 50 provides a graph showing the varied ways in which each method book facilitates constructivism through relevant learning experiences.

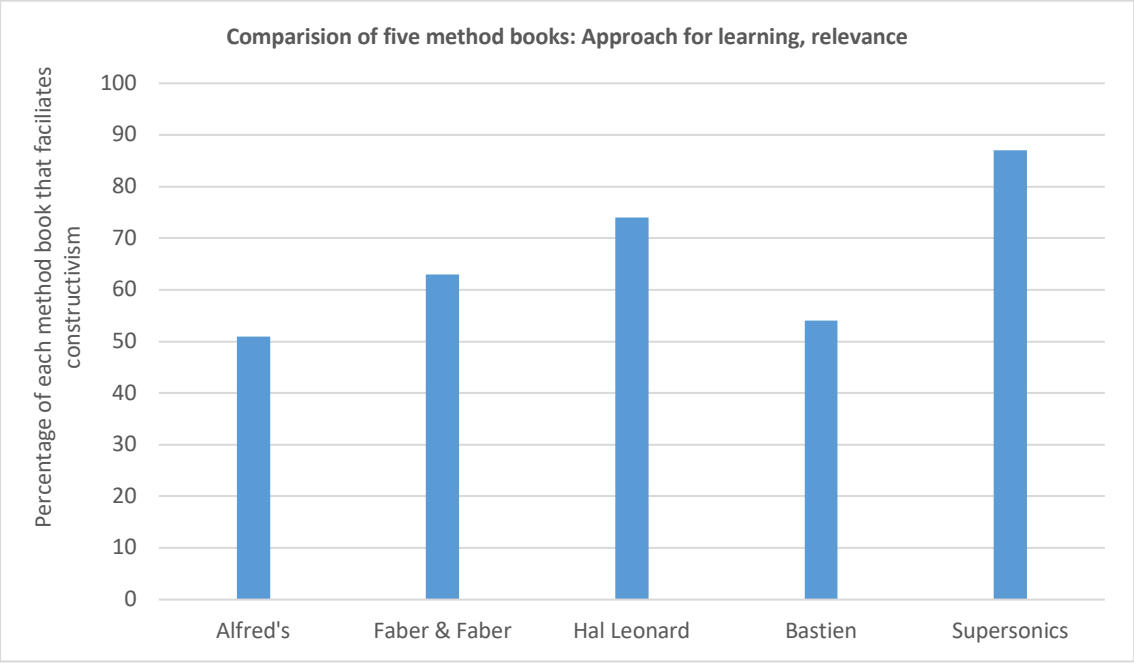

Figure 49: Facilitation of constructivism through use of relevant learning materials in five method books for older beginners.

Prior knowledge as a basis for learning new concepts and skills is used in varying degrees in all five books. Application of the CET shows that prior learning provides the foundation for new learning in over 50% of each American method and in over 80% of *Supersonics*. All five methods use a logical sequence, introducing a similar range of basic concepts as outlined in previously. The order in which foundational concepts and skills are introduced varies slightly from method to method. Apart from *Supersonics* where one new

technical skill is the focus of each module, the other method books sometimes introduce several new concepts simultaneously. The simultaneous presentation of many new skills and concepts makes it difficult to discern the degree to which prior learning may provide a basis for learning. Thus, when this occurred in the sequence of learning it was recorded as N (no, does not build on prior learning). In addition, some methods present new concepts arbitrarily without reference to prior learning. Figure 50 provides a summary of the degree to which each method facilitates constructivism through structured learning that uses prior knowledge as the basis for new learning.

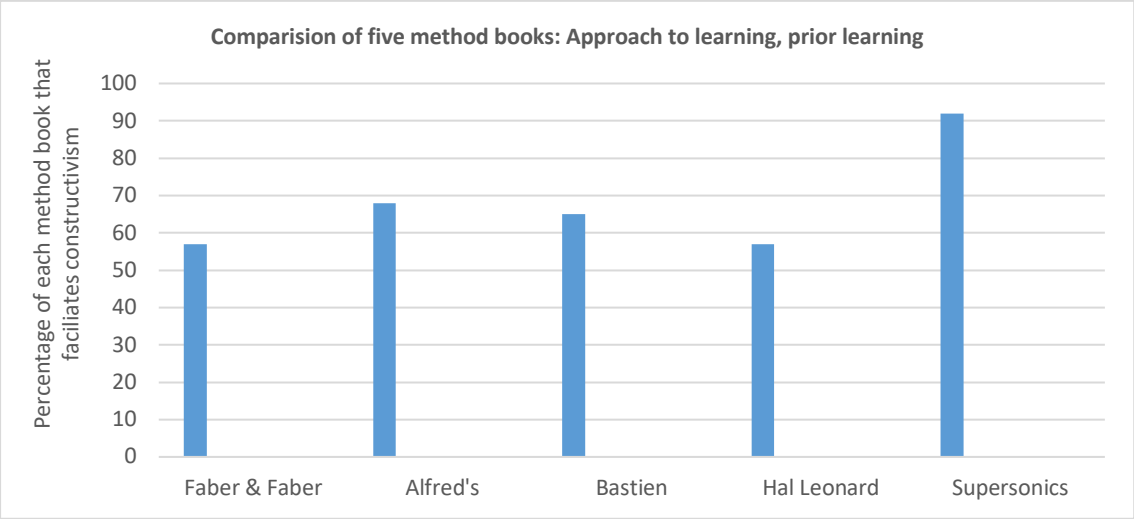

Figure 50: Facilitation of constructivism through the use of prior learning as a basis for new learning in five method books for older beginners.

The third descriptor of category two, the structure of learning, examined the degree to which the five method books facilitate student-centred learning. Alfred's is the most didactic approach of all five methods. The majority of the method is teacher-centred, teacher-led, with very few options for student-centred learning. The Bastien and Hal Leonard methods also tend towards a teacher-dominant approach and includes student-centred learning for less than a tenth of the material. In the majority of the Bastien method, concepts are presented as information to be learned and the student is frequently instructed to memorise information or learn by rote. Although Hal Leonard offers a number of *Ab Lib* options which facilitate student-centric learning the bulk of the material is instructional in tone.

Supersonics includes one creative task per unit providing small opportunities for student-centred learning. The minimal inclusion of text-based explanations renders the evaluation of *Supersonics* difficult and the results ambiguous. The *Supersonics* method allows the teacher wide discretion in regard to the way the materials are used. The absence of

text renders an assessment of the ways in which the teacher introduces and teaches new concepts and skills impossible to determine. Thus, the *Supersonics* method does not actively encourage student-centric learning to any significant degree.

Apart from the inclusion of some creative and improvisational tasks provided sporadically across the five methods, none of the books examined strongly facilitate student-centred learning. There are no options allowing the student to skip content, change the sequence of learning, or select repertoire.

Overall, the structure of learning presented in the four of the method books, tends toward a traditional teacher-led, teacher-directed approach, reflective of the master-apprentice model. This approach continues to be a common way for the student to learn the core concepts and skills for playing piano (Bautista et al., 2009). It is typified by student observation, listening, memorisation, skill practice, and the transmission of knowledge from the master (teacher) to apprentice (student). Student-centred learning demands that the student participate more actively and co-operatively in the learning process. This can be challenging as learning to play the piano requires the acquisition of a pre-determined body of knowledge and skills. In this context, McPhail (2013a, 2017) suggests a form of teacher-led, student-centred learning that requires active student responses to enable better recall and understanding. The facilitation of constructivism through studentcentred approaches in the piano learning context requires further investigation.

Figure 51 provides a summary of the degree to which each method facilitates student-centred learning. The outcomes of this part of the research raise the question of whether it is possible for a method book to facilitate student-centred learning in terms of sequence, pace, repertoire and creative music making. Further research would enable a deeper exploration into the ways a method book, or set of printed resources might support student-centred learning.

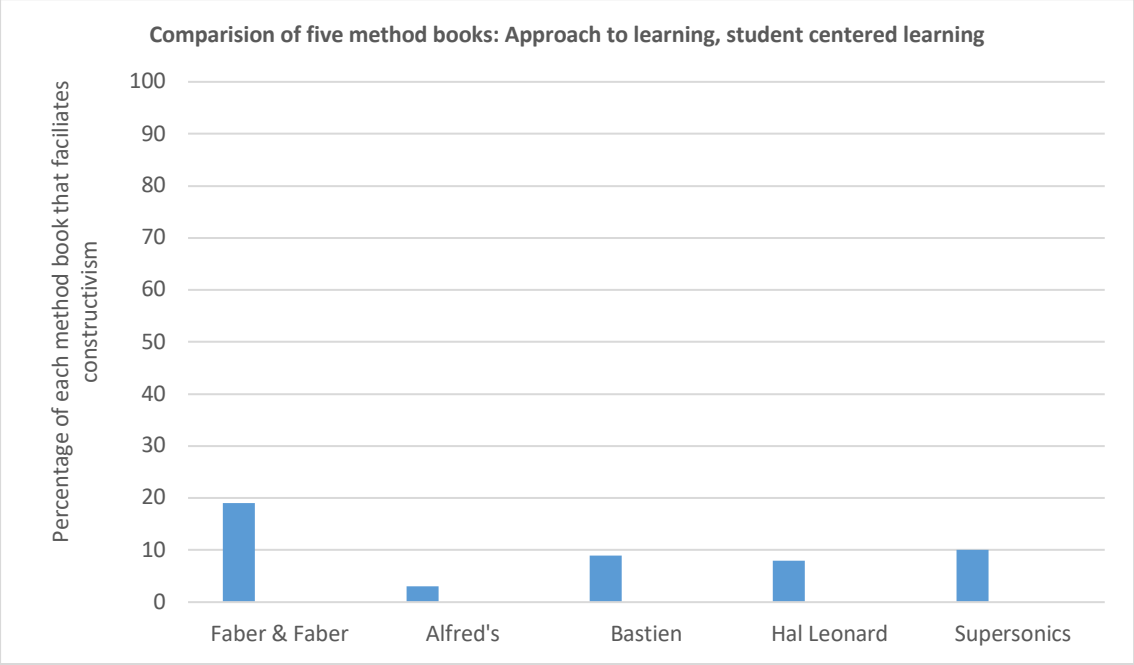

Figure 51: Facilitation of constructivism through, student-centred learning in five method books for older beginners.

The results of category two are unevenly spread over its three descriptors. Attempts are made by authors to connect the content of the method book to the student's age, stage and daily experiences. This is evident primarily through repertoire choice, song titles and in all five methods the inclusion of traditional, folk and familiar songs drawn from the Anglo-European heritage and for an American student, the American culture. The incorporation of folk songs and traditional pieces that may be familiar to the Australian student is common to the method books evaluated.

Likewise, the inclusion of drawings and pictures (Faber & Faber; Alfred's) or absence of pictorial illustrations (Bastien; Hal Leonard; *Supersonics*), the choice of language and the unanimous inclusion of boogie, rock, pop and jazz styles suggests the authors' awareness that repertoire and presentation needs to be relevant and engaging to the older beginner. The degree to which the five method books are relevant to the older beginner is impacted by a number of variables including:

- the degree to which an Australian student may connect with the American culture, language, songs and imagery used in the four American methods;
- the degree to which an Australian student is familiar with traditional and folk tunes which are used across the five methods and drawn from the Anglo-European tradition shared by Australia and America;

- the multi-cultural composition of Australian society which includes beginner piano students with varied ethnic backgrounds; and
- the home environment of the beginner student which may be musical or non-musical, supportive or indifferent.

There is ongoing concern amongst teachers to find repertoire that is relevant and suited to the older beginner's skill set. Additional research exploring the Australian older beginner piano student in terms of ethnic background, degree of familiarity with the songs included in method books, and the student's support at home would provide a more conclusive description of this issue.

Prior learning and knowledge as a basis for new learning is facilitated in all five books. All five method books provide a program of learning that employs sequential learning that is, concepts and skills used earlier in the method provide a foundation for the next step of learning. Although some methods are fast paced and move through new skills and concepts quickly, all methods demonstrate a logical and progressive structure. The rate at which new learning occurs and the degree to which new learning is obviously connected to prior learning varies from lesser to more, across the method books. Consequently, survey respondents described the use of multiple method books with a single student as a means of matching the learning materials to the individual's learning pace. The use of several methods with a single student addressed the varied degrees of linkage between prior and new learning; and the resultant pace and structure of different books.

Student-centred learning appears to be marginally included or absent from the five method books. Four of the five methods include significant proportions of instructional and directive text, resulting in a high degree of teacher-led, teacher-directed learning. *Supersonics* did not include more than one page of instructive text per unit, but neither did the author actively facilitate student-centred learning. In all five methods, student-centred learning is primarily provided in the form of creative tasks or simple improvisational activities, scattered throughout the book. This result prompts the following questions for future research:

- Do teachers incorporate student-centred learning? If so, how and to what extent?
- How much of, and in what ways can the pre-determined body of knowledge and skills required to play piano and read music can be learned through student-centred learning?

- Is it possible to prepare written material in the form of a method book that equips the teacher to facilitate student-centred learning?

Cognitive learning

Descriptors: questions, analysis, application and transferal of knowledge and skills, problem solving (the personal cognitive acts of the learner)

Category three of the evaluation tool examined constructivism in relation to cognitive learning. The various learning tasks provided in each book and the requisite personal cognitive acts of the learner were explored through three descriptors: opportunities for students to question and analyse; tasks that require the application and transferal of skills and knowledge; and problem solving.

Three of the five method books actively promote constructive learning through questioning and analysis. In Faber and Faber, over half the learning experiences include questioning and analysis tasks, *The Phrase* (Faber & Faber, pp. 38-39) is one example. Alfred's, Bastien and Hal Leonard each include questioning, for example, *Old Uncle Bill* (Alfred's, p. 29) and *Changing positions* (Hal Leonard, p. 65) but in less than 15% of each method. The *Supersonics* does not use questioning or analysis as a pathway to learning. Figure 52 shows a comparison of the five method books in terms of questioning and analysis.

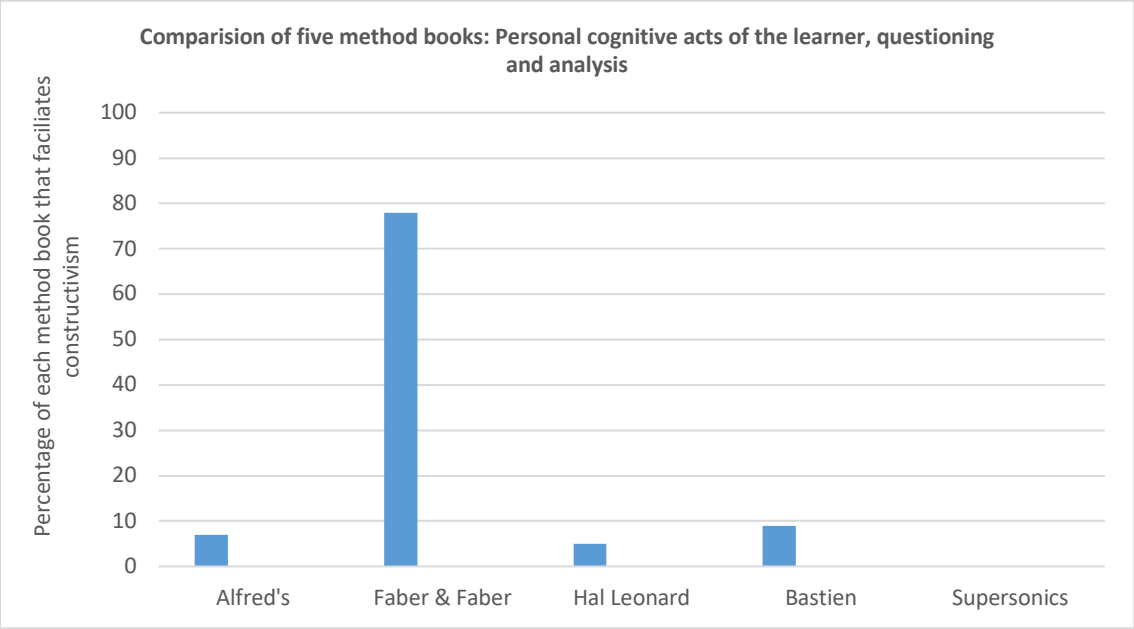

Figure 52: Facilitation of constructivism through questioning and analysis in five method books for older beginners.

Descriptor two of category three explored the degree to which the application and transferal of knowledge is used in the learning process. It is acknowledged that the reading of previously unseen musical score requires the application of knowledge, thus, the CET recorded the activities described by the delimits, specifically, transposition, harmonisation, composition, improvisation, specific sight reading tasks and other activities that require the application and transferal of knowledge.

The Hal Leonard, Faber and Faber and, *Supersonics* methods each utilise the application and transferal of knowledge through the inclusion of improvisational activities and creative music making opportunities including:

- *Ad Lib* (Hal Leonard, p. 71);
- *Chant of the Monks* (Faber & Faber, p. 25); and
- *Call and Response* (*Supersonics*, p. 58).

In addition, Bastien and Hal Leonard facilitate constructivism through the provision of theory or review units where the student is required to apply previous knowledge to new situations, for example:

- Music Theory, (Hal Leonard, p. 54); and
- Review Unit 3 (Bastien, p. 28).

Figure 53 shows a comparison of the five method books in terms of the application and transferal of knowledge as part of the learning experiences.

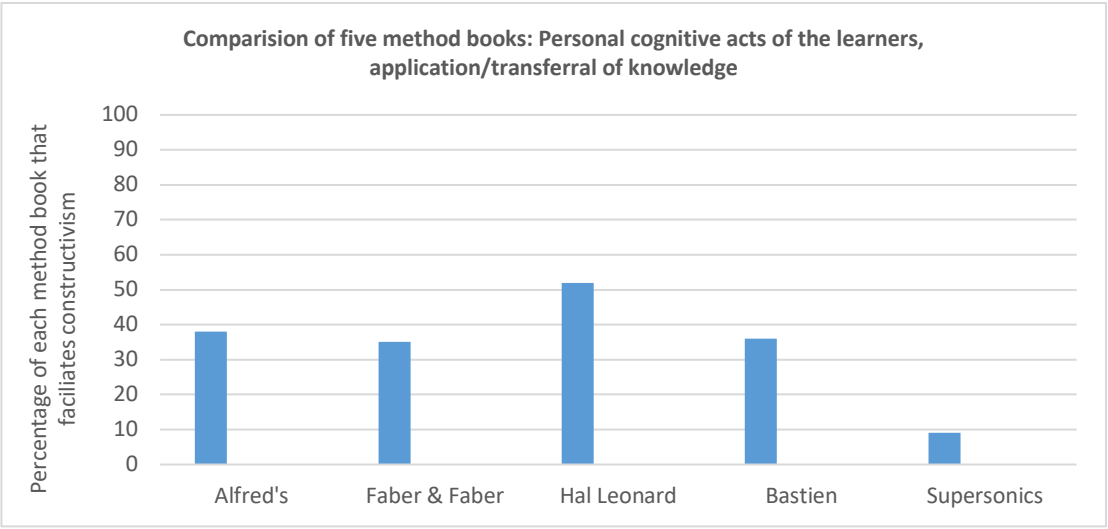

Figure 53: Facilitation of constructivism through the application and transferal of knowledge in five method books for older beginners.

The skill of identifying and solving problems is a core component of constructivism. Problem solving tasks requiring the student to identify and find solutions to problems, are not commonly included in the five methods evaluated. Tasks asking the student to identify an inaccurate hand position and find a solution that corrects the error, notice tempo fluctuations in performance and develop a practice strategy to solve the problem, or identify an incorrect note or fingering and find a solution are not commonly included in the five methods evaluated.

Tasks that directly asked the student to identify an issue or problem when learning the piece are completely absent in four of the five books. Faber and Faber includes a few simple problem solving tasks such as "create an exercise to develop stepwise playing" (p. 23). Tasks similar to this occurred in less than a quarter of the method.

Supersonics, Hal Leonard, Alfred's and Bastien offered no clear opportunities for the student to problem solve. Alfred's and Bastien are predominantly instructive and corrective in approach. Hal Leonard is also strongly directive, offering pre-emptive solutions to potential problems the student may encounter. *Supersonics*, offers little in the way of text-based instruction, thus, the student would either continue to make errors or rely on teacher corrections and solutions. Beginners have limited skills and although the student may be able to hear or possibly identify a mistake, she or he may not be able to find a solution. The degree to which the Australian piano teacher intentionally develops the student's problem solving skills is unknown.

The use of any one of the five method books alone provides very limited scope for the student to develop problem solving skills. It is acknowledged that the teacher may approach and adapt the activities provided in the various method books in ways that encourage student problem solving. However, this possibility cannot be examined within the scope of this research. An exploration of the ways in which printed materials could facilitate student problem solving and enhance constructivism in the piano lesson is an area for further research. Figure 54 shows a comparison of the five method books in terms of problem solving.

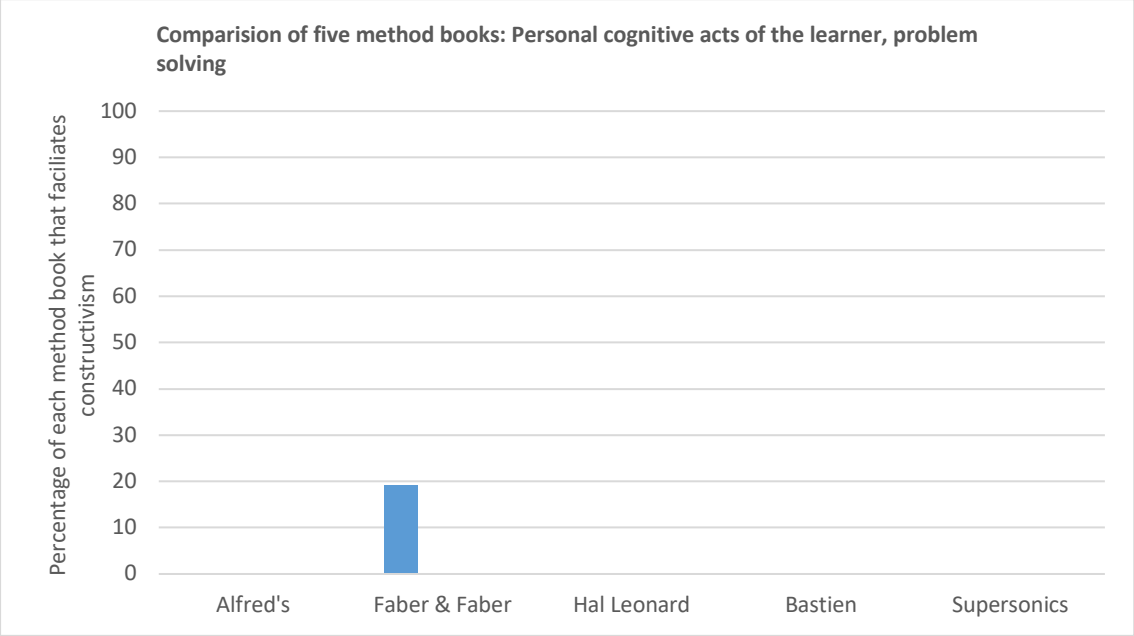

Figure 54: Facilitation of constructivism though problem solving in five method books for older beginners.

The personal cognitive acts of the learner requisite for the construction of knowledge and skills are evaluated in terms of: an exploration of the degree to which questioning; analysis; the application and transferal of what is known, as a means to learn what is unknown; and problem solving are included in vastly different degrees in the five method books. In terms of the personal cognitive acts of the learner, Bastien, Alfred's and *Supersonics* provide the fewest opportunities to facilitate constructivism in terms of the cognitive learning descriptors. Questioning, usually closed ended, requiring a single correct answer, is used often by Faber and Faber, periodically by Hal Leonard, infrequently by Bastien, rarely in Alfred's and never in the *Supersonics* method.

All five books include a measure of learning that involves the application and transferal of knowledge. Analysis tasks are included to a modest degree in Alfred's Bastien, Hal Leonard and Faber and Faber and infrequently in the *Supersonics* method. Improvisation is featured in Hal Leonard, Faber and Faber and to a lesser degree *Supersonics*. Transposition and harmonisation are included in all methods except Alfred's. Sight reading is used in all five books and theory review pages included in Hal Leonard and Bastien. Hal Leonard provides the most extensive range of activities that require the application and transferal of knowledge.

Four of the methods do not incorporate problem solving activities. Faber and Faber alone, provides a limited assortment of very simple problem solving tasks. The recurrent use

of the application and transferal of knowledge, infrequent use or absence of questioning and analysis and the almost non-existent use of problem solving activities across the five methods raises two questions for further research.

- To what extent do teachers work outside the method book parameters to incorporate questioning, analysis and problem solving activities and, thus, facilitate aspects of constructive learning?
- Is it possible for a method book to include material that facilitates to a larger degree, questioning (open-ended as well as closed questions), analysis, and the development of problem solving skills?

Social learning

Descriptors: discussion, collaborative learning and scaffolding

Each method book examined provides a different number of social learning experiences. Opportunities for the student to discuss, debate, explain and verbalise her or his understanding of new concepts and skills are not a strong feature of the five method books examined. A small number of tasks that may encourage discussion are included in the review and theory components of Hal Leonard. The creative tasks provided in Faber and Faber, Hal Leonard and to a smaller degree *Supersonics* may also facilitate some discussion between student and teacher. Neither the Bastien nor the Alfred's offers prompts or activities that might stimulate discussion. Figure 55 provides a summary of category four, facilitation of discussion as an aspect of social learning.

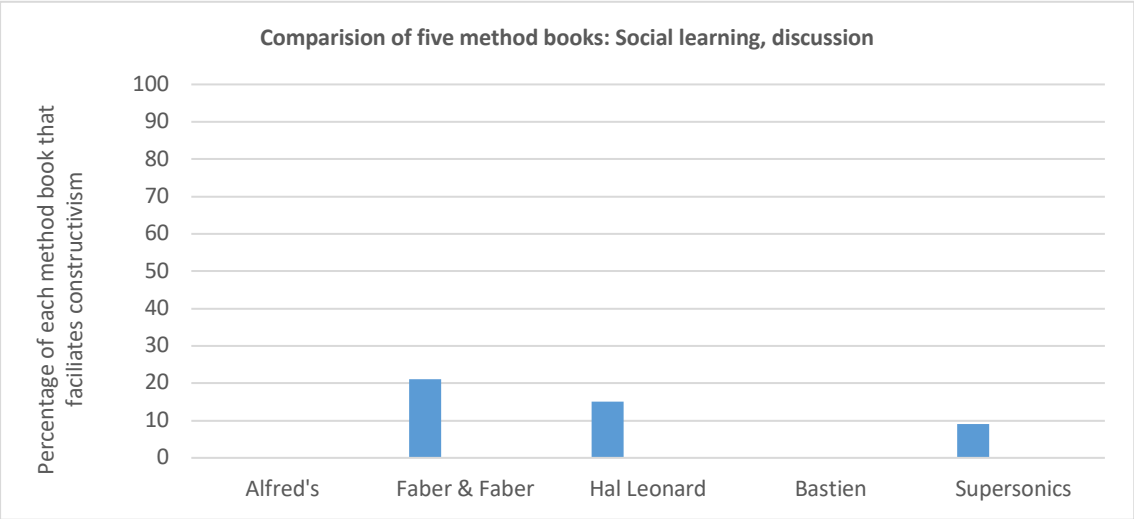

Figure 55: Facilitation of constructivism through discussion in five method books for older beginners

Collaborative learning opportunities are omitted in Bastien and under-represented in *Supersonics*. Hal Leonard, Alfred's and Faber and Faber provide a range of collaborative learning activities, mostly in the form of student-teacher duets. In addition to duet playing, Hal Leonard, and Faber and Faber include a range of creative and improvisational tasks that may involve a degree of collaboration between the student and teacher. The Alfred's method does not provide any creative music making experiences and *Supersonics* provides marginal support for collaborative learning through a small range of improvisational and creative tasks. Examples of collaborative learning in the form of teacher-student duets include the following:

- *Jingle Bells* (Alfred's, p. 33);
- *Minuet* (Faber & Faber p. 27); and
- *Happy Heart* (Hal Leonard, p. 37).

Other forms of collaborative learning such as shared performance tasks, peer-to-peer duets, and mixed ensembles are not included in any of the methods. Figure 56 provides a summary of category four, facilitation of social learning.

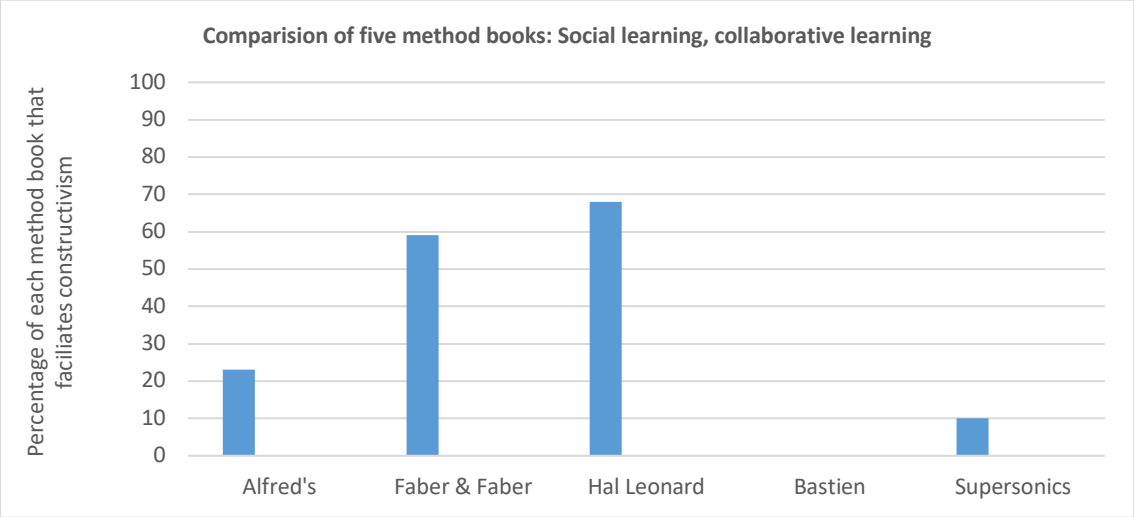

Figure 56: Facilitation of constructivism through collaborative learning in five method books for older beginners.

Substantial scaffolding is provided in all but *Supersonics*. Alfred's, Bastien and Hal Leonard provide scaffolding in over a third of each method. Faber and Faber includes extensive scaffolding in the form of: questions; added text; additional finger numbers; diagrams; and other reminders to provide temporary support for the development of new skills. The proportion of helpful text, diagrams, and symbols providing additional support

lessens as the book progresses. The Bastien is also more heavily scaffolded in the early parts of the method with support tapering off in the later part of the method. Examples of scaffolding include:

- Diagrams of the keyboard used to indicate the hand position for the song (Hal Leonard, p. 32; Faber & Faber, p. 17; Bastien, pp. 32-33; Alfred's, p. 32);
- Provision of finger numbers, used by all five methods, sparingly included in *Supersonics*; and
- Additional text, arrows, circles, red or coloured text to remind the student about a new note (Alfred's, p. 45), a new concept (Bastien, p. 25), a hand position shift (Faber & Faber, p. 58).

Supersonics provides minimal scaffolding. However, the repertoire included in the method uses one hand position and a set vocabulary of rhythms, which in a small way, scaffolds the learning. The printed materials also provide one page of text-based information per unit resulting in a small level of support for new learning. However, teachers using the *Supersonics* method would have to provide additional scaffolding as needed. Figure 57 demonstrates a comparison of the degree to which each method provides scaffolding for the learner.

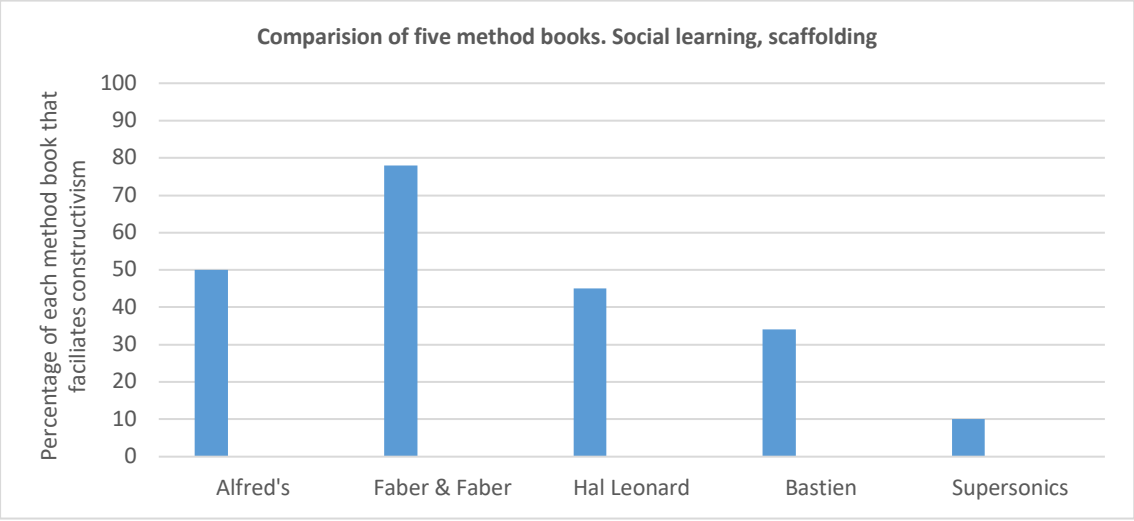

Figure 57: Facilitation of constructivism through scaffolding in five method books for older beginners.

The CET descriptors related to the social aspects of learning are unevenly distributed across the books evaluated. Discussion is used in limited ways in three of the five methods, primarily in the context of the theory and review pages provided in Hal Leonard and Bastien

and the creative tasks included in Hal Leonard, Faber and Faber and *Supersonics*. The Alfred's and Bastien methods do not facilitate discussion. Discussion and the ways in which printed materials might stimulate verbal interaction between the student and teacher in the piano lesson is an area for further investigation.

Three of the methods include collaborative learning opportunities in the form of teacher duet parts. Piano duets as a form of collaborative learning are included throughout the Hal Leonard, Faber and Faber, and the first half of Alfred's. The inclusion of creative tasks in all the books except Bastien also provide some possibilities for collaborative learning.

Scaffolding is provided in greater and lesser degrees across the five method books. Hal Leonard and Alfred's, which move rapidly through the musical content and skills, at times introducing several new concepts simultaneously, provide significant scaffolding, particularly in the earlier units of work. Faber and Faber, a more moderately paced method, usually introduces one new skill or concept at a time, and also provides substantial scaffolding throughout the method. Bastien offers both a moderate degree of scaffolding and a significant number of activities to reinforce the understanding of a new concept or skill. Despite the fact that several new concepts are sometimes introduced on a single page, the Bastien is slower paced than Hal Leonard and Alfred's, as the method includes a greater number of tasks related to each core musical skill and more frequent revision to support student learning. *Supersonics* provides minimal scaffolding. Support for student learning is mainly offered via the use of C position for the 99 pages of repertoire and the occasional inclusion of finger numbers at the start of a song. The degree to which the teacher may provide scaffolding to support student learning while using the *Supersonics* method is unknown and outside the scope of this research.

Faber and Faber and Hal Leonard provide the strongest support for social learning with each descriptor, discussion, collaborative learning and scaffolding, facilitated to a greater or lesser degree. *Supersonics* also facilitates each descriptor of social learning, but to a much smaller degree. Bastien and Alfred's offers the fewest opportunities for social learning. The unequal emphasis on the collaborative aspects of learning and scaffolding in the five method books and minimal inclusion or absence of discussion as a form of learning, highlights an area for further research related to teacher practice and method book design. Additional investigation is required to achieve a greater understanding of the role discussion plays in the piano lesson and the ways in which printed materials might stimulate discussion and the other aspects of social learning.

The focus of learning

Self-regulation skills, self-evaluation, student ownership, goal setting

In category five, the focus of learning was examined through three descriptors: student self-reflection and self-evaluation; evidence that the student is encouraged to own the learning; and the facilitation of student goal setting.

Constructive learning theory emphasises the significance of learning that fosters an awareness of the learning process (Morford, 2007). This does not exclude the importance of realising quality outcomes nor diminish the value of achievement. A focus on the learning process does draw attention to the merit of enabling the student to develop self-regulation and meta-cognitive skills (Pritchard, 2017). Meta-cognition enhances the student's ability to learn effectively (Efklides, 2008). In constructivism, learning how to learn and the development of self-regulation skills through self-evaluation, student ownership of learning and goal setting, equips the student to become an independent learner. Thus, the processes of learning are deemed of equal significance as the results of learning (Bruner, 1996).

None of the five books examined facilitate a strong focus on the processes of learning. Self-reflection and self-evaluation of one's performance is essential for the music student (Nielsen, 1999a, 2001). There are infrequent and few examples across the five method books where the student is directly asked to self-evaluate or self-reflect by listening, checking, watching or noticing her or his own performance. Additional opportunities for self-evaluation and self-reflection in relation to the student's own performance and practise would be possible only through teacher encouragement, as the method books alone do not readily facilitate this process. It is possible that many teachers encourage student self-reflection and self-evaluation in the piano lesson, but the degree to which this occurs is unknown.

Faber and Faber facilitates self-reflective and self-evaluative opportunities in a quarter of the method, the highest proportion of all five books. In one example the student is asked to check that she or he is observing the accent marks (Faber & Faber, p. 29). Alfred's, and Hal Leonard encourage self-evaluation and self-reflection in less than a tenth of each method, largely via the sporadic inclusion of suggestions that the student observes, watches, and notices (Hal Leonard and Alfred's) or in the additional creative tasks provided in Hal Leonard and *Supersonics*. Bastien does not provide any activities that prompt student self-reflection or self-evaluation. The CET analysis provides evidence that student self-reflection and self-evaluation is not strongly facilitated in any of the five method books preferred by

Australian teachers. Figure 58 provides a summary of the results of the CET in relation to student self-reflection and self-evaluation.

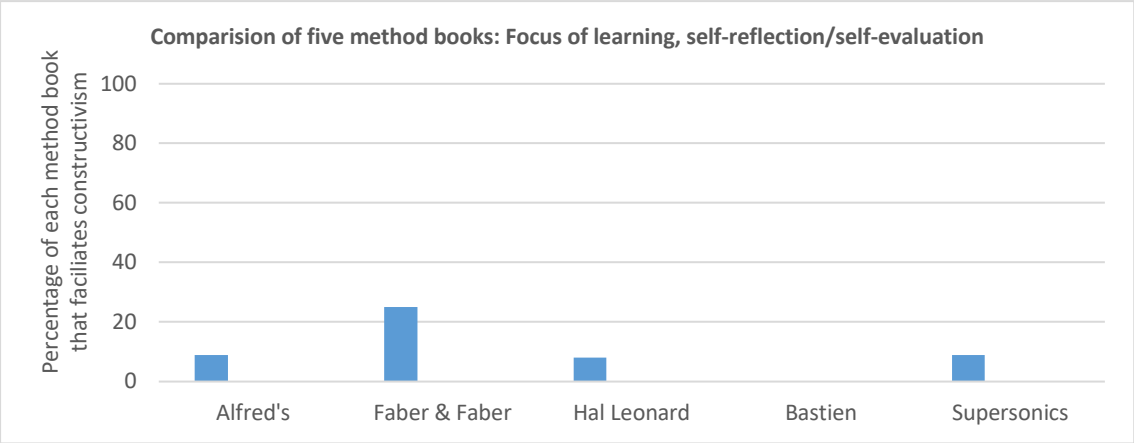

Figure 58: Facilitation of constructivism through student self-reflection and self-evaluation in five method books for older beginners.

The facilitation of student ownership and goal setting are not dominant features of the five method books evaluated by the CET. The method books are carefully sequenced and intended by the creators to be followed page by page, in the pre-set order, from beginning to end. Teachers using the any of the five methods as intended have little scope to shift the ownership of learning from the method book to the student. Thus, the degree to which the student may own the various learning tasks provided by each of the five method books, is generally limited. All five books provide a few opportunities for student ownership, principally, through the inclusion of improvisational and creative tasks (Faber and Faber, Alfred's, Hal Leonard and *Supersonics*) and the provision of the supplementary repertoire (Bastien).

Research suggests that student ownership of the learning is essential for maintaining motivation, successful learning and progress (Gilbert, 2016; Nielsen, 1999a, 1999b). The results of this section of the study pave the way for further research into ways in which student ownership can be facilitated via a method book, teaching materials and teacher practice as enacted in the piano lesson. Figure 59 summaries a comparison of the degree of student ownership across five commonly used method books.

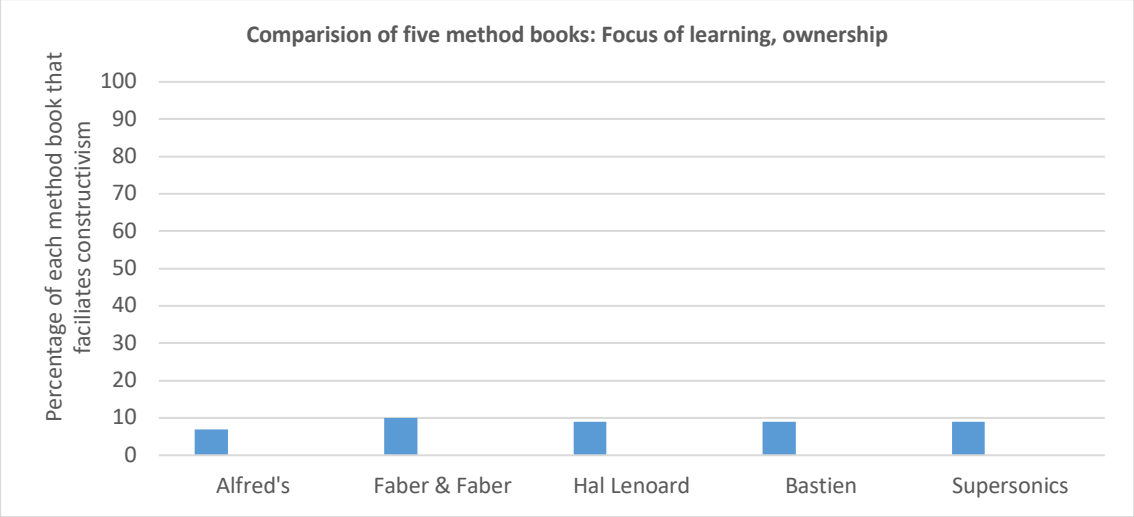

Figure 59: Facilitation of constructivism through student ownership in five method books for older beginners.

The third descriptor of category five, the focus of learning, examined the degree to which the method books alone clearly encourage the setting and monitoring of goals. Student goal setting is closely aligned with student ownership (McPhail, 2010, 2013a; Smith, 2005). It is difficult for the student to own the learning if the goals of learning are determined by the teacher, parent, method book, exam requirements or other external agency. Faber and Faber alone promotes goal setting, but in less than 5% of the method. The other method books do not include questions, tasks or exercises that might stimulate student goal setting and monitoring. A summary of the results of category five are provided in Figure 60.

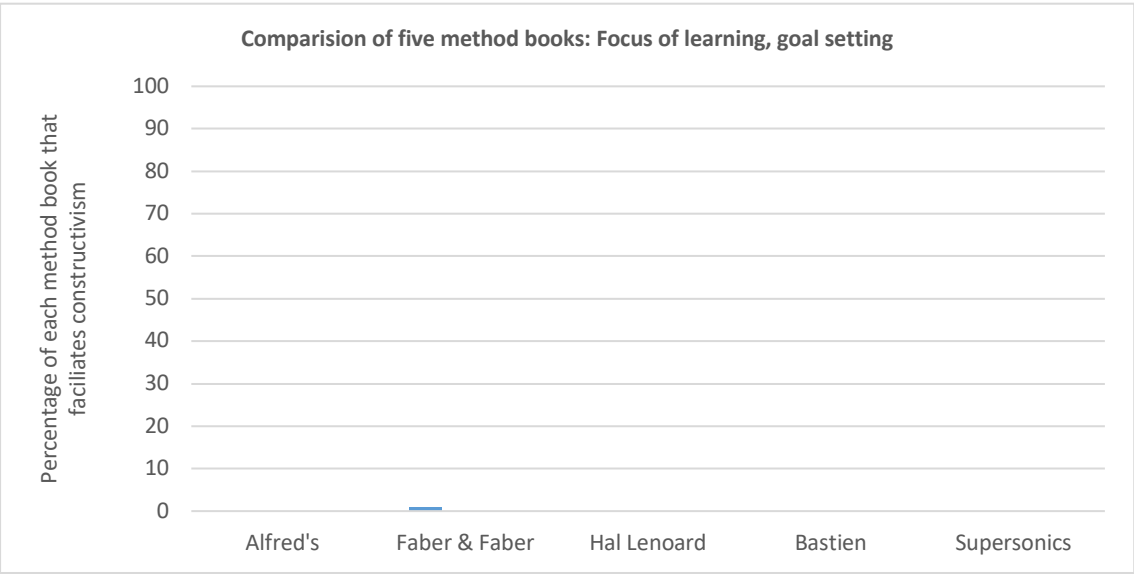

Figure 60: Facilitation of constructivism through student goal setting in five method books for older beginners.

The final category of the CET examined the focus of the learning in terms of student self-reflection, self-evaluation, ownership and goal setting. Overall, the five method books are product-focused rather than process-facilitating. A small number of activities that encourage self-reflection and self-evaluation are included in all methods except Bastien. Student ownership, facilitated in small ways was a feature of all five method books yet goal setting was only included in 1% of Faber and Faber. The limited encouragement of student self-reflection, self-evaluation, ownership and goal setting within each method book raises two questions for further research.

- Do method books, by default, define the student's goals?
- How might the content of method books and other teaching materials be presented in ways that encourage student self-reflection, self-evaluation, facilitate student ownership and support student goal setting?

Summary

The five methods preferred by Australian teachers when teaching older beginners were examined multiple times using the CET. The results of each evaluation were noted in the CET record sheets in order to determine the number of times the descriptors within each category are included in each method. The total number of pages reflecting the delimits of each descriptor provided a means identifying the degree to which aspects of constructivism are facilitated in each method. CET examinations of five method books, used with older beginners, reveals that some descriptors of constructive learning are facilitated. All five methods include a strong emphasis on visual and kinaesthetic learning and a four of the five, a moderate use of a reading learning style. Relevance, prior learning and the application and transferal of knowledge are also prominent in the methods evaluated. Collaborative and scaffolded learning feature moderately in three of the five methods. The other descriptors of constructivism, namely, questioning, analysis, problem solving, discussion, student self-reflection, self-evaluation, ownership, goal setting, and student-centred learning, are sporadically encouraged in some methods and not facilitated in others.

CET Results and Teacher Perspectives

In this section, the qualitative data from the survey in phase one, and the results of the CET assessment of five method books in phase two, will be discussed. The CET enabled the identification and quantification of the degree to which the 16 descriptors of the CET are facilitated in five method books often used with older beginner piano students. The method

books facilitate some descriptors more strongly than others, with the result that each book emphasises different features and degrees of constructivism.

Similarly, survey responses were more focused on some aspects of piano teaching than others. Although the primary purpose of the survey was to identify teacher preferred resources for teaching older beginners, and responses did not use the term constructivism, several descriptors of the CET were mentioned in teacher comments. Specific references to learning styles, prior learning, relevance, student goals and student ownership occurred in many answers across several questions. Other aspects of constructivism, not mentioned by name but inferred by description, were also featured in many responses, such as, the importance of duet playing, an allusion to the CET descriptor, collaborative learning.

It is noteworthy that positive statements made by survey participants in relation to method books often aligned with the CET descriptors that are moderately or strongly reflected in the five method books. Positive comments by teachers included references to:

- meeting the needs of the student, an oblique reference to student-centred learning;
- the repertoire choices as relevant and age/stage appropriate;
- the sequence of learning as logical in terms of prior learning; and
- the inclusion of duets and the value of the collaborative aspects of musical learning.

In contrast, a number of responses were highly critical of the quantity and quality of relevant, age and skill appropriate material provided in the method books for older beginners. Further research is needed to tease out the reasons for this mixed response.

Several interesting outcomes emerged from a comparison of the CET assessments with teacher statements regarding the resources available for older beginners. A large number of critical responses centred around the following:

- the poor representation or absence of aural learning in method books, which included responses that method books are “too tied to notation”;
- the importance that the student owns the learning;
- the value of student-centred learning;
- goal setting and the achievement of student goals; and

- relevant repertoire: many teachers seemed to want more than is currently provided.

The CET analyses revealed that these same areas, namely, goal setting, aural learning, student ownership, and student-centric learning, are poorly represented in the method books. Thus, teacher descriptions of method book deficiencies coincided with some categories of the CET that are marginally or not included in the five methods commonly used with older beginners. The results highlight a disparity between the teachers' perceived needs and the content provided in method books. In addition, a small but persistent number of responses described the content of current method books as "too American" citing a need for "more Australian content". These outcomes provide a foundation for the next phase of research related to method books, older beginners and Australian studio piano teaching.

In terms of the focus of learning, both the method books and survey responses skew towards the achievement: playing the piano and reading music. Participant comments rarely mentioned self-reflection and self-evaluation. Teachers referenced student ownership and goal setting primarily in terms of student motivation and the attainment of successful student outcomes. The mix of survey responses and results of the CET examinations of five method books regarding the process of learning, raises another two questions for future research:

- To what degree do Australian teachers intentionally facilitate a focus on the process of learning, in terms of encouraging the student's self-reflective and self-evaluative skills, student ownership and goal setting?
- Is it possible to include material that facilitates the development of self-reflective and self-evaluative skills, student ownership and goal setting in a method book?

In addition, a comparison of the survey data with the CET outcomes reveals an interesting phenomenon. The descriptors that rated poorly in all five books, namely, problem solving, discussion, and to a lesser extent questioning and analysis, did not feature in participant answers. Additional research may shed light on the reasons for both the marginal inclusion of these aspects of constructivism by method book authors and the absence of survey responses referencing these aspects of constructivism.

Limitations of the research

This research is limited by several constraints. These include: the scope of a Master's thesis; the limitations associated with survey research and content analysis; the total number of survey responses; the limitations inherent in all social research paradigms; the boundaries of the CET, its categories, descriptors, delimits and measurement processes; and the researcher's position as an insider (Greene, 2014). These will now be elaborated.

The scope of this study is determined by the requirements of a Master's thesis, which defines the length and depth of the research project. The survey included unforeseen, unpredictable and uncontrollable events including, the unexpected response of two New Zealand piano teachers and, a number of unclear statements and vague comments made by participants. In addition, the total number of 239 participants reflects only 12% of the 2,000 teachers invited to complete the survey. This limits the ways in which the data can be used and understood. The survey data reveals the opinions and behaviours of a small percentage, of a particular type of teacher, in a single point in time, 2019-2020. The data will most likely change and become outdated over time. These factors, in combination with the smaller sample size of the survey, generates a pool of data that cannot be easily generalised to describe or used to represent all piano teachers in Australia.

The inherently interpretivist nature of qualitative research also influences and limits both the survey research and the CET examinations of piano method books (Gummesson, 2000; Ratner, 2002). A two-part examination of the survey responses, using two forms of content analysis aimed to mitigate researcher biases and assumptions and facilitate a more objective reading of the data. However, as an insider, it is likely some level of subjectivity and sympathy influenced the interpretation of teacher responses.

There are also limitations associated with the definitions, delimits and measurements created for each category and descriptor of the CET. As previously discussed, there are many interpretations and forms of constructivism and an identification of the core characteristics of constructivist learning theory in order to create the CET provided several challenges. Deep thought and detailed research went into the definition of constructivism as it applies to this research. The creation of each category, descriptor and delimits used in the CET reflect a synthesis of several manifestations of constructivism. Researchers have identified different versions of constructivism, each of which leans toward a particular emphasis. Examples include: the socio-cultural aspects explored by Bonk and Cunningham (1998); the cognitive

and social constructivism theories of Piaget and Vygotsky discussed by Wadsworth (1996); versions of social and radical constructivism identified by Steffe and Gale (1995); and the different traits of constructivism presented by Phillips (1995). These, and other descriptions of constructivism presented earlier, provided a foundation for the final version of the CET. Research by Myers (2009), Shively (2015), López-Íñiguez and Pozo (2016), Scruggs (2009), Scott (2012), McPhail (2017), Gordon (2009), Freer (2009) and several others who explored the practical application of constructivism in musical learning also contributed to the development of the CET.

The differing opinions of researchers about the definition of constructivism and its practical manifestations in music education, suggests that other academics and practitioners may dispute some of the categories, descriptors, delimits and measurements used in the CET. It is acknowledged that each individual using the CET may allocate, for each descriptor, alternative ratings to those chosen by the researcher. The completion of one CET evaluation by an external moderator was included to address this issue. However, the outside moderator owns personal assumptions and biases that may not be apparent and which impact their interpretation of the teaching materials. Although the differences between the independent CET examination of the method books and those conducted by the researcher in this project were small, many more assessments, made by a significant number of different individuals, are needed before the data can be considered conclusive. Despite these limitations, this research does initiate a conversation, that hither-to has not been undertaken regarding Australian studio piano teaching, constructivism, teaching materials, method books and the older beginner.

Conclusions and Further Research

The survey data generated in phase one and the results of the CET evaluation conducted in phase two provides new information related to: constructivism; piano method books; and Australian teachers' perceptions and use of method books with older beginners. A number of insights related to the teacher's choice and use of teaching materials with older beginners is revealed from a survey of Australian piano teachers. The CET results highlight the areas of constructivism that are strongly supported in five method books used with older beginners, at the same time exposing areas of constructivism that are neglected or marginally evident.

A comparison of the survey responses with the CET results, simultaneously demonstrates the ways in which method books support the teaching of older beginners, and identifies the areas considered by teachers, to be poorly represented. Some areas of constructivism that are under-represented in the method books such as collaborative learning, aural and relevant repertoire, were cited by many teachers as weaknesses in the materials. Additionally, some areas which are more strongly accommodated in the five method books, such as prior learning, the application and transferal of knowledge in the form of creative tasks, were described as strengths by some participants. Other areas of constructivism that are under-represented in the method books such as questioning, analysis, problem solving, and discussion were not mentioned by participants.

There was also an interesting outcome in relation to student ownership, goal setting and student-centred learning. Participants frequently mentioned the student's needs and student-centric learning, but in the context of achievement and results. Similarly, student goals and the importance of student ownership was not related to method books nor to the process of learning but in relation to student outcomes or products. Additionally, problem solving which was not strongly facilitated in the method books was not discussed in the statements recorded in the survey. Likewise, student self-reflection and self-evaluation poorly facilitated in the method books was rarely mentioned by survey participants. The reasons for this are not revealed by this research and instead raise a number questions related to constructivism in the piano lesson, method books and the ways in which a method book might facilitate these aspects of constructivism.

This research investigated constructivism in the teaching materials created for older beginners. Using the perspective of the Australian studio piano teachers five method books for older beginners were identified and evaluated in terms of the degree to which each book facilitated various aspects of constructivism. The outcomes of this research included: an identification of teacher preferred method books for older beginners; teacher descriptions of the ways in which they use their preferred teaching materials; teacher opinions outlining the strengths and weaknesses of method books; and an exploration of the constructivism using the descriptors embodied in the CET. The CET enabled an assessment of the degree to which constructivism is facilitated in five method books used by teachers with older beginners. The development of the CET is a secondary outcome of the research as the tool can be applied to any set of piano teaching materials, including those for younger beginners and adult learners.

These results provide a pathway for the next phase of research which will lay a foundation for the creation of a range of Australian created teaching resources that aims to:

- more equally facilitate each descriptor of constructivism as defined by the CET;
- reflect and connect with the multi-ethnic composition of Australian society;
- include repertoire accessible and relevant to the twenty-first century piano student;
- address teacher complaints related to current method books for older beginners;
- facilitate the under-represented CET descriptors through the more frequent use of
    - an aural learning style;
    - problem solving tasks;
    - discussion;
    - a wider variety of collaborative activities;
    - the development of student self-reflection and self-evaluation skills;
    - the facilitation of student ownership; and
    - the encouragement of student goal setting and monitoring.

The next phase of research would be anchored by the findings from phases one and two of this research and the further investigation of the pertinent questions raised by this study. This could, I propose, culminate in the creation of a set of teaching materials underpinned by constructivism and include original repertoire created by Australian composers.

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Appendix A: Survey Letter to Participants

Survey Introduction

Project Overview

Piano teachers, over 18 years of age, who teach beginner students aged from 12-17 are invited to complete a short online survey. You have been invited to participate because your name is registered online as a piano teacher through one of the music teacher's organisations in Australia Completion of the survey will take around 10-15 minutes. Participation in this project will not affect your association with the University or any other agency.

The survey questions include basic demographic information, studio composition and size, music and educational study and teacher qualifications. The survey seeks to find Australian teacher preferences for piano method books and materials and establish a statistical measure for these preferences. You may choose to omit any questions you do not wish to answer.

Benefits and Risks

There is no direct benefit to you for participating in this project other than an opportunity for you to voice preferences for selected teaching materials, promote teaching materials that have been of value, raise questions and issues regarding what is lacking in current resources and express opinions regarding aspects of piano pedagogy.

Potential risks are limited to the time commitment required to complete the survey, as all information is anonymous and will be stored securely. We do not anticipate that participation in this research will cause you any undue discomfort.

Confidentiality/Anonymity

The survey will not collect any identifying information; your responses will be anonymous. Additionally, there will be no means of identifying individual participants by either the researcher or participants, thus, confidentiality and privacy are ensured. All research data will be stored on password protected devices in and compliance with CQUniversity policies. Data will be securely stored for five years after the publication date of the last publication.

Outcome

The outcome of the research will include a Masters thesis and a range of papers related to music education and piano teaching. The results of this research will also be

disseminated in the form of journal articles and conferences. If you would like to view generalised information regarding the results of the survey, it will be available here.

Right to Withdraw

Your participation in this research survey is voluntary. You may withdraw at any time prior to completing the survey simply by closing the survey window on your web browser. However, any responses already completed will be included in this research. If you wish to withdraw after submitting the survey, the information you have already provided cannot be deleted. This is because we will not be collecting any identifiable information from you and therefore, will not be able to identify your information.

Questions/Further Information

If you have any questions about this project, please contact the Chief Investigator Joanne Burrows via joanne.burrows@cqumail.com or the project supervisor Professor Judith Brown via J.Brown@cqu.edu.au

Please contact Central Queensland University's Division of Research (Tel: 07 4923 2603; Email: ethics@cqu.edu.au; Mailing address: Building 32, CQUniversity, Rockhampton, QLD 4702) should there be any concerns about the nature and/or conduct of this research project.

This project has been approved by the CQUniversity Human Research Ethics Committee, approval number approval number 21044

Electronic Consent

Commencing this survey indicates

- You have read the above information
- You voluntarily agree to participate; and
- You give your consent for the data you provide in the following survey to be used for the assessment and research purpose describe above.

Survey Participant Responses

The following forums were used to contact various organisations and teachers:

Social Media Post. Responses:116

Weblink 1. Response: 106

Email invitation. Responses:17

Appendix B: Survey Questions

Survey Questions Phase One

Constructivism and Australian studio piano teaching: An investigation of the resources for teaching older beginning students.

Q1 Please indicate your current age

a. Under 30
b. 31-45
c. 46 and over
d. Semi-retired or retired

Q2 Teaching experience: How many years have you been teaching?

a. Under 10 years
b. Between 11-20 years
c. Between 21-35 years
d. Over 35 years

Q3 Current location. If you teach in Australia, please indicate the state in which you currently teach. ***If you teach outside Australia, please indicate the country in which you currently teach.***

_____

Q4 Studio composition. How many students do you teach?

a. Under 10
b. 11-20
c. 21-35
d. 36-50
e. Over 50

Q5 How many of your students are beginners aged 11 years or under? (Beginner students are those who have been learning for 12 months or less)

a. None
b. 1-5
c. 6-10
d. 11-20
e. Over 20
f. All students are beginners

Q6 Preferred materials for teaching young beginners aged 11 years or under. What teaching materials do you use with young beginner students? Select one or more.

a. *Piano Adventures,* Faber and Faber;
b. *Piano for the Young Beginner,* James Bastien;
c. *Lesson Book 1A* and *1B,* Alfred's Basic Piano Library;
d. *Alfred's Prep. Course,* Alfred's Basic Piano Library;

e. S*uzuki Piano Course*;

f. *John Thompson Piano Series*; and

g. Other methods.

Q7 How many of the student's that you currently teach are beginners aged 12-17? (please indicate all students aged 12-17 who have been learning for 12 months or less, regardless of other instruments the student's may currently learn)

a. None

b. 1-5

c. 6-10

d. 11-20

e. Over 20

f. All

Q8 Preferred materials for teaching older beginner students aged 12-17. Select one or more from the list below.

a. *Accelerated Piano Adventures: For the older beginner, lesson book 1*; Faber and Faber;

b. *Alfred's basic piano library: Lesson book, Complete level 1, for the later beginner*

c. *Older Beginner Piano Course, Level 1;* Bastien;

d. A mix of the Faber and Faber, Bastien and Alfred's methods listed above; and

e. Other materials.

Q9 If you use other materials with older beginners than those listed in Question 8, please list the books or parts of books you use with older beginners. ***(short answer question)***

_____

_____

_____

Q10 Do you use the materials listed above in the order provided in the books?

a. Yes

b. No

c. Sometimes

Q11 If you do not follow the books in the order provided, why? ***(short answer question)***

_____

_____

_____

Q12 Do you use more than one method book for older beginner students, aged 12-17?

a. Yes, always
b. Sometimes
c. No

Q13 If you use a number of books or parts of books for older beginners, why? ***(short answer question)***

_____

_____

_____

Q14 Do you use different materials for different students?

a. Yes
b. No
c. Sometimes

Q15 If you use different materials for different students, why? ***(short answer question)***

_____

_____

_____

Q16 What do you like about the teaching materials you use with older beginners? ***(short answer question)***

_____

_____

_____

Q17 What do you feel is missing from the teaching materials available for teaching older beginners, aged 12-17? *(short answer question)*

_____

_____

_____

Q18 I am interested in what you do when teaching older beginner students. What additional teaching resources would you find most useful for teaching older beginners? ***(short answer question)***

_____

_____

_____

Q19 Have you completed any formal musical training as part of a bachelor, masters or doctorate degree in music, education or piano? Please tick all boxes describing the training/qualifications you have completed or in which you are currently engaged.

a. Bachelor degree or higher in music (Piano)
b. Bachelor degree or higher in music (Instrument other than piano)

c. Bachelor degree or higher in Creative Arts
d. Bachelor degree or higher in Education
e. Bachelor degree or higher in Arts
f. Diploma in Music
g. Diploma in Education
h. Grades in piano

Q20 In which country did you complete the study listed Question 19?

_____

Q21 Please indicate the highest grade you have completed in piano through

a. AMEB
b. AMEB TMus
c. AMEB LMusA
d. AMEB AMusA
e. AMEB Certificate of Performance
f. Grade 8
g. Grade 7
h. Grade 6
i. No grades in AMEB
j. Not Applicable

Q22 Have you studied piano through recognised examination bodies other than AMEB? Include the piano grades and or diploma levels you have completed. Please tick all examination bodies through which you have completed piano studies. More than one may be ticked.

a. ANZCA Grades
b. ANZCA Diploma Levels
c. ABRSM Grades
d. ABRSM Diploma Levels
e. ABRSM Grades
f. ABRSM Diploma Levels
g. Trinity College London Grades
h. Trinity College London Diploma Levels
i. New Zealand Music Examinations Board Grades
j. New Zealand Music Examinations Board Diploma Levels
k. Other

Q23 Are you qualified in any of the below? Tick all relevant boxes.

a. Yamaha Piano Teacher Training
b. Taubman Method
c. Alexander Technique- Piano
d. Suzuki Training- Piano

e. Kodaly
f. Orff
g. Dalcroze
h. Other

Q24 Have you participated in any of the following professional development courses? Please tick all relevant boxes.

a. Piano Pedagogy Conferences
b. Piano workshops and masterclasses
c. Membership in a Music Teacher Organisation
d. Additional music education through TAFE
e. Music Education Conferences
f. Other

Q25 Please provide the year in which you last engaged in a professional development course, as listed in Question 24.

_____

Q26 Do you perform as a Soloist pianist? If so, please indicate how often?

a. Yes, several times per year
b. Yes, twice a year
c. Yes, once a year
d. Yes, less than once a year
e. Rarely
f. Never

Q27 Do you perform as an accompanist for students? If so how often?

a. Often - Several times per year
b. Sometimes - Once-twice a year
c. Rarely - less than once a year
d. Never

Q28 Do you perform as part of an ensemble or as a piano duet partner? If so how often?

a. Often - several times per year
b. Sometimes - once-twice a year
c. Rarely - less than once a year
d. Never

Q29 Final question: Do you have any comments to make about teaching older beginners? Please add a comment of anything interesting or any area of research that you feel would be valuable to you as a teacher.

_____

_____

_____

Appendix C: CET Record Sheets for Five Method Books

CET (Constructivism Evaluation Tool) Record Sheet									
***Accelerated piano adventures: For the older beginner, lesson book 1*: Faber and Faber**							**Total Pages: 92**		
Category one: The approach to learning									
Learner's personal cognitive lens, VARK	Date	V (n/92)	%V	A (n/92)	%A	R (n/92)	%R	K (n/92)	%K
Researcher	1/11/19	92	100.0	17	18.5	88	95.7	90	97.8
Moderator	1/12/19	92	100.0	15	16.3	92	100.0	88	95.7
Researcher	1/3/20	92	100.0	17	18.5	92	100.0	89	96.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**100.0**		**17.8**		**98.6**		**96.7**
Category two: The structure of learning tasks									
Descriptor 1: Relevance, links to age, stage, daily experiences	Date	Y (n/92)	%	N (n/92)	%				
Researcher	1/11/19	55	59.8	37	40.2				
Moderator	1/12/19	59	64.1	33	35.9				
Researcher	1/3/20	59	64.1	33	35.9				
Average of 3 evaluations = % of method reflects constructivism descriptor			**62.7**		**37.3**				
Descriptor 2: Prior learning	Date	Y (n/92)	%	N (n/92)	%				
Researcher	1/11/19	52	56.5	40	43.5				
Moderator	1/12/19	55	59.8	37	40.2				
Researcher	1/3/20	54	58.7	38	41.3				
Average of 3 evaluations = % of method reflects constructivism descriptor			**58.3**		**41.7**				

Descriptor 3: Student-centric	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	16	17.4	76	82.6
Moderator	1/12/19	19	20.7	73	79.3
Researcher	1/3/20	17	18.5	75	81.5
Average of 3 evaluations = % of method reflects constructivism descriptor			**18.8**		**81.2**
Category three: Cognitive learning, personal acts of the learner					
Descriptor 1: Question/Analysis	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	72	78.3	20	21.7
Moderator	1/12/19	73	79.3	19	20.7
Researcher	1/3/20	71	77.2	21	22.8
Average of 3 evaluations = % of method reflects constructivism descriptor			**78.3**		**21.7**
Descriptor 2: Application/transferal of knowledge	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	33	35.9	59	64.1
Moderator	1/12/19	34	37.0	58	63.0
Researcher	1/3/20	30	32.6	62	67.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**35.1**		**64.9**
Descriptor 3: Problem solving	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	16	17.4	76	82.6
Moderator	1/12/19	17	18.5	75	81.5
Researcher	1/3/20	18	19.6	74	80.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**18.5**		**81.5**

Category four: Social learning					
Descriptor 1: Discussion	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	20	21.7	72	78.3
Moderator	1/12/19	22	23.9	70	76.1
Researcher	1/3/20	18	19.6	73	79.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**21.7**		**77.9**
Descriptor 2: Collaborative learning	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	54	58.7	38	41.3
Moderator	1/12/19	55	59.8	37	40.2
Researcher	1/3/20	54	58.7	38	41.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**59.1**		**40.9**
Descriptor 3: Scaffolding	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	70	76.1	22	23.9
Moderator	1/12/19	73	79.3	19	20.7
Researcher	1/3/20	73	79.3	19	20.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**78.3**		**21.7**
Category five: The focus of learning					
Descriptor 1: Self-reflection/self-evaluation	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	23	25.0	69	75.0
Moderator	1/12/19	22	23.9	70	76.1
Researcher	1/3/20	24	26.1	68	73.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**25.0**		**75.0**

Descriptor 2: Student ownership	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	9	9.8	83	90.2
Moderator	Dec-19	9	9.8	83	90.2
Researcher	Mar-20	9	9.8	83	90.2
Average of 3 evaluations = % of method reflects constructivism descriptor			**9.8**		**90.2**
Descriptor 3: Goal setting	Date	Y (n/92)	%	N (n/92)	%
Researcher	1/11/19	1	1.1	91	98.9
Moderator	1/12/19	1	1.1	91	98.9
Researcher	1/3/20	1	1.1	91	98.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**1.1**		**98.9**

CET (Constructivism Evaluation Tool) Record Sheet									
Alfred's Lesson Book, Complete level 1, for the later beginner								**Total Pages: 70**	
Category one: The approach to learning		(n/70)		(n/70)		(n/70)		(n/70)	
Learner's personal cognitive lens, VARK	Date	V	%V	A	%A	R	%R	K	%K
Researcher	1/11/19	70	100.0	7	10.0	58	82.9	67	95.7
Moderator	1/12/19	70	100.0	8	11.4	58	82.9	67	95.7
Researcher	1/3/20	70	100.0	7	10.0	56	80.0	67	95.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**100.0**		**10.5**		**81.9**		**95.7**

Category two: The structure of learning tasks					
Descriptor 1: Relevance, links to age, stage, daily experiences	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	39	55.7	31	44.3
Moderator	1/12/19	43	61.4	27	38.6
Researcher	1/3/20	44	62.9	26	37.1
Average of 3 evaluations = % of method reflects constructivism descriptor			**60.0**		**40.0**
Descriptor 2: Prior learning	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	48	68.6	22	31.4
Moderator	1/12/19	48	68.6	22	31.4
Researcher	1/3/20	47	67.1	23	32.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**68.1**		**31.9**
Descriptor 3: Student-centric	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	15	21.4	55	78.6
Moderator	1/12/19	12	17.1	58	82.9
Researcher	1/3/20	13	18.6	57	81.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**19.0**		**81.0**

Category three: Cognitive learning, personal acts of the learner					
Descriptor 1: Question/Analysis	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	5	7.1	65	92.9
Moderator	1/12/19	4	5.7	66	94.3
Researcher	1/3/20	5	7.1	65	92.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**6.7**		**93.3**
Descriptor 2: Application/transferal of knowledge	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	27	38.6	43	61.4
Moderator	1/12/19	25	35.7	45	64.3
Researcher	1/3/20	26	37.1	44	62.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**37.1**		**62.9**
Descriptor 3: Problem solving	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	0	0.0	70	100.0
Moderator	1/12/19	0	0.0	70	100.0
Researcher	1/3/20	0	0.0	70	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

Category four: Social learning					
Descriptor 1: Discussion	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	0	0.0	70	100.0
Moderator	1/12/19	0	0.0	70	100.0
Researcher	1/3/20	0	0.0	70	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Descriptor 2: Collaborative learning	Date	Y (n/70)	%Y	N	%N
Researcher	1/11/19	16	22.9	54	77.1
Moderator	1/12/19	16	22.9	54	77.1
Researcher	1/3/20	16	22.9	54	77.1
Average of 3 evaluations = % of method reflects constructivism descriptor			**22.9**		**77.1**
Descriptor 3: Scaffolding	Date	Y (n/70)	%Y	N	%N
Researcher	1/11/19	36	51.4	34	48.6
Moderator	1/12/19	36	51.4	34	48.6
Researcher	1/3/20	35	50.0	35	50.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**51.0**		**49.0**

Category five: The focus of learning					
Descriptor 1: Self-reflection/self-evaluation	Date	Y (n/70)	%Y	N	%N
Researcher	1/11/19	7	10.0	63	90.0
Moderator	1/12/19	7	10.0	63	90.0
Researcher	1/3/20	6	8.6	64	91.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**9.5**		**90.5**
Descriptor 2: Student ownership	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	5	7.0	65	93.0
Moderator	Dec-19	6	8.0	64	92.0
Researcher	Mar-20	5	7.0	65	93.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**7.3**		**92.7**
Descriptor 3: Goal setting	Date	Y (n/70)	%Y	N (n/70)	%N
Researcher	1/11/19	0	0.0	70	100.0
Moderator	1/12/19	0	0.0	70	100.0
Researcher	1/3/20	0	0.0	70	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

CET (Constructivism Evaluation Tool) Record Sheet									
The Older Beginner Piano Course, Level 1: **Bastien**			**Total Pages: 92**						
Category one: Approach to learning									
Learner's personal cognitive lens, VARK	Date	V	%V	A	%A	R	%R	K	%K
Researcher	1/11/19	92	100.0	1	1.1	65	72.2	85	94.4
Moderator	1/12/19	92	100.0	1	1.1	64	71.1	85	94.4
Researcher	1/3/20	92	100.0	1	1.1	65	72.2	85	94.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**100**		**1**		**71.9**		**94.4**
Category two: The structure of learning tasks									
Descriptor 1: Relevance, links to age, stage, daily experiences	Date	Y (n/92)	%Y	N (n/92)	%N				
Researcher	1/11/19	48	52.2	44	47.8				
Moderator	1/12/19	51	55.4	41	44.6				
Researcher	1/3/20	51	55.4	41	44.6				
Average of 3 evaluations = % of method reflects constructivism descriptor			**54.3**		**45.7**				
Descriptor 2: Prior learning	Date	Y (n/92)	%Y	N (n/92)	%N				
Researcher	1/11/19	59	64.1	33	35.9				
Moderator	1/12/19	59	64.1	33	35.9				
Researcher	1/3/20	60	65.2	32	34.8				
Average of 3 evaluations = % of method reflects constructivism descriptor			**64.4**		**35.6**				

Descriptor 3: Student-centric	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	8	8.7	84	91.3
Moderator	1/12/19	8	8.7	84	91.3
Researcher	1/3/20	8	8.7	84	91.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.7**		**91.3**
Category three: Cognitive learning, personal acts of the learner					
Descriptor 1: Question/Analysis	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	14	15.2	78	84.8
Moderator	1/12/19	14	15.2	78	84.8
Researcher	1/3/20	13	14.1	79	85.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**14.1**		**85.9**
Descriptor 2: Application/transferal of knowledge	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	32	34.7	60	65.2
Moderator	1/12/19	32	34.7	60	65.2
Researcher	1/3/20	34	37.0	58	63.1
Average of 3 evaluations = % of method reflects constructivism descriptor			**35.4**		**64.6**
Descriptor 3: Problem solving	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

Category four: Social learning					
Descriptor 1: Discussion	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Descriptor 2: Collaborative and shared learning	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Descriptor 3: Scaffolding	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	30	32.6	62	67.4
Moderator	1/12/19	32	34.8	60	65.2
Researcher	1/3/20	32	34.8	60	65.2
Average of 3 evaluations = % of method reflects constructivism descriptor			**34.1**		**65.9**
Category five: The focus of learning					
Descriptor 1: Self-reflection/self-evaluation	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

Descriptor 2: Student ownership	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	8	8.9	84	91.3
Moderator	1/12/19	8	8.9	84	91.3
Researcher	1/3/20	8	8.9	84	91.3
Average of 3 evaluations = % of method reflects constructivism descriptor			8.9		91.3
Descriptor 3: Goal setting	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			0.0		100.0

CET (Constructivism Evaluation Tool) Record Sheet									
***Adult Piano Course, Book 1,* Hal Leonard**				**Total Pages: 92**					
Category one: Approach to learning									
Learner's personal cognitive lens, VARK	Date	V(n/92)	%V	A(n/92)	%A	R(n/92)	%R	K(n/92)	%K
Researcher	1/11/19	92	100.0	13	14.1	58	63.0	84	91.3
Moderator	1/12/19	92	100.0	14	15.2	58	63.0	86	93.5
Researcher	1/3/20	92	100.0	14	15.2	59	64.1	86	93.5
Average of 3 evaluations = % of method reflects constructivism descriptor			**100.0**		**14.9**		**63.4**		**92.8**

Category two: The structure of learning tasks					
Descriptor 1: Relevance, links to age, stage, daily experiences	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	67	72.8	25	27.2
Moderator	1/12/19	67	72.8	25	27.2
Researcher	1/3/20	69	75.0	23	25.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**73.6**		**26.4**
Descriptor 2: Prior learning	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	50	54.3	42	45.7
Moderator	1/12/19	53	57.6	39	42.4
Researcher	1/3/20	54	58.7	38	41.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**56.9**		**43.1**
Descriptor 3: Student-centric	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	7	7.6	85	92.4
Moderator	1/12/19	8	8.7	84	91.3
Researcher	1/3/20	7	7.6	85	92.4
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.0**		**92.0**

Category three: Cognitive learning, personal acts of the learner					
Descriptor 1: Question/Analysis	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	5	5.4	87	94.6
Moderator	1/12/19	5	5.4	87	94.6
Researcher	1/3/20	4	4.3	88	95.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**5.1**		**94.9**
Descriptor 2: Application/transferal of knowledge	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	46	50.0	46	50.0
Moderator	1/12/19	49	53.3	43	46.7
Researcher	1/3/20	47	51.1	45	48.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**51.4**		**48.6**
Descriptor 3: Problem solving	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Category four: Social learning					
Descriptor 1: Discussion	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	14	15.2	78	84.8
Moderator	1/12/19	14	15.2	78	84.8
Researcher	1/3/20	14	15.2	78	84.8
Average of 3 evaluations = % of method reflects constructivism descriptor			**15.2**		**84.8**

Descriptor 2: Collaborative learning	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	62	67.4	30	32.6
Moderator	1/12/19	60	65.2	32	34.8
Researcher	1/3/20	60	65.2	32	34.8
Average of 3 evaluations = % of method reflects constructivism descriptor			**65.9**		**34.1**
Descriptor 3: Scaffolding	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	42	45.7	50	54.3
Moderator	1/12/19	42	45.7	50	54.3
Researcher	1/3/20	40	43.5	52	56.5
Average of 3 evaluations = % of method reflects constructivism descriptor			**44.9**		**55.1**
Category five: The focus of learning					
Descriptor 1: Self-reflection/self-evaluation	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	9	9.8	83	90.2
Moderator	1/12/19	6	6.5	86	93.5
Researcher	1/3/20	8	8.7	84	91.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.3**		**91.7**
Descriptor 2: Student ownership	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	8	8.7	84	91.3
Moderator	Dec-19	6	6.5	86	93.5
Researcher	Mar-20	8	8.7	84	91.3
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.0**		**92.0**

Descriptor 3: Goal setting	Date	Y (n/92)	%Y	N (n/92)	%N
Researcher	1/11/19	0	0.0	92	100.0
Moderator	1/12/19	0	0.0	92	100.0
Researcher	1/3/20	0	0.0	92	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

CET (Constructivism Evaluation Tool) Record Sheet									
***Supersonics Piano Method, Level One*: Daniel McFarlane**				**Total Pages: 109**					
Category one: The approach to learning									
Learner's personal cognitive lens, VARK	Date	V (n/109)	%V	A (n/109)	%A	R (n/109)	%R	K (n/109)	%K
Researcher	1/11/19	98	89.9	10	9.2	11	10.1	98	89.9
Moderator	1/12/19	98	89.9	10	9.2	11	10.1	98	89.9
Researcher	1/3/20	98	89.9	10	9.2	11	10.1	98	89.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**90.8**		**9.2**		**10.1**		**89.9**

Category two: The structure of learning tasks					
Descriptor 1: Relevance, links to age, stage, daily experiences	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	84	77.1	25	22.9
Moderator	1/12/19	85	78.0	24	22.0
Researcher	1/3/20	84	77.1	25	22.9

Average of 3 evaluations = % of method reflects constructivism descriptor			**77.4**		**22.6**
Descriptor 2: Prior learning	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	**100**	**91.7**	**9**	**8.3**
Moderator	1/12/19	**100**	**91.7**	**9**	**8.3**
Researcher	1/3/20	**100**	**91.7**	**9**	**8.3**
Average of 3 evaluations = % of method reflects constructivism descriptor			**91.7**		**8.3**
Descriptor 3: Student-centric	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	11	10.1	98	89.9
Moderator	1/12/19	11	10.1	98	89.9
Researcher	1/3/20	11	10.1	98	89.9
Average of 3 evaluations = % of method reflects constructivism descriptor			**10.1**		**89.9**
Category Three: Cognitive learning, personal acts of the learner					
Descriptor 1: Question/Analysis	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	0	0.0	109	100.0
Moderator	1/12/19	0	0.0	109	100.0
Researcher	1/3/20	0	0.0	109	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Descriptor 2: Application/transferal of knowledge	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	10	9.2	99	90.8
Moderator	1/12/19	10	9.2	99	90.8
Researcher	1/3/20	**10**	**9.2**	**99**	**90.8**
Average of 3 evaluations = % of method reflects constructivism descriptor			9.2		90.8

Descriptor 3: Problem solving	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	0	0.0	109	100.0
Moderator	1/12/19	0	0.0	109	100.0
Researcher	1/3/20	0	0.0	109	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Category four: Social learning					
Descriptor 1: Discussion	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	0	0.0	109	100.0
Moderator	1/12/19	0	0.0	109	100.0
Researcher	1/3/20	0	0.0	109	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**
Descriptor 2: Collaborative and shared learning	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	10	9.2	99	90.8
Moderator	1/12/19	10	9.2	99	90.8
Researcher	1/3/20	9	8.3	100	91.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.9**		**91.1**
Descriptor 3: Scaffolding	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	10	9.2	99	90.8
Moderator	1/12/19	10	9.2	99	90.8
Researcher	1/3/20	10	9.2	99	90.8

Average of 3 evaluations = % of method reflects constructivism descriptor	**9.2**		**90.8**

Category five: The focus of learning					
Descriptor 1: Self-reflection/self-evaluation	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	10	9.2	99	90.8
Moderator	1/12/19	9	8.3	100	91.7
Researcher	1/3/20	9	8.3	100	91.7
Average of 3 evaluations = % of method reflects constructivism descriptor			**8.6**		**91.4**
Descriptor 2: Student ownership	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	10	9.2	99	90.8
Moderator	1/12/19	10	9.2	99	90.8
Researcher	1/3/20	10	9.2	99	90.8
Average of 3 evaluations = % of method reflects constructivism descriptor			**9.2**		**90.8**
Descriptor 3: Goal setting	Date	Y (n/109)	%Y	N (n/109)	%N
Researcher	1/11/19	0	0.0	109	100.0
Moderator	1/12/19	0	0.0	109	100.0
Researcher	1/3/20	0	0.0	109	100.0
Average of 3 evaluations = % of method reflects constructivism descriptor			**0.0**		**100.0**

Appendix D: List of contacts for survey phase one

The following organisations were contacted and passed on the survey invitation to their members:

Music Teacher Organisations in each Australian State

- New South Wales Music Teachers Association (MTA NSW), of which the researcher is a member.
  https://www.musicnsw.com.au
- Australian Capital Territory Keyboard Association (ACTKA), of which the researcher is a member.
  http://www.actka.org
- Queensland Music Teachers Association (QMTA)
  https://www.musicteacher.com.au/music-teachers-association-of-qld-inc/
- Northern Territory Music School
  http://www.ntms.net.au/centres-and-associations
  https://www.musicteacher.com.au/directory/darwin-northern-territory/lessons/piano/?order=distance
- Western Australian Music Teachers Association (WAMTA)
  http://www.musicteacherswa.org.au/index.php
- South Australian Music Teachers Association (MTASA)
  https://mtasa.com.au
- Tasmanian Music Teachers Association (TMTA)
  https://www.tmta.com.au
- Victorian Music Teachers Association (VMTA)
  https://vmta.org.au

Australian Music Teachers Register

Lists piano teachers in every state of Australia

https://www.amtr.com.au

(Permission given by administrator for researcher to send survey invite to piano teachers listed on the site)

Music Teachers Online

Different lists piano teachers in every state of Australia

https://www.musicteacher.com.au/directory/lessons/piano/

(Permission given by administrator for researcher to send survey invite to piano teachers listed on the site)

Regional Conservatoriums of New South Wales (total 17)
http://www.regionalconsnsw.org.au/locations/

- Murray Conservatorium: Albury
  http://www.regionalconsnsw.org.au/albury
- New England Conservatorium: Armidale and Inverell
  http://www.regionalconsnsw.org.au/armidale
- Mitchell Conservatorium: Bathurst, Forbes, Lithgow
  http://www.regionalconsnsw.org.au/mitchell
- Central Coast Conservatorium: Central Coast and Gosford
  http://www.regionalconsnsw.org.au/gosford
- Coffs Harbour Regional Conservatorium
  http://www.regionalconsnsw.org.au/coffsharbour
- South West Music: Deniliquin
  http://www.regionalconsnsw.org.au/deniliquin
- Macquarie Conservatorium: Dubbo
  http://www.regionalconsnsw.org.au/dubbo\
- Goulburn Regional Conservatorium
  http://www.regionalconsnsw.org.au/goulburn
- Clarence Valley Conservatorium: Grafton
  http://www.regionalconsnsw.org.au/grafton
- Gunnedah Conservatorium
  http://www.regionalconsnsw.org.au/gunnedah
- Northern Rivers Conservatorium: Lismore
  http://www.regionalconsnsw.org.au/lismore
- Orange Regional Conservatorium
  http://www.regionalconsnsw.org.au/orange
- Tamworth Regional Conservatorium
  http://www.regionalconsnsw.org.au/tamworth

- Upper Hunter Conservatorium: Muswellbrook and Singleton
  http://www.regionalconsnsw.org.au/upperhunter
- Riverina Conservatorium of Music: Wagga Wagga
  http://www.regionalconsnsw.org.au/waggawagga
- Wollongong Conservatorium of Music
  http://www.regionalconsnsw.org.au/wollongong
- Young Regional School of Music
  http://www.regionalconsnsw.org.au/young

Websites/Facebook

The Art of Piano Pedagogy (over 600 members)

https://www.facebook.com/theartofpianopedagogy/

Tertiary Music Institutions

- ANU School of Music
  http://music.cass.anu.edu.au
- Melbourne Conservatorium of Music
  https://mcm.unimelb.edu.au
- Sydney Conservatorium of Music
  http://music.sydney.edu.au/study/
- Elder Conservatorium of Music
  https://music.adelaide.edu.au
- Queensland Conservatorium of Music
  https://www.griffith.edu.au/arts-education-law/queensland-conservatorium
- Queensland University
  https://www.uq.edu.au
- University of Western Australia, Conservatorium of Music
  email: music@uwa.edu.au
  https://www.uwa.edu.au/able/contact