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The assessment dilemma : Music teacher perspectives on engaging with assessment data

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The Assessment Dilemma: Music teacher perspectives on engaging with assessment data

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"This thesis contains no material that has been extracted in whole or in part from a thesis that I have submitted towards the award of any other degree or diploma in any other tertiary institution.

No other person's work has been used without due acknowledgment in the main text of the thesis.

All research procedures reported in the thesis received the approval of the relevant Ethics/Safety Committees (where required)."

Dedication

The achievement of this study would not have been possible without the support and belief of a number of important people. Firstly, my sincere gratitude goes to my principal supervisor, Emeritus Professor Tania Aspland. Over the course of 8 years of study Emeritus Professor Aspland has provided academic and personal support to ensure completion of my thesis and the achievement of my goals. Her willingness to respond to my phone calls, texts and emails has assisted in keeping me on track, building my skills and improving the quality of research through teaching and leading me.

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Abbreviations

A*a*L	**Assessment as Learning**
ABRSM	Associated Board of the Royal Schools of Music
ACARA	Australian Curriculum, Assessment and Reporting Authority
A*f*L	Assessment for Learning
AITSL	Australian Institute for teaching and School Leadership
AMEB	Australian Music Examinations Board
APST	Australian Professional Standards for Teachers
ATAR	Australian Tertiary Admissions Ranking
ARG	Assessment Reform Group
CBM	Curriculum-based measurement
CET	Cognitive Evaluation Theory
DBDM	Data-based decision making
DDDM	Data-driven decision making
DIDM	Data-informed decision making
EBDM	Evidence-based decision making
FA	Formative assessment
FE	Formative evaluation
ITE	Initial teacher education
MCEETYA	Ministerial Council on Education, Employment, Training and Youth Affairs
NAPLAN	National Assessment Program – Literacy and Numeracy
NCCD	Nationally Consistent Collection of Data for Students with Disability
NSW	New South Wales (Australian State)
OECD	Organisation for Economic Co-operation and Development

PCK	Pedagogic content knowledge
PISA	Programme for International Student Assessment
PL	Professional Learning
SDT	Self-determination Theory
TIMSS	Trends in International Mathematics and Science Study
TPA	Teacher Performance Assessment
UNESCO	United Nations Educational, Scientific and Cultural Organization
WAM	Western Art Music
WWII	World War Two

Abstract

This research sets out to ascertain the perspectives of Australian teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. The aim of the study is to develop an understanding of classroom teachers' beliefs and perspectives on using data generated from formative assessment of music literacy. The purpose of conducting the study is multifaceted: (i) To understand how perspectives influence teachers' use of data to guide the teaching and learning process; (ii) to guide professional learning in relation to assessment and (iii) to build assessment capacity that supports learning with a view to enhancing pedagogy, student outcomes and improving participation rates in post-compulsory music education.

Whilst existing research into assessment in music education suggests that teachers engage in idiosyncratic, inconsistent and conflicting practices which encompass assessment for learning but do not ensure enhancement of student learning outcomes, a paucity of research has been conducted into teacher perspectives on using student assessment data in classroom music literacy.

Inferential coding and thematic analysis of data from qualitative surveys (N=86) and semi-structured interviews (N=8) with participants from across Australia, identified six main themes. Expressed as a set of assessment dilemmas faced by music educators, these dilemmas highlight factors that inhibit music teachers from fully engaging with formative assessment data that could lead to improved pedagogy and learning outcomes in their classrooms.

Recommendations from this study have implications for pre-service training, professional learning, teacher assessment identity formation and teacher assessment literacy, through reframing the dilemmatic assessment space as a place of positive growth. Additionally, recommendations identify addressing the Australian curriculum requirements for music education across primary and the first year of secondary education.

Chapter 1: Introduction

This research sets out to ascertain the perspectives of Australian teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. The aim of the study is to develop an understanding of classroom music teachers' beliefs and perspectives on using data generated from formative assessment of music literacy. Although the use of summative and formative assessment practices is a requirement of the Australian Curriculum (ACARA, 2014), the distinction between the two is, at times, lacking clarity as the use of the term formative assessment consists of a diverse set of practices (Cizek, et al., 2019; Black & Wiliam, 2009: Harlen & James, 1997; Ramaprasad, 1983). Harlen and James (1997) warned of the "detrimental effect of this confusion of purposes on formative assessment and on the role that assessment has to play in teaching for understanding" (p. 367). Alarmingly, some 22 years later, Cizek et al., (2019) stated that there remains "a serious—and, consequential—lack of clarity about the definition of formative assessment" (p. 32).

For the purpose of this study the researcher has established a clear interpretation of formative assessment as it applies to this study. This interpretation draws the distinction between formative and summative assessment data based on their potential use within the classroom, whereby "summative assessment data can be used formatively, but formative assessment information should, in general, be used only formatively" (Cizek, et al., 2019, p. 32). Further delineation and definition of formative assessment as it applies to this current research project is provided by Black and Wiliam (2009) as they conceptualise five key elements of formative assessment.

> 1. Clarifying and sharing learning intentions and criteria for success;
> 2. Engineering effective classroom discussions and other learning tasks that elicit evidence of student understanding;
> 3. Providing feedback that moves learners forward;
> 4. Activating students as instructional resources for one another; and
> 5 Activating students as the owners of their own learning (p. 8)

Therefore, the researcher uses of the term formative assessment to encompass teacher-peer-learner interactions that improve learning by (i) establishing where the students are in their learning, (ii) through the use of formative music literacy tasks that generate objective data, (iii) for planning future learning directions and goals setting by the teacher and (iv) for students to co-regulate their learning (Panadero, et al., 2019), thus (v) building self-efficacy and intrinsic motivation into learning in classroom music.

The purpose of conducting the study is multifaceted: (i) To understand how perspectives influence teachers' use of data to guide the teaching and learning process; (ii) to guide professional learning in relation to assessment and (iii) to build assessment capacity that supports learning with a view to enhancing pedagogy, student outcomes and improving participation rates in post-compulsory music education.

Impetus for the Research

Prior to commencing the research presented in this thesis, the author had undertaken school-based investigations to examine the declining participation rates in elective music at her school. The multi-campus, Pre-K(indergarten) to Year 12 (Pre-K-12) school had a well-regarded, highly accomplished instrumental music program, but participation rates in elective classroom music were consistently low and dropping. It was also noted that many students studying an instrument through private tuition maintained their instrumental studies but did not enrol in the classroom music elective. Year 7 was, and continues to be, the final year of compulsory music at the school. Approximately 50% of Year 7 students were new to the school, while the other 50% had been at the school throughout some or all of their primary (elementary) years. The researcher was granted school-based ethics approval to conduct surveys and interviews with Year 7 students across all campuses to determine the reasons why students were choosing other elective subjects over music. For convenience, interviews were only conducted with students on the researcher's home campus. School-based ethics and research participation approval documentation was sent to 350 students and their parents inviting them to participate in the study. The participation rate was 87% and 304 surveys were received from the Year 7 group. Student responses showed that students liked music classes (72%) and that they had fun (80%) in during music lessons. However, 88% of surveyed students also claimed that they did not learn anything in music and 95% reported that they did no learning-work in the classes. 98% of students said music had no relevance to their futures and less than 6% of students said they were considering doing music as an elective in Year 8.

Students identified their inability to read music (86%) as the main reason that they felt they were not *musical,* and that they had low levels of self-efficacy in music. As a result, they reported that they would not consider choosing music as an elective study. The follow up interview stage explored this further with 32 (16 male and 16 female) students. They expressed a number of frustrations which are outlined below. First, they expressed frustration and helplessness in relation to reading notation. One typical student participant (SP) response explained,

> We had music classes for six years through primary school but learnt nothing at all. We just played games [in primary school]. I never had a chance to sing in class, even though I love singing. We rarely had the opportunity to play instruments and I had no idea how to read basic notation [on the treble staff]. We did lots of dancing games, but we didn't learn anything from them. (SP21)

Another student echoed this sentiment, claiming "We did singing in class, although there was rarely any music knowledge we could take away from it" (SP29), and yet another stated,

> At my school we didn't really learn about notation, so I never got to remember my notes. We played a lot of singing and dancing games because it was easier than getting all the instruments out. We were assessed on group performances based on our singing and dancing. (SP30)

The students who were comfortable with notation stated that they learned this in their private instrumental music lessons and not in classroom music. The following statements were typical of responses.

- "I was confident with notation because of piano lessons outside of school". (SP24)
- "By playing keyboard outside school, I had basic knowledge of notation but we were never taught in music classes". (SP9)
- "The school didn't teach anything about the treble staff. I learnt it all from doing piano classes in after school lessons". (SP5)

Participants did not value classroom music performance stating that they did not learn from the experience as they were just doing what they teacher told them to. One participant explained “we usually played the marimba, but we never got taught notes or how to read music” (SP18). Similarly, SP22 said “We played instruments. However, it was very vague and we weren’t taught about the notes of the instruments”. Further supporting this theme, another student claimed that “We mostly used our iPads for instruments. We didn’t learn notes on the treble staff. We learned basic notes of the iPad such as C, F and G buttons and made melodies about it" (SP3).

The school survey at this site, presented some interesting findings into the perceived failure of primary education in preparing students for music education in the secondary context. It also offered some deeper insights into the challenges that were presented to this researcher, a musician and music educator, who really wanted to inspire young people into the world of music education. With this intention in mind, the research in this thesis unfolded over many years.

This introductory chapter presents an overview of the thesis. It introduces a brief overview of the background and context for this research. The aims of the study are presented and the justification for the research introduced, focussing on the fact that there is very little literature about the field under review. The central research question and the guiding research questions for this study are presented below. This chapter also introduces the interpretivist nature of the research methodology adopted for this investigation to set the scene for what follows. Finally, an overview of the structure of this thesis is presented.

Background – A Brief Overview

This section presents a brief overview into the background for the study. The phenomenon of decreasing participation rates in classroom music past the compulsory years is internationally acknowledged (Freer & Evans, 2019; McEwan, 2013; Venter & Panebianco, 2022), with GCSE music participation rates in the United Kingdom decreasing by 27% since 2010 (Hall, 2022). There is considerable concern within the music education profession regarding the decreasing numbers of students continuing their instrumental studies and those selecting to pursue classroom music studies post the compulsory years. Considerable research from a psychological perspective (McPherson et al., 2015; Venter & Panebianco, 2022) has been undertaken to understand the movement away from music. Freer and Evans (2018, 2019) have explored psychological needs-based causes for the diminishing numbers, and along with Evans et al., (2012) have identified the psychological needs of competence, relatedness and autonomy as intrinsic to continued participation in music learning. It is clear that students in classroom music are lacking in a sense of competence in relation to music literacy. Further, without the competence to engage with literacy, autonomy is impacted, leaving students feeling helpless and frustrated. Hennessy (2000) and more recently, Lamont and Maton (2010) also identified student perspectives that the lack of music teacher competence or self-confidence can also attribute to students not selecting music in the post compulsory years.

The move to a national Australian curriculum in 2014, for the first time in Australia's history, brought significant changes to teaching in Australian schools. This curriculum reform introduced a national framework across key learning areas from Foundation to Year 10, with senior secondary schooling remaining the domain of each of the states or territories in this nation. Although the curriculum was developed to ensure a level of uniformity across Australia, each of the states and territories is now responsible for its implementation, with jurisdiction-based interpretations taking precedence over the national framework (Ewing et al., 2019). As a result, there is a great deal of variability across jurisdictions with some learning areas taking priority over others in terms of time allocation and resourcing. At the same time, national testing in literacy and numeracy was also introduced which additionally led to a narrowing of the national curriculum and a loss of curriculum time for some learning areas, one of which is music education.

It is within this dilemmatic space, where policy expectations, regulations, time restrictions, pedagogic content knowledge, assessment and reporting requirements conflagrate, that classroom music teachers find themselves. As Fransson and Grannäs (2013) point out, the complexity of daily work practices required to meet these changing demands "create dilemmatic tensions between official, recommended, taught, learned and tested curricula" (p. 5). The recent reduction in curriculum time allocated to music in the initial years of secondary schooling, compounds the conflict and challenges the teacher's vision of best practice in music education. Subsequently, teachers find themselves in the dilemmatic space in which their professional judgement is suppressed for the sake of meeting jurisdictional demands.

A study undertaken by Western Sydney University in 2012 surveyed 8300 teachers and found that since the introduction of national testing in 2008, teachers were most concerned by the narrowing of teaching strategies and of the curriculum (Dulfer et al., 2012). This research indicated that 74% of participant teachers believed that national testing had resulted in the reduced importance of other curriculum areas and had resulted in timetable reductions for those subjects. In 2019, Monash University conducted a further study with 8000 participants. Similar findings indicated that the "heavy focus on data and testing, narrowed [the] curriculum as a result" (Heffernan et al., 2019, p. 14) and that teachers did not feel that they were trusted to do the job they had been prepared to do. Further, these findings confirmed the belief that teachers are powerless in relation to policy decisions and reforms that they must enact in their classrooms.

During the same period of time, Australia witnessed an increasing regulation of the teaching profession with the introduction of the Australian Professional Standards for Teachers (2011). The regulatory national body that managed the standards, the Australian Institute of School Leadership and Teaching (AITSL) was owned by the Commonwealth Minister of Education and was established to heighten the quality of teaching across Australia. However, many professional bodies perceived the standards to be a threat to the autonomous standing of the profession in Australia. This debate continues as regulation through policy, national testing, mandated curriculum and teacher accreditation covertly shapes the work of teachers under the guise of quality assurance.

This debate has implications for reshaping the teaching of music and the arts in schools in Australia, which is elaborated further in the ensuing chapters. However, of significance, several key practices across curriculum and pedagogy have influenced the delivery of the arts, including music in the early years of secondary education in Australia. These include:

(i) The integrated approach to teaching the arts dramatically reducing class time dedicated to each of the arts areas as they now share the one timetable allocation.
(ii) Using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom education resulting in loss of teaching time.
(iii) The demand from school leaders to reform assessment strategies across the curriculum including music education to promote formative assessment for data-based decision making.

Within this context of curriculum reform, national testing, increasing regulation of the profession and a pedagogical shift in the focus of teaching and assessment, together with a decreasing interest from students in pursuing music education in secondary schools and the broader educational context, there existed a need to interrogate the empirical literature to investigate how to address many of the questions that were emerging about the future of music education in Australian schools.

Having explored the literature, it was evident that the extent of research into music education was considerable. While there has been a plethora of studies both internationally and nationally (Call, 2018; Mayer et al., 2005; Shanker, 1996; Sachs, 2003, 2015; Talbot, 2016; Willis et al., 2019) claiming that the professional autonomy of teachers has been significantly reduced by the introduction of standards and the neoliberal agenda that focuses on performativity rather than education, there are few studies that have interrogated teachers' perspectives on engaging with data as integral to their professional work in the classroom. Music education has been well researched. Existing research themes relating to music education include instrumental music teaching (Fredrickson, 2007; Watson, 2010), teacher self-concepts (Ballantyne et al., 2012; Jones & Parkes, 2009; Künsting et al., 2016), the musician as teacher (Hargreaves et al., 2007; Parkes & Jones, 2012), teacher preparation (Pascoe et al., 2005) and cognitive development (Collins, 2014; Costa-Giomi, 2014; Schellenberg, 2004). Throughout the limited research investigating assessment in classroom music, a number of researchers (Eisner, 2007; Fautley & Murphy, 2014; Leong, 2014; Leong & Qiu, 2013; Murphy, 2007; Sadler-Smith, 2015; Wong, 2013; Zandén & Ferm Thorgersen, 2014) identified idiosyncratic, inconsistent and conflicting practices. It became evident that of the many pathways research could take in this field, little was known about Australian music teacher perspectives on assessment, engaging with assessment data or the use of formative assessment relating specifically to music literacy.

Many music teachers believe the only true and authentic form of music assessment is the aspect of performance, a public display by which students demonstrate their learning (Asmus, 1999; Fautley, 2010), however, the subjective nature of performance assessment and its measurement is a point of concern (Shuler, 2011; Russell & Austin, 2010; Cantwell & Jeanneret, 2004). Further, although a teacher may be considered to be assessment literate, they may not have the skills to be data literate (Mandinach & Jimerson, 2016). Data literacy includes the capacity to gather appropriate data, interrogate the data, interpret the data and draw conclusions that can be applied to their own teaching practice (Kennedy-Clark et al., 2020; Mandinach & Gummer, 2016). As with assessment literacy, teacher confidence and competence with data are generally considered to be low as overcrowded teacher preparations courses provide inadequate training in data literacy skills. This is clearly of great concern in music education as this research will demonstrate.

These concerns expressed in the empirical literature juxtaposed with the context in which teachers in Australia were working in schools, particularly in music education, led to the identification of guiding research sub-questions for further investigation, namely:

1. What are the aims of music teachers when assessing music? What are their aims for assessing music literacy and engaging with the formative data they generate? What reasons do they give for these assessment aims?

2. What strategies do music teachers use to achieve their aims in relation to the assessment of music and using formative data from music literacy assessments? What reasons do they give for using those strategies?

3. What significance do music teachers say they attach to their aims or intentions and their strategies and what reasons can they give for this?

4. What outcomes do music teachers expect from pursuing their aims or intentions? And what reasons can they give for this?

5. Are there any inhibiting factors that prevent teachers from actively using formative assessment data?

6. To what extent, if any, does professional learning have? What impact would individually designed professional learning have on music education praxis?

With these questions at the fore of the conceptualisation of further research, methodology became important and the quest for the most appropriate framing of the investigation was instigated.

The key research question being investigated in this thesis: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* examined the central phenomenon of teacher perspectives in relation to using data as a pedagogical tool in multifarious music classrooms.

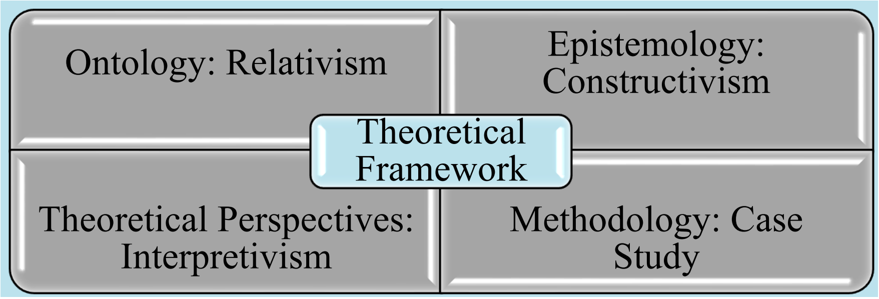
The intentions of the study were:

- To develop an understanding of classroom music teachers' beliefs, attitudes, self-efficacy and perspectives on using data generated from formative assessment of music literacy; and
- To understand and theorise how teachers' use of data guides teaching with a view to enhancing student music literacy learning outcomes and improving participation rates in post-compulsory music education.

The theoretical framing of the study is comprehensively presented in Chapter 4 of this thesis but the diagram below (Figure 1) captures four key constructs that rationalised the research plan and directed the research action throughout the data collection and analysis.

Figure 1

Theoretical Framework


Ontology: Relativism
Epistemology: Constructivism
Theoretical Framework
Theoretical Perspectives: Interpretivism
Methodology: Case Study

At the point of design and implementation, the researcher employed a constructivist approach to studying perspectives of the sample music teachers, as it is primarily an individualistic understanding of the phenomenon where meaning-making is undertaken through an interpretive theoretical perspective as an activity of the individual mind of the researcher (Crotty, 1998). In seeking to understand the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from the assessment of music literacy, the research focused on meanings made on how pedagogical knowledge has combined with personal and collective histories, experiences and beliefs to shape individual reality and the culture of classroom music education in Australia.

The implementation of case study methodology facilitated comprehensive exploration of the phenomenon of teacher perspectives at a point in time, thereby addressing the desired outcomes of the research (Creswell, 2012; Creswell, 2013; Crotty, 1998). Exploring the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from the assessment of music literacy presented a contemporary phenomenon where little research has been undertaken but also where the only genuine way to gain that understanding was by talking directly to the participants, further supporting a case study methodology (Kvale & Brinkmann, 2009).

Two data collections methods were adopted to explore the complexity of the central phenomenon. These methods include the employment of a qualitative survey and semi-structured interviews. Further rationalisation and explanation are provided in Chapter 4. Following the process of ethics approval, this approach to data collection generated a vast amount of rich data particularly through a series of sustained interviews with participants. What followed through the data analysis phase was enlightening and surprising, as a series of dilemmas, contradictions and ambiguities unfolded throughout teachers' perspectives, and as they shared their experiences including personal and professional beliefs about assessment practices in music education in the context of secondary schools in Australia.

What follows in Chapter 2 is a further delineation of the context in which this study is positioned, namely music education in secondary schools in Australia. This chapter outlines the history of music education in this nation and provides an overview of the changing policies regarding education and the arts since the introduction of compulsory schooling in Australia.

Chapter 3 offers a review of the empirical literature and focuses on the analysis of key bodies of knowledge that informed the evolution of the study. First, a discussion on data use in education is presented. Then a review of current research on formative assessment as it shapes teaching and learning is articulated. Thirdly, an examination of research into music education and assessment is delineated and this is followed by a critical report on the current research into formative assessment in music. The fourth section examines the influencing factors that impact teacher perspectives on engaging with assessment data. In part five, the impact of educational change is addressed. Part six examines professional learning and the summary brings together the literature review, forming the basis for the generation of research questions that require further investigation. The chapter closes with a rationale for the importance of further research that will address the key research question within this dissertation: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?*

Chapter 4 rationalises the theoretical constructs that shape the methodology and methods of data collection and analysis that were adopted for the research and the principles that were followed to ensure rigorous and authentic research procedures throughout the study. The key dilemmas that were elicited through the data analysis are reported in Chapter 5, identifying the very insightful themes and theoretical propositions that contribute to building the significant findings of the research.

In the culminating Chapter 6, a narrative is presented, articulating the evolution of a new model of how teachers work with dilemmas in new times, particularly in relation to assessment in music education. The final interpretation, portraying the complex dilemmas reported by the participating teachers will be presented, and represents the substantive theory of teachers' practices when engaging in assessment data in the first year of music education in sample secondary schools in Australia. Finally, a set of recommendations for practice, policy and further research will be argued based on the evidence generated in this study.

Chapter 2: Context

Introduction Politics, Policy and Music Education

This chapter serves to situate music education in the Australian context. Music education in Australia is shaped by educational policy, a highly regulated national curriculum and reporting regulations. Section 1 of the chapter looks at historical contexts influencing music education. In Section 2, the chapter will present an historical overview of initial teacher education (ITE) designed to prepare music teachers for Australian schools. Section 3 will examine the classroom music curriculum and Section 4 will provide a brief overview of the assessment and reporting requirements outlines in national curriculum documents. The final section of this chapter will address musical literacies and clarify the interpretation of the concept of music literacy being addressed in this thesis.

Classroom music education in Australia has undergone many changes since the commencement of public education in 1848. Whilst still largely situated in the Western, classical tradition, music education has been influenced by cultural and political change and the research of significant international individuals and methodologies. As a body of discipline knowledge, it also reflects its own philosophical approaches that sometimes sit outside the findings of educational research. The following section examines the historical contexts of music education in Australia.

2.1 Historical Contexts of Music Education in Australia

Fads and Influencers.

From its initial beginning, Australian music education centred around a classroom curriculum based on singing and choirs. A strong conceptual framework moved students from singing by ear through the development of aural skills, to the engagement of music methodologies including the use of tonic solfa. In the upper primary years, students would sing from staff notation, as by this time students were expected to be able to sight-read notation. There is no indication in Government reports of the time that the music curriculum provided any opportunity for students to compose or create their own music (Tearne, 1921). Likewise, there is no indication that instruments were used by students in the enactment of classroom music education. The focus was on internalising music through using the voice, together with developing strong aural and reading skills. Influenced by approaches to music education being used in the United Kingdom, a shift in thinking occurred in Australia during the 1930s. Flute bands were introduced in New South Wales with great success, however, these were unsustainable during World War II (WWII), as the instruments could not be sourced. The influence of British music education continued to impact on Australian music education and in 1935, the popularity of percussion bands became the latest fad in music teaching. These too waned in popularity and the percussion bands soon became unsustainable. Since then, a number of instrumental trends have influenced music classrooms across the country with recorders, keyboard labs, class sets of guitars and more recently, the inclusion of Ukulele.

After WWII, the Displaced Person's Scheme allowed European migrants to resettle in Australia; however, immigration from non-European countries was restricted (Department of Immigration and Border Protection, 2015), further consolidating the use of Western Art Music (WAM) as the basis for music education in Australian classrooms.

Transformation of music education became evident in the United Kingdom in the middle decades of the twentieth century, with Independent and Grammar Schools creating a new sense of purpose for music education (Paynter, 2002) by developing bands, choirs and orchestras. Schools in Australia quickly followed. During the 1960s and 70s, music education in Australia was also influenced by the work of Professor R. Murray Schafer and John Paynter which resulted in an increased focus on performance. The continuation of the use of Western Art music still dominated the classroom and reflected Australia's colonial past and the immigration policy of the time. The focus on performance became cemented in the psyche of educational leaders as a tangible product that brought prestige to schools through concerts and competition.

The influence of Canadian composer and educationalist, Professor R. Murray Schafer promoted creativity in composition by attempting to "discover whatever creative potential children may have for making music of their own" (1972, p. 3). At the same time, the influence of British music researcher and educator, John Paynter, consolidated the move to a more creative approach to classroom music education but also acknowledged the difficulties teachers may have in delivering lessons involving creativity (Southcott & Burke, 2012). These reforms to music education in the primary and lower secondary years, resulted in a need for change in the curriculum at the senior secondary level.

By the 1970s, social change resulted from an influx of Vietnamese refugees which ultimately brought about the end of the White Australia Policy (Department of Immigration and Border Protection, 2015) and the opening of immigration to include people from the Middle East, Asia and South America leading to great change over the next few decades. By the 1990s, Australian society had seen vast demographic change and combined with developments in pedagogy, teachers were beginning to explore a more multi-cultural, comprehensive and academic approach to music education that included aural skills, composition, musical literacy and performance in the hope of generating more comprehensively skilled musicians. Although, during the 1920s, it was feared "that 'good' music was dying out and being replaced by popular music and the cinema" (Chaseling & Boyd, 2014, p. 49) by the early 1990s a greater acceptance of popular music and an increasing use of culturally diverse music, including an emphasis on the music of Australia's Indigenous peoples (Dunbar-Hall, 2005), were considered valid forms of study. These changes widened the genres of music that teachers were including in the classroom curriculum.

At this point, the use of an integrated approach to curriculum delivery in schools became popular in primary and lower secondary programs and the teaching of music was no exception as music was often integrated into a thematic approach to teaching across disciplines. As Carroll (2019) points out, the move to unit or topic-based music education at this period of time "worked against the systematic construction of knowledge" (p. 164). The segmented nature of topic-based or genre-based learning where students moved from Jazz to WAM and popular music or non-Western music provided no sequential learning of the elements of music. This fragmenting of the learning sequence has come under even more strain with the inclusion of the Musical Futures pedagogical approach to classroom music (Crawford, 2017; Jeanneret, 2010), currently being adopted in some Australian schools. Wilson (2019) describes music learning to be "haphazard, non-linear, holistic or serendipitous" (p. 92) rather than a planned or sequential learning pathway. Paynter (1970) had already noted that the limited time dedicated to music in the secondary schools made the teaching of music literacy ineffective for both students and teachers. This was further compounded by the new unit-based approach. Rather than addressing the pedagogical approaches to teaching music literacy in both primary and secondary music, Paynter (1970) claimed that students should be permitted to create and perform music without the supporting ability to read or notate music.

However, being musically literate was more complex than Paynter (1970) previously implied and an ideological tension between educators developed, dividing the meta-collective about what constitutes musical literacy. Further, domain specific content knowledge in ITE music courses did not address the changing landscape of music education (Drummond, 2001). Initial teacher education in music will be discussed next.

2.2 Music Teacher Training

Questions about the teaching of music in schools and the quality of music teaching have also been documented in Australia since the 1920s (Chaseling & Boyd, 2014). Reports written between 1920 - 1926 in NSW indicate that generalist primary teachers "received little or no music instruction [...] were avoiding teaching music by claiming they were musically incompetent" and where it has been noted that "on entering Teacher's College, students had had five years [of secondary school] without music lessons" (Chaseling & Boyd, 2014, p. 48). The similarities of these reports to current circumstances are disappointingly alarming as similar concerns relating to the capacity of generalist primary teachers to deliver sequential music programs are being raised a century later. Although reports to NSW District Inspector indicated some improvements in music during the 1930s, it was noted that "schools do not reach the standard set down in the syllabus" (Cantello, 1934, in Chaseling & Boyd, 2014, p. 50). Once again, this statement echoes contemporary concerns as teachers in the secondary schools' report that most students do not meet the Australian curriculum standards for music on entry to the first year of secondary schooling.

However, ITE courses, usually populated by a socially elite group (Drummond, 2001) from which the majority of music teachers come, have never adequately addressed the increasing array of cultural and social diversity in classrooms. Ultimately, any pedagogic gains made during the late 1980s and 1990s were lost as teachers struggled to differentiate learning or engage students with culturally specific musical experiences (Murphy, 2007). With the ever-increasing pressure on instructional time and requirements to provide substantiation of the efficacy of their teaching, there was a return by teachers to courses resembling the music appreciation movement of the past. The music appreciation courses, in which students learned *about* music, but did not learn music (Paynter, 2002), failed to provide improvements in student learning outcomes. The term music appreciation appeared in music syllabus documentation in Australia in the earliest days, however, establishing a meaning for the term led to a wide-ranging interpretation and application to music education in the school. Despite a warning in the NSW syllabus of 1941, that teachers should avoid the propensity to make children listeners only under the guise of music appreciation, by 1952 the term was "synonymous with the listening lesson" (Chaseling & Boyd, 2014, p. 54) and this approach continued into the 1980s and was still dominated by Western Art Music.

The absence of a dominant pedagogical approach to music teaching in Australia is echoed in ITE, further fragmenting student learning. ITE courses in Australia teach *about* pedagogical methodologies (Kodaly, Orff-Schulwerk, Dalcroze and Musical Futures) rather than teaching pre-service teachers any one of the methodologies present in the Australian Music education landscape. Although the University of Queensland had historically trained music teachers in the Kodaly methodology, this focus changed in 2012. Without sufficient training and provision of a common pedagogy in pre-service teacher education, students in Australian schools' experience music learning based on the idiosyncratic and individual ideas of the teacher. This resulted in creating vast differences in learning and music literacy across all sectors of schooling. Moreover, there is still no consistent interpretation of the curriculum documentation across the nation, which will be discussed in the next section.

2.3 The Australian Curriculum - A Curriculum That is Vast Yet Vague

Southcott & Bourke (2012) point out that prior to the influence of Paynter and the introduction of creative composition, classroom music had concentrated on the performance of an instrument learnt outside of the classroom environment, theory of music and the inert recall of history. The current Australian curriculum for music covers aural skills, composition, analysis, performance and the inclusion of Australian music including music of Aboriginal and Torres Strait Islander Peoples. The content descriptor comparisons which are displayed in Figure 2, use terms such as "build on their skills" and "build on their understanding from previous bands". However, there is no direct or clear indication as to what those skills or understandings should be. There are sequential learning structures provided in the documentation, meaning that its interpretation varies between schools and teachers. The requirement for students to be able to sing and recognise intervals does not state what intervals should be achievable at the Year 7 level, nor is there an indication of which intervals should have been learnt or are to be introduced in the future. Curriculum details are contained in the curriculum band descriptors in Figure 3.

Figure 2

Australian Curriculum Content Descriptor Band Comparison - Music

Years 7 & 8 Content Descriptors	Years 9 & 10 Content Descriptors
build on their aural skills by identifying and manipulating rhythm, pitch, dynamics and expression, form and structure, timbre and texture in their listening, composing and performing	continue to develop their aural skills as they build on their understanding and use of the elements of music
perform with expression and technical control	extend technical and expressive skills in performance from the previous band

Figure 3

Australian Curriculum Band Descriptors Years 7 & 8

Australian Curriculum
Music (Version 8.4)
Years 7 and 8 Band Description
In Music, students:

- build on their aural skills by identifying and manipulating rhythm, pitch, dynamics and expression, form and structure, timbre and texture in their listening, composing and performing
- aurally identify layers within a texture
- sing and play independent parts against contrasting parts

- recognise rhythmic, melodic and harmonic patterns and beat groupings
- understand their role within an ensemble and control tone and volume
- perform with expression and technical control
- identify a variety of audiences for which music is made
- draw on music from a range of cultures, times and locations as they experience music
- explore the music and influences of Aboriginal and Torres Strait Islander Peoples and those of the Asia region
- learn that Aboriginal and Torres Strait Islander people have converted oral records to other technologies
- learn that over time there has been further development of techniques used in traditional and contemporary styles of music as they explore form in music
- explore meaning and interpretation, forms, and elements including rhythm, pitch, dynamics and expression, form and structure, timbre and texture as they make and respond to music
- consider social, cultural and historical contexts of music
- evaluate the expressive techniques used in music they listen to and experience in performance
- maintain safety, correct posture and technique in using instruments and technologies
- build on their understanding from previous bands of the roles of artists and audiences as they engage with more diverse music.

Years 7 and 8 Content Descriptions

Experiment with texture and timbre in sound sources using aural skills (ACAMUM092)

- experimenting with and transcribing pitch contour, beat patterns and rhythm sequences
- singing and recognising intervals and melodic patterns to extend music ideas in improvisation and composition

Considering viewpoints – forms and elements: For example – How have the elements of music and instruments been used in this piece?

- identifying qualities of chords in isolation and experimenting with combinations to create chord progressions
- manipulating sound quality by exploring how sounds are produced by different instruments and voice types, for example, manipulating dynamics and timbre in voice or acoustic or digital instruments
- experimenting with texture by layering sound in different ways in composition, for example, by using looping software
- using aural skills to evaluate and improve interpretation of music they read and perform

Develop musical ideas, such as mood, by improvising, combining and manipulating the elements of music (ACAMUM093)

(i) using technology to manipulate specific elements such as pitch and timbre to create intended effects in composition or performance

(ii) manipulating their voices through timbre and expressive techniques to convey intended style

Considering viewpoints – meanings and interpretations: For example – Why does the same piece sound different when different musicians play it?

(iii) experimenting with technology to sequence and combine ideas to enhance intentions in compositions and performances

(iv) listening to and interpreting different types of score conventions from different styles and traditions to develop their own style

(v) experimenting with different types of notation to communicate and record ideas

Practise and rehearse a variety of music, including Australian music to develop technical and expressive skills (ACAMUM094)

(i) exploring and manipulating the elements of music within given parameters to create new music, and reflecting upon musical ideas used by Australian composers, including Aboriginal and Torres Strait Islander artists

Considering viewpoints – societies, cultures and histories: For example – What is the social context of this piece and for whom would it be performed? What is the cultural context of this piece and what does it signify? What instruments and other features of the music indicate it is from a particular time and place?

(ii) rehearsing a range of music in solo and ensemble activities for performance to a variety of audiences

(iii) improvising, practising and rehearsing a range of music expressively and with attention to technique

(iv) considering and investigating techniques for stylistic features when rehearsing

(v) practising interpretation of notation in a range of known and unknown repertoire

Structure compositions by combining and manipulating the elements of music using notation (ACAMUM095)

(i) combining and manipulating the elements of music to imitate a range of styles, using appropriate notation

(ii) selecting, combining and manipulating sounds using technologies to create, develop and record music ideas

Considering viewpoints – evaluations: For example – How effectively are the expressive techniques indicated in the notation of the composition? What are the strengths of this performance or composition?

- experimenting with texture by layering sound in different ways in composition, for example, by using looping software
- using aural skills to evaluate and improve interpretation of music they read and perform

Develop musical ideas, such as mood, by improvising, combining and manipulating the elements of music (ACAMUM093)

(vi) using technology to manipulate specific elements such as pitch and timbre to create intended effects in composition or performance

(vii) manipulating their voices through timbre and expressive techniques to convey intended style

Considering viewpoints – meanings and interpretations: For example – Why does the same piece sound different when different musicians play it?

(viii) experimenting with technology to sequence and combine ideas to enhance intentions in compositions and performances

(ix) listening to and interpreting different types of score conventions from different styles and traditions to develop their own style

(x) experimenting with different types of notation to communicate and record ideas

Practise and rehearse a variety of music, including Australian music to develop technical and expressive skills (ACAMUM094)

(vi) exploring and manipulating the elements of music within given parameters to create new music, and reflecting upon musical ideas used by Australian composers, including Aboriginal and Torres Strait Islander artists

Considering viewpoints – societies, cultures and histories: For example – What is the social context of this piece and for whom would it be performed? What is the cultural context of this piece and what does it signify? What instruments and other features of the music indicate it is from a particular time and place?

(vii) rehearsing a range of music in solo and ensemble activities for performance to a variety of audiences

(viii) improvising, practising and rehearsing a range of music expressively and with attention to technique

(ix) considering and investigating techniques for stylistic features when rehearsing

(x) practising interpretation of notation in a range of known and unknown repertoire

Structure compositions by combining and manipulating the elements of music using notation (ACAMUM095)

(iii) combining and manipulating the elements of music to imitate a range of styles, using appropriate notation

(iv) selecting, combining and manipulating sounds using technologies to create, develop and record music ideas

Considering viewpoints – evaluations: For example – How effectively are the expressive techniques indicated in the notation of the composition? What are the strengths of this performance or composition?

Considering viewpoints – forms and elements: For example – What composition devices were used in your piece?

- creating an arrangement of a known melody
- using style-specific notation software to record compositions

Perform and present a range of music, using techniques and expression appropriate to style (ACAMUM96)

- using the features and performance practices to interpret a specific musical style
- performing with correct posture, for example, standing or sitting in a way suitable to the instrument
- maintaining technical control throughout the performance of a piece of music
- experimenting with alternative dynamics and expression to enhance performance

Considering viewpoints – forms and elements: For example – How have the elements of music and instruments been used in this piece? What composition devices were used in your piece?

- controlling tone and volume to create a balanced sound in ensemble performance

Analyse composers' use of the elements of music and stylistic features when listening to and interpreting music (ACAMUR097)

- identifying elements of music aurally and then discussing how these elements, composition techniques and devices are used and manipulated to create a style
- identifying and describing the features and performance practices that help determine a specific musical style or culture

Considering viewpoints – evaluations: For example – How effectively did the musicians use expressive techniques in their performance? What are the strengths of this performance or composition?

- following scores while listening to musical works and using these as a tool for interpreting music
- accessing and researching music through real or virtual performances to analyse performers' interpretations of composers' intentions

Identify and connect specific features and purposes of music from different eras to explore viewpoints and enrich their music making, starting with Australian music including music of Aboriginal and Torres Strait Islander Peoples (ACAMUR098)

- identifying roles and responsibilities in music-making activities and contexts as both performer and audience member
- identifying personal preferences in the music they listen to and the reasons for them
- making judgements about music as audience members and articulating the reasons for them
- discussing different opinions and perspectives about music and strategies to improve and inform music making

Considering viewpoints – evaluations: For example – How effectively did the musicians use expressive techniques in their performance? What are the strengths of this performance or composition?

https://www.australiancurriculum.edu.au/f-10-curriculum/the-arts/music

The Australian Curriculum states that students should be able to recognise rhythmic, melodic and harmonic patterns and beat groupings without any indication of the appropriately sequenced elements of music they are refereeing to. Moreover, the bands for Years 9 and 10 state: extend their understanding and use of more complex rhythms and diversity of pitch and incorporate dynamics and expression in different forms. The vague use of language leaves the interpretation of a *more complex rhythm* to the individual teacher. This is the case across all content bands in music education, resulting in confusion ideologically, inconsistency at the level of implementation and a lack of clarity when it comes to assessing student learning outcomes.

2.4 Assessment of Music Education

Assessment of music education outcomes in Australian schools also comes with a chequered past. Assessment has historically been used to exclude pupils from programmes or for other forms of selection processes that have strongly favoured those learning an instrument outside the classroom. Some research even described music assessment as a method for music teachers to get "shot of the unwashed masses as quickly as possible in order to bask in the rarefied company of gifted exceptions" (Ross, 1995, p. 185). Assessment regularly focused on the evaluation of inert information, recalling facts with little application or transfer of knowledge or through subjective appraisal of performance. Aural assessments and composition have been more difficult to evaluate in multifarious classrooms and regularly form a lesser part of the evaluation process. Unsupported claims that assessing creative subjects restricts creativity also abound (Leong & Qiu, 2013; Sadler-Smith, 2015; Zandén & Ferm Thorgersen, 2014). As elsewhere, Australian music teachers have questioned what should be assessed (Fautley & Murphy, 2014), how it should be assessed and for what purpose (Murphy, 2007).

Other changes have been driven by external policies and syllabus documents. More recently, further vagaries have occurred due to the introduction of technology, government funding issues and the focus on numeracy and literacy within Australian schools through national numeracy and literacy testing across primary and early secondary levels. Assessment of music is also inextricably linked to and contingent upon reporting requirements of Australian state and federal education departments.

2.4.1 Reporting of Student Achievements in the Australian Curriculum.

The Australian Curriculum, Assessment and Reporting Authority (ACARA) is the regulatory body for education in Australia and requires reports on student progress to be sent to parents/carers twice yearly. As documented in the Implications for Teacher Assessing and Reporting (ACARA, 2013), student progress must also be reported against a five-point scale as stated below:

> The Australian Curriculum achievement standards are an important focus for teachers in initial planning and programming of teaching and learning activities. They provide teachers with a statement of learning expected of students at the end of a year or band of years and assist in developing teaching and learning programs.
>
> Teachers use the Australian Curriculum achievement standards and content to identify current levels of learning and achievement, and then to select the most appropriate content (possibly from across several year levels) to teach individual students and/or groups of students.
>
> Assessment of student learning takes place at different levels and for different purposes, including:
>
> - ongoing formative assessment within classrooms for the purposes of monitoring learning and providing feedback, for teachers to inform their teaching, and for students to inform their learning
> - summative assessment for the purposes of twice-yearly reporting by schools to parents and carers on the progress and achievement of students

State and territory curriculum and school authorities, and sometimes individual schools, make decisions about how teachers give A–E grades.

An additional statement contained in the Implications for teaching, assessing and reporting (2013) document claims that “The Australian Curriculum can be used flexibly by schools”. This flexibility means that there is no consistency or standard sequence of learning at any level of music from Foundation to Year 10. The Australian school structure, where students move from multiple primary schools into larger secondary schools, means that this flexibility becomes problematic. Therefore, also problematic is the requirement to report against achievement standards on a five-point scale in music during the first year of secondary school. Moreover, reporting on a five-point scale that is aligned to achievement standards, as required by the regulatory body, does not indicate student progress as required by the same documentation.

2.5 Musical Literacies

It is important in this chapter to also address music literacy as a broad and complex term, before identifying the area of focus for this study. The term music literacy, as it applies to this research refers to reading and writing of notation and the understanding and application of terms, signs and symbols in the Western tradition. Despite Mac Mahon's (2014) research indicating that many music teachers' conceptions of the term, music literacy, still focused mainly on the ability of students to read notation, this narrow concept of music literacy, also expressed by Paynter (1970), is no longer thought to cover all of the literacies that are now considered when discussing being musically literate. Kokkidou (2018) defined music literacy more broadly to include the ability to generate meaningful experiences with music and to interact with music texts through listening, performing, creating, imagining and constructing meaning from musical texts. Further, the argument presented in this thesis does not diminish the meaningful learning opportunities that occur through performance experiences.

A well planned and sequential pathway for learning should move a student from foundational literacy to technical and analytical literacy. This means that the student should be able to "“speak” music and “listen” to music, and also…codify (notate) music during the acts of “reading” and “writing” (Philpott, 2015, p. 3). First literacies in music, however, are a response to aural stimulus often signified by foot tapping and responding to music with the body. A considerable quantity of literature (for example: Green, 2006; Jaques-Dalcroze, 1921; Philpott 2015), addresses the informal, somatic nature of early music learning. And in fact, a number of researchers (Hennessy & Corr, 2021; Wilson, 2019) claim that technical and analytical literacy cannot develop unless the somatic learning has occurred. Moreover, Philpott (2015) also claims that "developing the technical literacy of written notation without *the body in the mind* of the child is to invert the sequential and cognitive implications of all that we know about becoming literate in music as a language" (p. 200).

A child moves from this foundational, or intuitive literacy to the more technical, or analytical literacy, through structure and sequential learning, when the connection between the somatic literacy and the technical literacy can allow the child to make meaning from the music. Folkestad (2006) describes the learning as requiring both aspects to be present and interacting in varying degrees and considers the progress to be a continuum of learning. As the student moves along the continuum of music literacy, they become competent and autonomous learners (Kupers et al., 2015). However, the current curriculum documentation provides no such continuum of music literacy. Generalist primary school teachers, who make up the predominant group tasked with music education in Australian primary schools, do not have the pedagogic content knowledge of music from their ITE to interpret the vagaries of the Australian curriculum document. The unitisation or thematic approach adopted by Australian music teachers, both generalist and specialist, further compromises a structured learning sequence as teachers employ resources linked to the theme regardless of the appropriateness of sequence within music learning.

A number of pedagogical problems arise from this situation. When repertoire for study in music is selected on the basis of the lyrics for the purpose of fitting a theme for a unit of inquiry, the elements of music literacy are overlooked. The subsequent result is that the music learning sequence is disrupted. Without adequate ITE and a clearly stated learning pathway, music becomes a disconnected set of activities with little structured and sequential learning.

This chapter provided an overview of music education in the Australian context. It has provided historical and current information in which to situate the research documented in this thesis. The following chapter provides a critical review of the literature in the field with the purpose of addressing the aims and the key questions that guide the study.

Chapter 3: Literature Review

Introduction

This literature review consists of a critique of current scholarly research articles and publications for the purpose of providing the platform for this research dissertation, and in doing so portraying an analysis of the existing research in the field of study: formative assessment in music education. First, a comprehensive search was completed following the identification of key words relevant to the topic. The key words included: formative assessment, assessment for learning, data literacy, assessment literacy, music assessment, assessment identity, self-determination, self-efficacy, and self-presentation.

As the basis of the search for literature would be instrumental in shaping the study, a series of Boolean strings were created to enhance the depth and breadth of the search. As this was as educational research study, literature was sourced from Australia and International education databases including: Education Resources Information Centre (ERIC), ProQuest Education Database, Sage Journals Online and Taylor and Francis Online.

Once the extensive body of research was identified, a sorting process was undertaken where key bodies of knowledge available through the literature were extensively analysed, selected or rejected as the pertinent body of knowledge that would be instrumental in shaping the ensuing research design. In doing so, key themes were proposed as the framework for this review of the literature presented in this chapter. As the themes are presented, and the current research analysed and evaluated, the existing contestations and gaps will be identified as significant in arguing the importance of this research project. The literature review was constantly updated throughout the research process to include the most up-to-date literature. Finally, a synthesis of the key concepts will be presented in the conclusion of the chapter and the landscape in which this research is positioned will be articulated.

Recent studies have highlighted the growing multitude of data-based resources available to schools and teachers (Mandinach & Jimerson, 2016) covering longitudinal student assessment and learning as well as materials on social-emotional and socio-economic circumstances. Most of this material and resource fails to reflect any form of critical analysis and is often reductionist in its intent. It is partly this increase in the quantity of non-analytical material that is overwhelming teachers as they wade through resources on student wellbeing, attendance, behaviour, learning management indicators, National Assessment Program–Literacy and Numeracy (NAPLAN), Trends in International Mathematics and Science Study (TIMSS), reading skills, numeracy skills and attitudes to learning (Datnow & Hubbard, 2016; Gummer & Mandinach, 2015; Wayman et al., 2012). Such an enormous "data dump" is not instructive for teachers. Music teachers in secondary schools, the subject of this research, are no exception to this scenario and are expected, in line with their professional colleagues, to transition into an orientation to learning and teaching that is essentially evidence based with little support from experts in critiquing which materials are useful for their particular context. As a result, much of the resource material has little impact on teaching processes. Similarly, as will be argued throughout this chapter, there is a paucity of research findings that examine classroom music teacher's perspectives on engaging with assessment data as integral to their teaching philosophy, pedagogies and assessment practices. As important as this field of study is in terms of teachers' professional work, there is little current empirical research available to build teachers' knowledge regarding evidence-based music assessment in the classroom.

As early as 1990, the profession of teaching in Australia came under extensive critique (Ingvarson, 2010) and the proposition correlating teacher quality with enhanced student learning outcomes has gained momentum (Black & Wiliam, 1998; Hattie, 2009; Shaddock, 2014; Vlachou, 2015; Wiliam, 2011; Wiliam, 2016; Wong, 2013). This continues until the current times, with teachers continually under the microscope of the media, educational pundits and important stakeholders. Concurrently, the international comparison of student literacy and numeracy results (e.g., Organisation for Economic Co-operation and Development's (OECD), Program for International Student Assessment (PISA)), together with Australia's national schools comparison discourse embedded in the Australian Curriculum, Assessment and Reporting Authority's (ACARA 2011) and My School website (https://www.myschool.edu.au/), has led to a movement that has shaped teaching and learning within Australian schools across all sectors to become more performance based under the guise of an argument for evidence based practice. As will be demonstrated below, this has had a negative impact on teachers' morale and has effectively reshaped the professional responsibilities of teachers. This was confirmed in 2011 with the development of the Australian Professional Standards for Teachers (APST), a document designed to regulate the teaching profession in Australia, and which called upon teachers *to demonstrate the capacity to interpret student assessment data to evaluate student learning and modify teaching practice.*

(Australian Professional Standards for Teachers: Standard 5.4). This is a significant moment for the profession in Australia where most practising professionals had not received sufficient pre-service training in the field and poor resourcing was provided by employers to address the shortfall.

While there has been a plethora of studies both internationally and nationally (Call, 2018; Mayer et al., 2005; Shanker 1996; Sachs, 2003, 2015; Talbot 2016; Willis et al., 2019) claiming that the professional autonomy of teachers has been significantly reduced by the introduction of standards and the neoliberal agenda that focuses on performativity rather than education, there are few studies that have interrogated teachers' perspectives on engaging with data as integral to their professional work in the classroom. This chapter presents a review of the empirical literature that addresses this lacuna in the literature: Teachers' perspectives on engaging with data as an integral component of their professional work in the classroom, with a particular focus on secondary music teachers.

The literature review focuses on analysis of key bodies of knowledge. First, a discussion on data use in education. Then an overview of current research on formative assessment. Third is an examination of research into music education and assessment which is followed by research into formative assessment in music. The fourth section examines the influencing factors that impact teacher perspectives on engaging with assessment data. In part five, the impact of educational change is addressed. Part six examines professional learning and the summary brings together the literature review, forming the basis for the generation of research questions that require further investigation. The chapter will close with a rationale for the importance of further research that will address the key research question within this dissertation: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?*

As stated in Chapter 2, there are a number of literacies within music. However, music literacy, as it applies to this research refers to reading and writing of notation and the understanding and application of terms, signs and symbols in the Western tradition. Classroom music includes domain-specific knowledge: aural skills, reading and writing of music notation, written critical response, aural & visual analysis, understanding in context, performance and composition.

3.1 The Impact of Educational Change

The analysis of literature within this field of study clearly illustrates that a multitude of influences impact teacher attitudes to engaging with data, not necessarily from a positive perspective. At the level of policy, there is an assortment of data types and purposes that are a part of the Australian education setting which ostensibly reshape the perspectives of teachers and influence their attitudes to engaging with data in music education. However, on closer examination, the literature probing the bigger picture around teacher perspectives on engaging with data, articulates a complex and demanding context in which teachers operate. A significant body of literature explores teacher ambivalence or hostile attitudes to educational change (Desyatova, 2020; Kazakbaeva, 2021; Lomba-Portela et al., 2022; Shaw, 2019). As many teachers interpret engaging with formative assessment data to be a change to their normal practice, it is therefore valuable to examine teacher attitudes to educational change.

Educational change is principally perceived by teachers to be externally mandated and externally imposed, with little consultation and as alien to the day-to-day activities of classroom teachers (Clement, 2014; Hargreaves, 2004; Harris, 2008; Priestley & Drew, 2017). Mandated changes from a systems perspective are generally driven by the twin motivators of ensuring improving levels of attainment by narrowing the gap between low and high achieving students across all schools and developing a greater capacity to respond to an ever-growing divergent school population (Bently, 2010; Clement, 2014). This perspective is not necessarily shared by teachers. As current research indicates, that teachers are not generally opposed to change but are likely to respond negatively to the way it is implemented which is often hurried and lacking in resources (Clement, 2014; Harris, 2008), often resulting in teachers experiencing confusion, anxiety, frustration and cynicism and ultimately resisting or disengaging from the process (Care & Kim, 2018; Clement, 2014; Zandén & Ferm Thorgersen, 2014; Hargreaves, 2004; Schmidt & Datnow, 2005). This form of implementation also impacts self-efficacy as Nyberg (2015) states, that when the changes are too rapid, teachers begin to doubt their competence and question their professionalism. This is the case across the profession but is also evident amongst secondary music teachers.

Irrespective of the origin or the intent, changes in schools are generally introduced and acted upon within very short time frames and do not allow teachers to become comfortable or even fully cognisant of their intent or how to successfully implement them, particularly whilst the everyday practice of teaching continues concurrently. This is evident in all schools as new leaders or new governments introduce change in policy or practices for reasons that are not evident to teachers in the classroom. However, there is commonly little choice that accompany the changes. For example, release time is not provided to teachers to enable the cognitive and emotional processing needed to make sense of change nor for teachers to review the change in accordance with their knowledge, beliefs, values and experiences (Biesta et al., 2015; Hill, 2011; Korthagen, 2004). The hasty and often ad hoc nature of externally imposed educational change consistently ignores the developmental process needed to undertake reforms of attitudes and behaviours when individual teachers are endeavouring to act on new ideas and practices (Anderson, 2010). This further demoralises teachers and commonly generates resistance to change across the profession. For example, respondents to the research carried out by Hargreaves (2004) indicated their belief that educational change always seemed to add to the workload of the teaching day that already had many time constraints. As a result, teachers indicated they were too busy with teaching to really consider or embrace new changes. Subsequently, effective educational change seems to remain elusive and despite years of educational reform, teaching practices have only marginally changed (Bentley, 2010; Clement, 2014; Hargreaves & Goodson, 2006; Le Fevre, 2014).

What is evident however, is that the ongoing imposition of change had resulted in teacher resistance to innovation, albeit that the heart of new ideas may be sound or even useful (Flores, 2020). Moreover, Elmore (2000) highlighted that mandated change is regularly buffered as policy makers and school hierarchies are dislocated from the everyday activities of the classroom and individual teachers are insulated from research and exposure to new practice, which is described by Bentley (2010) as “primarily created upstream from teaching and learning in the fields of basic research” (p. 40). Educational changes across OECD nations tend to follow the same tri-level structure as described by Fullan, (2005) and may be initiated by government departments, systemic requirements or be an initiative of an individual school.

In the context of this study, it can be argued that those policies introduced by governments or systematic requirements without due consultations and opportunities to invite meaning making and practical transformations, do not effect change. Rather, they have been instrumental in building ongoing resistance from teachers and further demoralisation across the profession. Constant pressure to improve educational practices and outcomes has resulted in an increase in mandated reform in Australia over recent decades (Aspland, 2006), leaving teachers despondent and suffering from change fatigue and repetitive-change syndrome (Clement, 2014; Hargreaves, 2004) and where members of school leadership teams suffer from presentism, consuming their energies by locking them into short-term improvement plans and public measures of success (Thorpe & Lamb, 2019). In a Canadian study, Hargreaves (2004) interviewed 50 teachers in 15 elementary and secondary schools, finding that the majority of teachers experienced negative emotions when change was externally mandated and that teachers were left feeling intense emotional frustration, "confusion, disappointment, discomfort and shame" (p. 297) resulting from "unclear purposes and poor implementation" (p. 296). Further, teachers report high levels of perceived risk in engaging in new pedagogical praxis and a fear of public failure (Le Fevre, 2014) and which result in teachers resisting the implementation of change (Zwart et al., 2015), or a process by which teachers implement it differently to its intention (Clement, 2014). Such a bifurcation between policy and teaching practice calls for research that will address what is problematic in this field. However, the traditional response from government is to introduce another policy, rather than fund such research.

AITSL Australian Professional Standards for Teachers

The introduction of the externally mandated Australian Professional Standards for Teachers (APST, 2011) by the Australian Institute for Teaching and School Leadership (AITSL) in 2011, largely left teachers to interpret a set of standards against which their performance as a teacher would be assessed (Thorpe & Lamb, 2019). These standards were designed to "guide teachers to demonstrate high quality teaching exemplified through pedagogical practice (AITSL, 2019, p. 4) and improve the status of the profession (Aspland, 2006). However, engaging teachers with the mandated APST (2011) has continued to prove difficult over more than ten years since its inception, as time constraints, accountability and compliance issues leave little time for the analysis and implementation of the standards or time for teachers to develop the level of interaction with the APST (2011) that are required to make a difference or build a shared understanding of the regulatory framework (Call, 2018; Ingvarson, 2010). Teachers have been left to draw their own understandings from the document, as identified by Thorpe and Lamb (2019). Further, teachers interpret these standards in an idiosyncratic manner that can be widely diverse, multifaceted, beliefs based and influenced by their professional identity and the context in which they work. This is particularly the case when it comes to the expectations regarding the assessment of teaching and learning. As will be demonstrated below, the professional identity of teachers as assessment experts, as articulated in the APST (2011) is very much undertheorized and incongruent with the existing current practices of many teachers.

The inclusion of Focus Area 5; Interpret student data (see Figure 4) in the APST (2011), represented a mandated change in focus for many teachers who are expected to develop their own perspective on what this meant, and how they might implement the standard. The requirement for teachers to interpret student data was a change that might be interpreted as having "had largely emotionally negative and painful effects on teachers" (Hargreaves, 2004, p. 288) and which has hindered teachers' abilities interact with the APST (2011) and which is interpreted as being associated with politics, political games, disempowerment and regulation (Call, 2018; Hargreaves, 2003).

Figure 4

AITSL Focus Area 5

Descriptor at career stage			
Graduate	Proficient	Highly Accomplished	Lead
Focus area 5.4 Interpret student data			
Demonstrate the capacity to interpret student assessment data to evaluate student learning and modify teaching practice.	Use student assessment data to analyse and evaluate student understanding of subject/content, identifying interventions and modifying teacher practice.	Work with colleagues to use data from internal and external student assessments for evaluating learning and teaching, identifying interventions and modifying teaching practice.	Coordinate student performance and program evaluation using internal and external student assessment data to improve teaching practice.

The nexus between teacher attitudes to educational change and self-determination theory, has been established by Ryan and Deci (2000). Social and environmental factors underpinning self-determination theory (SDT) (Ryan & Deci, 2000) further assist in understanding the anxiety experienced by classroom music teachers encountering change, and the lack of confidence in themselves as assessment experts. As an empirically derived theory of human motivation, SDT investigates the impact that the sense of being autonomous or being controlled have on the capacity to fulfil responsibilities. Psychological needs of relatedness, autonomy and competence (Ryan & Deci, 2000) are closely intertwined and directly impact on individual motivation levels to perform tasks. Therefore, to develop intrinsic motivation, one must feel competent to avoid negative evaluation and have a sense of autonomy to control the environmental factors surrounding the demonstration of competence, something that is often not achieved when rapid change is occurring. Teachers have expressed a sense of powerlessness when it comes to such professional autonomy (Call, 2018; Haapaniemi, et al., 2021; Vangrieken, et al., 2017).

As a subset of self-determination theory, cognitive evaluation theory (CET) takes the relationship further to claim that a sense of competence alone will not heighten intrinsic motivation without a sense of autonomy. A common misconception in teaching is that autonomy is a structure-free form of teaching however, SDT is more associated with being the cause of one's own behaviour. An autonomy paradox has developed in music teaching stemming from the failure to conceptualise a "professional self in education" (Fellenz, 2016, p. 268) and the continued lack of concurrence concerning what classroom music education should look like, which has allowed idiosyncrasy to thrive. The notion that the individual teacher is autonomous in the professional decisions made within their own classrooms allows them to believe that they can be self-governing. All domains of education face the same dilemma as all teachers must operate within the bounds of curriculum and within the constraints of the regulatory context determined most recently by the APST (2011). To this end, further promoting the use of assessment data aligned with curriculum must inform the teaching process and promote "bounded autonomy" (Fellenz, 2016, p. 272).

3.2 Data Use in Education

The regulatory imposition of policy and the work of teachers seeps into the classroom on many fronts. It is not just teacher identity that is impacted, but student learning is continuously being reconstituted by outside agencies rather than the profession and teachers themselves. This is particularly evident in the field of classroom assessment. The current educational climate of accountability for student learning outcomes and continuous improvement in professional knowledge, pedagogy and practice has resulted in an increase in policy material and resources linked to teacher engagement with educational data. Further, a recent increase in empirical studies and literature is a reflection of the amassing plethora of data with multifarious foci that teachers engage with in their daily practice. A part of the recent emphasis on monitoring and auditing student progress, individualising learning, improving school performance and developing teacher practice (DeLuca & Bellara, 2013; Gonski, et al., 2018; Pella, 2012; UNESCO, 2017/18) has resulted in a surge in research publications in recent years, not all based on empirical research. However, the emerging research publications that are available generate findings that demonstrate that the role of data and its application in improving teaching and learning are considered essential elements of praxis, for example, as acknowledged by the Australian Professional Standards for Teaching (APST) (2011). Based on policy and the emerging research, the ability to use data effectively to inform practice and programs and to improve student learning outcomes has emerged as a principal focus for educators around the world and highlight the need for ongoing research into teacher readiness to implement data skills as a teaching tool. Furthermore, the purposes for the use of data have become the focus of much attention in schools and in research both in Australia and internationally (ATSIL, 2018; Honig & Coburn, 2008; Kerr et al., 2006) not only as an internal measurement of student progress, but also as a "publicly acceptable code for quality" (Broadfoot & Black, 2004, p. 9). This trend is illustrated below.

Research on data in education is predominantly focused on standardised test data and the impact it can have when teachers are overwhelmed and lacking self-efficacy to apply the data to their pedagogy. It is generally hypothesised across the research that when teachers understand how to use the data generated assessment, positive student learning outcomes can be achieved. However, the counter argument suggests that these standardised assessments can run the risk of de-professionalising teaching and may lead to criteria compliance (Nyberg, 2015). Notwithstanding recent research indicating the positive influence of engaging with data (e.g., Madsen, 2019; Prøitz et al., 2017; Schildkamp, 2019) there are still teachers who interpret external data collection and standardised tests as a "tool for external control" (Nyberg, 2015, p. 236) where auditing and ranking is not always connected to education. In some cases, and as feared by many teachers, this form of data is also used to measure teaching quality. Moreover, Wayman et al., (2012) remind us of "*effective data use* to distinguish between data use practices that benefit educators in their practice (and which thus benefits student learning) from other data use practices that have been shown to actually hinder educational work" (p. 5). For the purpose of this study, a positive stand is required, demanding that the focus is on engaging with data generated from formative written assessment in music literacy with the purpose of benefitting educators in their practice (Wayman et al., 2012). Research of this type is limited and requires urgent action if this hypothesis suggesting the positive correlation between evidence-based assessment and enhanced student learning outcomes is to be validated.

The capacity for engagement with assessment data to provide teachers with valuable pedagogical insights for the provision of differentiation and individualised learning addresses the increasing need for inclusive education — a further mandated policy initiative that is reshaping teaching in Australia. Equity policies in Australia, Canada, the UK and US support the rights of all students to have an education free from discrimination, with the Australian Curriculum, Assessment and Reporting Authority (2013) stating that it is "committed to development of a high-quality curriculum for all Australian students that promotes excellence and equity in education. All students are entitled to rigorous, relevant and engaging learning programs drawn from challenging curriculum that addresses their individual learning needs" (p. 4). Further documentation in Australia (Disability Discrimination Act, 1992; Disability Standards for Education, 2005; Nationally Consistent Collection of Data for Students with Disability (NCCD) Guidelines, 2019) mandates that teachers must make reasonable adjustments to teaching and learning to achieve equity and social justice within the mainstream programs. As affirmed by Cumming et al., (2018), there is an expectation that teachers can apply a range of teaching methodologies to meet individual needs which can be more easily identified when quality data are used to establish the next steps needed in the learning cycle. Positive educational outcomes have been documented for students with additional learning needs when assessment for learning principles have been coupled with curriculum-based data collection (Cumming & van der Kleij, 2016) for the purpose of identifying individualised learning needs and for the provision of differentiated teaching and assessment. Such research is instructive but falls short of being convincing in terms of its argument due to the lack of research that interrogates practices from the perspectives of the teachers.

3.2.1 Data Engagement: Different Roles, Different Attitudes.

A vexing problem with engaging with assessment data is the implicit variability across the purposes attached to the task by people in different levels of school structures. Mixed methods research undertaken by Wayman et al., (2012) examined how data were used to improve classroom practice across three school districts in Texas, including an analysis by role. Qualitative data were collected through semi-structured, individual interviews designed to elicit the ways data were used and accessed, specific data systems used and teacher aspirations for future data use. Quantitative data were gathered through the administration of a 67-item survey which included “attitudes toward data use, support for data use, instructional practices, technology, and specific ways in which data were used by the respondent” (p. 7). For comparison purposes, the study grouped participants by role: Administrators (principals and assistant principals), central office staff, instructional support staff and finally, teachers.

Although the researchers report slight differences across the three districts, there were greater disparities when compared across roles within the school. Administrators used data to identify struggling students, to measure the fidelity of curriculum implementation and to provide feedback and evaluation to teachers. Instructional support staff used data to assist teachers with monitoring and diagnosing individual student needs “as well as intervention and support with individual teachers and students” (p. 13). Teachers reported using data to help struggling students, for instructional grouping purposes and to reteach specific concepts and skills. The researchers noted that no group discussed applying insights from data to students performing at an adequate level or to those excelling in the classroom. Furthermore, the researchers claim that “although surveyed teachers reported frequently using data to adjust instruction for individual students, [they] heard little mention of this” (p. 13) in interviews or focus groups. This silencing of teachers’ intentions, aspirations and values regarding the use of data in assessing the learning of all students highlights a gap in the research that must be addressed urgently.

However, this study portrayed teachers’ attitudes to engaging with data, which were generally positive in relation to its potential, notwithstanding identified barriers. More importantly, the teachers in this study reiterated levels of ambivalence and scepticism about data that was not reported by participants in other school roles. Barriers included “day-to-day difficulties in using data, such as problems with computer systems, lack of time to reflect on data, and the labor-intensiveness (sic) of using data” (p. 15), moreover, some teachers believed data to be used inappropriately to compare and incite unhealthy competition. Of significance for further investigation in the context of Australian schools was the proposition that teachers reported having high level concerns about access to data, about the challenges of obtaining the right data and expressed professional anxiety “about the kinds of conclusions that might be drawn from data, such as data only serving to confirm expectations rather than expanding knowledge” (p. 16). Of further significance for this study, teachers reported a top-down approach to engaging with data that resulted in data use but little indication of collegial practice and a sense that leadership behaviours around requirements and use of data, that were identified as something done “to” teachers and not done “with” teachers, and that were punitive in nature. This finding ratifies the urgent need to address the impact of regulatory policy on teachers’ professional identity and call on academics to engage in further research in the field, specifically of the interplay amongst evidence-based assessment, quality teaching praxis and teacher identity.

3.2.2 Teacher Capacity for and Beliefs About Data Use.

In preparation for the conceptualisation of the research, a comprehensive literature review investigated international research into teacher capacity and beliefs about data. The empirical study conducted by Datnow and Hubbard (2015), drew conclusions from a decade of research that employed qualitative or survey methods, from countries including the United States of America, Australia, Canada, the Netherlands, Spain, South Africa and New Zealand. Two criteria were applied to the literature review:

> First the publication had to include information on the efforts to build K-12 teachers’ capacity to use data or teachers’ beliefs about data use, or both. Second, the source had to be published after 2001, since the advent of No Child Left Behind (p. 8).

The meta-analysis found similar themes to those identified by Wayman et al. (2012) particularly relating to the role carried out by the teacher in relation to the use of data as central to their work. Conceptions of data use varied between teachers and administrators as already stated, but this research also identified differences between the approaches to data use between secondary and primary level teachers.

The theme, teacher confidence, was identified in a number of studies as a principal influence in shaping teachers' ability to use data to improve pedagogy and instruction. Numerous teachers claimed they did not have enough knowledge to interpret data and transform their practice. Furthermore, Datnow and Hubbard (2015) identified Australian teachers as reporting a lack of confidence and difficulty in interpreting statistical data, including mathematics teachers who identified as either neutral or not confident in their capacity to analyse NAPLAN numeracy data. The barrier created by this lack of confidence deterred many teachers from engaging with data and 61% of participants claimed they had not changed their instructional methods or teaching plans based on the analysis of their school's data. Additionally, Datnow and Hubbard (2015) established a strong connection between competence, individual beliefs and data use. These findings ratify the significance of the research that follows and the importance of gaining deeper insights into teacher resistance to the use of data, particularly in the priority field of learning and assessment in secondary education.

Much of the literature covered by Datnow and Hubbard (2015) focused on teachers' beliefs in relation to data use, described as being rigid and capable of inhibiting the adoption of different ideas. Pre-existing beliefs shape knowledge representations and provide a safe and stable base on which teachers act. When faced with a new concept, teachers reported that they interpret this new knowledge within their existing framework. Therefore, the research demonstrated the tendency of teachers to see characteristics in the data that support their beliefs, experiences and expectations and to ignore data that challenges those beliefs. A significant finding in this study confirmed that, when beliefs are challenged, teachers may question and mistrust the purposes from the collection and use of data.

The literature review identified teachers' trust in the intentions of data use as an inhibiting factor for engaging fully with data analysis. Teachers disengage and display resistance when they fear exposure that impacts their reputation.

Themes identified by Datnow and Hubbard (2015) are widespread and well documented. These include the following propositions:

(i) Reactions to discrepant information can have debilitating consequences when the discrepancy interacts with teacher beliefs;

(ii) New information is often interpreted as inauspicious or intimidating rather than theoretically beneficial and results in a defensive response (Hodgins et al., 2010).

(iii) Engaging with data when the self-efficacy for such engagement is low directly negatively impacts the teachers' sense of identity. This is further addressed in section 3.5.

(iv) Inadequate initial teacher education and few opportunities for professional learning (Stiggins, 1995) in the application of data leaves many teachers feeling inept and can lead to resistance.

(v) In other cases, teachers with limited expertise in engaging with data simply end up trying to fit data into their current thinking (Van Gasse et al., 2016) which subsequently results in little improvement for the increased effort.

Further research is required in Australian schools as to why teachers' trust in data use is an inhibiting factor for engaging fully with data analysis. Further, why teachers disengage and display resistance when they fear exposure that impacts their reputation is worthy of further interrogation.

3.3 Formative Assessment: Assessment for Learning

Introduction

Providing initial clarity for the concept of formative assessment (FA) requires an exploration of the terminology found in research literature to describe and define the phenomenon. Terms include assessment for learning (A*f*L), assessment as learning (A*a*L), formative assessment (FA), curriculum-based measurement (CBM) and formative evaluation (FE). Notwithstanding the use of different terminology found in the literature, all support the intention to improve student learning outcomes and share the central concepts related to FA; engaging with data, student participation in peer feedback and self-monitoring, promotion of student understanding of learning goals and clearly articulated performance levels. The numerous terms and lack of definitional clarity impacted teacher perspectives and resulted in individual interpretation and implementation (Bennett, 2011; Taras, 2010; Vlachou, 2015) which has exacerbated teacher confusion and anxiety (Bandura, 1983). Another stress in implementation comes from teacher anxiety relating to the original expression, *formative evaluation*, related to assessing the quality of teaching programs, but it has since come to reflect the work and progress of the student. As perspectives are historically constructed and situated, changes to the language around FA and a lack of clarity for implementation (Bennett, 2011; Wiliam, 2011) have led to varying levels of engagement and had varying outcomes. Moreover, whilst the definition remains unclear, meaningfully testing or documentation of the effectiveness of FA strategies can be undertaken. Furthermore, Looney et al., (2017) express the added confusion experienced by teachers through the use of the terms formative and summative when both assessment types can serve a summative or formative role depending on their application and purpose. Within this study, the researcher refers to both A*f*L and FA, based on the premise that assessment becomes formative when evidence from data is used to modify teaching to facilitate the needs of the learner (Black et al., 2004; Hattie, 2009; Popham, 2009; Shaddock, 2014) and when feedback serves the dualistic function of promoting student learning and guiding pedagogy (Bone, 2006; Hattie, 2009; Perkins, 2009; Ramaprasad, 1983; Ruiz-Primo, 2011).

The following definition has been used to focus the review of literature:

> Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there (ARG, 2002).

Irregularities in the implementation of A*f*L and FA have resulted in additional assessments being added to existing and over-crowded assessment schedules, as strategies and practices are mechanistically applied with limited understanding of purpose or cognitive principles underpinning them (Vlachou, 2015). Likewise, the failure of the education community to adequately develop an understanding of the underpinnings of theory, procedure or connection with pedagogy and praxis has led to a piecemeal approach to implementation.

Similar to the role-related differences in perspectives on engaging with data (Wayman et al., 2012) identified in Section 3.1.1, perspectives and beliefs about FA vary depending on the persons role within a school, as educators with various roles assess for different purposes. At the policy level, FA allows departmental or board level decisions and evaluations to be undertaken. At the administrative level, principals and school leaders may use FA data to support teachers, allocate resources and evaluate both teachers and programs. Formative assessment carried out by a classroom teacher at the instructional level may be used to diagnose individual student needs, group students for instructional purposes, grade students or make judgments about pedagogy or programs (Stiggins, 1995). Whilst all three levels of FA and engagement with data have an impact on the perspectives held by classroom teachers, the use of classroom FA by the teacher will be explored further in the next section.

Formative Assessment (FA) is described as one of the most powerful tools for improving student outcomes across all learning areas; providing the teacher with the capacity to ensure that intended learning outcomes are achieved, understood and mastered (Black & Wiliam, 1998; Shaddock, 2014; Vlachou, 2015; Wiliam, 2011; Wiliam, 2016; Wong, 2013). When FA is embedded in the teaching and learning cycle, teachers can identify what has been mastered, what is yet to be learned and allows for direct instruction or correction of misunderstandings that may have arisen (Guskey, 2003; Shaddock, 2014; Wiliam, 2016). Moreover, this regular monitoring of student progress and the provision of high-quality feedback (Bone, 2006; Hattie, 2009) allows the student to self-monitor progress over time, further assisting to develop a more mastery-oriented view of their own intelligence. This is especially the case when students are given the opportunity to reflect regularly on their incremental progress and set goals for their own improvement (Dweck, 2000). Battling the fixed mindset (Dweck, 2000) of the talent myth (McPherson & McCormick, 2006; Woody, 2020), often expressed by students with the phrase, ‘I am not musical’ through the monitoring of incremental improvement and the ability to demonstrate progress is one of the most powerful tools to enable students to move from an entity intelligence realm to that a growth mindset (Dweck, 2000). Surprisingly, rather than students becoming disengaged through ongoing testing, most students benefit from the fulfilment of the psychological need to experience competence (Bibbens, 2018; Dweck, 2000; Ryan & Deci, 2000) further improving self-efficacy and motivation, whilst contributing to academic progress. The value of a growth mind-set and high levels of self-efficacy should not be underestimated, particularly on entry to secondary school where expansive differences in domain specific knowledge are generally at their widest as students come from a variety of primary (elementary) schools with differing experiences.

Employing formative assessment techniques in the teaching and learning cycle allows teachers to focus directly on misconceptions and provide direct (Lowe & Belcher, 2012) or corrective instruction (Guskey, 2003), to identify natural starting points for learning (Paynter, 2002) and develop appropriate differentiation, ultimately maximising instructional time (Drummond, 2001; Popham, 2011) and ensuring all students have a grasp of what is being taught. Assessment for learning allows teachers to immediately identify gaps in student learning however, it can also be used to evaluate programmes and to identify areas for improvement in teacher pedagogical practice. As with students, analysing data gathered from one's teaching can lead to the development of a mastery-orientation practice. Through identifying strengths and weaknesses in programs or praxis, a more targeted approach to ongoing professional learning can be developed, with opportunities for teacher collaboration and shared practice building capacity within staff.

Notwithstanding the documented benefits to be gained through the application of A*f*L strategies, there are a number of skills required for successful implementation. A*f*L is multi-faceted, requiring the integration of classroom management skills, pedagogic content knowledge, subject specific content knowledge (Asmus, 1999; Shuler, 2012), curriculum and assessment skills need to be coalesced simultaneously to achieve intended outcomes. These skills can scarcely be achieved in the time and over-crowded curriculum of initial teacher education programmes (Laveault, 2016; Mandinach & Gummer, 2016; Xu & Brown, 2016) subsequently requiring quality professional learning opportunities once in service. Furthermore, developing A*f*L skills requires a teacher to possess proficiencies to align learning tasks with learning goals and the ability to accurately interpret achievement standards and align assessment tasks to realise them (Schneider & Meyer, 2012), whilst moving away from teacher-oriented foci to supporting student-oriented and initiated task implementation. The integration of A*f*L is further hampered by the absence of multiple assessment sources and requires high levels of assessment literacy (Laveault, 2016; Schneider & Meyer, 2012; Stiggins, 1995), described by Dixon and Hawe (2018) as teachers that are assessment capable.

Formative assessment (FA) is not a new concept. The benefits for student outcomes and professional learning have been well documented (Black & Wiliam, 1998; Black et al., 2004; DeLuca et al., 2015; Guskey, 2003; Hattie, 2009; Shaddock, 2014). Likewise, the substantial body of research investigating teacher perspectives on engaging with data in the daily organisation of their teaching has been explored. However, there is insufficient research in examining the perspectives of Australian music teachers in relation to engaging with FA and using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education.

Formative assessment has now become a pivotal player in the life of teachers with its importance as a diagnostic tool clearly articulated as a requirement of the APST (2011) in that teachers must interpret and use student assessment data for the purpose of diagnosing obstacles to learning, challenge students to improve their performance, evaluate student learning and modify teaching practice (Australian Institute for Teaching and School Leadership (AITSL). However, despite the inclusion of FA practices in the professional standards for Australian teachers, very little research has been conducted here or elsewhere, into teacher perspectives on engaging with data to fulfil the requirement.

Data-based decision making (DBDM) also known as data-driven decision making (DDDM), data-informed decision making (DIDM) and evidence-based decision making (EBDM) is recognised as a subset within formative assessment, as it concentrates on engaging data to augment teaching and learning and to provide precise feedback (Honig & Coburn, 2008; Hoogland et al., 2016; Kerr et al., 2006; van der Scheer & Visscher, 2016). As a subset, DBDM is identified by Schildkamp and Kuiper (2010) as: "Systematically analysing existing data sources within the school, applying outcomes of analysis to innovate teaching curricula, and school performance, and implementing (e.g., genuine improvement actions) and evaluating these innovations" (p. 482).

The literature under review to this point has emanated from a variety of international research sources and has significant implications for Australian teachers who are facing the challenges of new forms of assessment as an integral component of the Australian curriculum and an expectation of the relatively new professional standards for teaching. What is also instructive and presented in the section below is the ways in which educational systems from a variety of international settings have taken up the challenge of formative assessment (or its equivalent) in school-based settings.

3.3.1 Perspectives from International Studies.

Norway, Portugal and The United States of America.

Document analysis and experimental contrast studies in this array of countries have developed themes relevant to the research questions posed in this thesis. The aim of a mathematics case study conducted in Norway and Portugal (Nortvedt, Santos, & Pinto, 2015) was to uncover the forces driving assessment for learning (A*f*L) in primary classrooms of each country. Each country was seen as one case and data were collected through document analysis. The authors found that FA practices were not common in the participant primary classrooms and that "teachers seemingly struggle[d] to develop and use A*f*L practices" (p. 378). Moreover, the case studies suggested that teacher assessment culture was influenced by national policies, professional learning opportunities, teacher autonomy and curriculum reforms. In addition, the authors quote a number of further studies asserting a lack of assessment culture and propensity for Norwegian teachers to provide poor quality feedback. Furthermore, the findings note difficulties of everyday implementation of FA principles. Although the authors state that "teachers not only need to change the focus of their assessment practices but also their beliefs about assessment and mathematics" (p. 379) no attempt was made to understand teacher beliefs. Themes identified by Nortvedt et al., (2015) were not dissimilar to those of Stecker et al., (2005), reported forthwith.

A review of FA research using curriculum-based measurement (CBM) model in mathematics and reading within special needs education (Stecker et al., 2005) identified similar themes to those of Nortvedt et al. (2015). In particular, researchers cited a number of studies indicating that although "teachers collected CBM data accurately, they neglected to comply with standard data-utilization procedures. That is, few instructional changes were made when the data indicated a need for modification" (p. 796) and "that failure to obtain significant achievement effects was due to teachers' poor evaluation of data and lack of compliance with data-utilization procedures" (p. 800). Inconsistent implementation application of the principals of FA is a theme that appeared across the research. The other significant theme related to time with some teachers electing not to use FA due to its time-consuming nature. For the full capacity of FA to be realised, a full and rich description of the phenomenon is needed to fill this gap. This can only be done by direct engagement with the teachers.

The United States of America.

A number of themes were identified in research conducted in America by Abrams et al., (2015). Researchers tested the theory that benchmark tests, usually undertaken for summative purposes, could be used as FA. The assertion, tested through a large-scale qualitative study undertaken in Virginia, used focus group interviews as the principal means of data collection from 67 elementary school teachers, in an urban metropolitan area. The qualitative research used a two-stage convenience sampling process to select and recruit participants, ensuring maximum variation within the sample group. The research design included focus group interviews as the principal method of data collection and an "inductive thematic analytical approach using a constant-comparative method was employed to identify emergent patterns and themes in the focus group data" (p. 354). The authors describe measures taken to ensure trustworthiness and used a range of participants instead of multiple types of data as a means of triangulation. Findings from the study showed academic improvements for students and development in pedagogical content knowledge and teacher praxis. Importantly, during the focus group interviews several themes emerged related to teacher perspectives on testing which included expectations for teacher's use of test results and how teachers used results to respond to student needs. The experiences of teachers varied widely with some teachers required to undertake formal analysis of data and others not. Some teachers expressed a perceived lack of guidance or direction and many teachers did not have confidence that administrators knew what to do with data collected. Frustration was also expressed by teachers with the time required to examine data with their students. Although the study uncovered some perspectives held by teachers, the aim of this study focused more on understandings and uses of formative and summative assessment.

The Republic of Ireland.

Similar themes were reported in a qualitative study of FA practices in physical education (Ní Chróinín & Cosgrave, 2012). Again, themes included time restrictions, lack of professional development on assessment strategies and the existing focus on skill performance as summative assessment. Data in this small-scale study were collected through a series of three focus group interviews each lasting one to one and a half hours in which participants were asked general and open-ended questions. Teachers were asked to plan and deliver a series of lessons and apply written/verbal assessment strategies to measure aspects of student learning. Originally teachers were requested to record their experiences in a journal, however time constraints meant that some teachers did not keep the journal, so responses were captured during the second interview. Constant comparison analysis was conducted and themes identified. Peer debriefing was used for establishing trustworthiness.

Initial concerns expressed by teachers included that "assessment should not lead to the fun being taken out" (p. 225) of the classes and concern that the assessment might get too formal. These perspectives require further investigation. Reported improvements in pedagogic content knowledge enhanced the quality of feedback provided to students and opened up opportunities for dialogue. It also provided reflective feedback to the teacher on the learning of the student. Additionally, embedding the assessment improved student engagement and enhanced the status and educational value of the subject. Perceived inadequate time to engage with assessment data and to provide feedback was a consistent theme throughout the literature. Time to adequately document assessment was also raised however, teachers noted that they became more adept at recording as time went on. Younger grades, where assessment strategies are fewer also presented difficulties with teachers trying to avoid boredom through repeating assessment types too often.

United Kingdom.

Koh's (2010) study of academic staff in nurse education used an interpretive approach as it aimed to explore staff perspectives of FA and feedback as it related to their students. Whilst this qualitative research was conducted in a different educational context, similar themes were discussed, and the methods align with those which are proposed in this new research. The researcher identified the "recognition of the importance of staff perspectives of formative assessment and their influence on assessment practice" (p. 205) as a way of understanding why staff engage in practices that prevent formative assessment being fully realised but publicly commit to it. Participants were selected through convenience sampling and semi-structured interviews were conducted, recorded and analysed for themes. Trustworthiness was established through conducting member checks of interview transcripts. As with the findings of other studies, Koh (2010) reports concerns about the types of FA (formal and informal), quality of feedback, relationship to professional learning and the purpose of formative assessment. It was documented that "the purpose of formative assessment might not be fully understood by some of the teachers themselves" (p. 206).

Seminal Research.

Gullickson (1984) identified six major themes from 391 opinionnaire respondents measuring teacher attitudes towards testing used for instructional purposes, with results depicting a heavy reliance on tests, general support for testing but apprehension about the value of assessment and concern about their own testing capability. The responses to 44 questions were measured on a Likert scale and mean and standard deviations were calculated. Although Gullickson's opinionnaire investigated teacher attitudes to testing rather than FA, the premise of gathering data from teachers on assessment provides a sound model for this investigation however, these data were collected from general classrooms and not music education. Nevertheless, it is clear from this international research, that not dissimilar to Australian teachers, teachers across the globe, while under pressure from regulators and employers to integrate more data into their decision-making practices, invariably resist or misconstrue the purpose of such practices based on a lack of expertise, lack of confidence or lack of conviction to do so. This reiterates a call for research that probes teachers' perspectives on how these uncertainties have arisen and how they can be addressed in the interests of improving the quality of teaching, assessment and reporting in school education.

3.3.2 Perspectives from Australia.

The English department in an independent boys' school in Canberra, Australia, undertook the implementation of FA strategies to improve teaching practices and increase student learning outcomes. Bibbens (2018) reported improvements across outcomes for students in Years 7–10 over the course of twelve months, and greater alignment between teacher intention and instruction, provision of feedback and refinement of assessment tasks as a result of the employment of FA techniques.

The purpose for the action research and the engaging of FA strategies arose from stagnating results. External assessment data from NAPLAN testing indicated that existing methods of assessment and the provision of feedback was not benefiting the students, nor the teachers. Improving the efficiency and quality of data collected was identified as a priority to improving classroom teaching practice, along with approaches to the manner in which teachers conceptualised marking and assessment. Moving to FA prompted an in-depth examination of curriculum, assessment methods, data collections procedures, provisions for feedback and the use of rubrics and grading. Teachers acknowledged that in general, the existing assessments were neither measuring the intended outcome nor providing students with enough information to improve and develop a growth mindset. Initial concern also focused on rubrics and grading.

Although outcomes reported are a part of an ongoing action research study, initial findings and themes reflect those already identified in existing research. Initially, teachers identified concerns relating to time, claiming that under the existing system they felt they were "constantly lurching from assessment to assessment" (p. 33), however, the move to introducing ungraded assignments, using newly designed continua prior to summative assessment, produced time efficiencies in the delivery of curriculum and by reducing the amount of writing needed to be included on feedback.

The review led to a greater understanding of how to use data to improve teaching and learning, a refinement of assessment tasks, and a new approach to success criteria. In the initial stages, student results looked like they had gone backwards, as the assessment truly aligned with the intention. Emotional responses to assessment data were triggered, resulting in the undermining of data as some teachers resisted the new criteria and became reluctant to interpret the rubrics strictly. Over the course of the year, student results and engagement improved and student ability to transfer skills between assessment types strengthened. However, claims were still made that designing assessment that targeted specific skills was time-consuming and that subjectivity in creative tasks still exists. Additionally, the researcher acknowledged that there is an ongoing challenge to encourage experienced teachers to change their practice. A theme that has come from this research that is undocumented in other research is the complacent attitude of some students not giving their full effort or failing to complete or even attempt assessment that is not summative. The initial results of this action research indicated positive outcomes for teaching and learning however, this remains an ongoing project.

While each of these studies generates insights and findings across education generally, the question of assessment needs to be considered more specifically within the context of music education, the focus of this thesis.

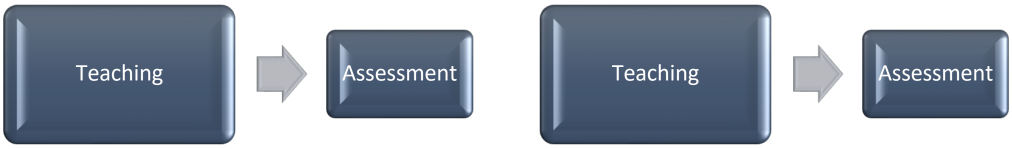
3.4 Music Education and Assessment

Assessment is integral to instructional practice, both for students and teachers and is a professional responsibility integral to the role of teacher. The requirement for teachers to accurately document student learning has been increasing in all subject areas both in Australia and internationally; however, some music teachers believe that assessment is challenging for music teachers (Ferm Almqvist et al., 2017), objectifies music, stifles creativity (Asmus, 1999; Leong, & Qiu, 2013; Russell & Austin, 2010; Zandén, & Ferm Thorgersen, 2014) and negatively reflects the effectiveness of both programs and teaching (Asmus, 1999). Many music teachers see assessment as an add on to instruction (Fautley, 2010) and hold the belief that it interferes with instruction (Asmus, 1999; Russell & Austin, 2010). The extensive history of assessment in music, both in school classrooms, universities and instrumental studios has led some to claim that of all of the art forms, music is the most assessed discipline (Fautley, 2010). Views on assessment in music also vary in the extreme as a result of the concerns listed above with some teachers claiming that valid assessment in music is impossible, to those that over assess every competency in isolation from context in a comprehensive and exhaustive manner. Notwithstanding these concerns, it appears that many teachers are willing to employ subjective methods to determine student levels of attainment that are idiosyncratic, ritualistic and which contemn contemporary research, at the expense of objective assessment data (Eisner, 2007; Cantwell & Jeanneret, 2004; Fautley & Murphy, 2014; Leong, 2014; Leong & Qiu, 2013; Murphy, 2007; Russell & Austin, 2010; Sadler-Smith, 2015; Thorpe & Lamb, 2019; Wong, 2013; Zandén & Ferm Thorgersen, 2014).

The assessment experiences of most music teachers have been influenced by their experiences of grading through external examinations (for example Australian Music Examinations Board (AMEB) in Australia and Associated Board of the Royal Schools of Music (ABRSM) in the United Kingdom) in instrumental music studies. This is a significant factor in shaping this research. It is evident from these experiences that two prominent assessment habits have evolved and stimulated music assessment in the classroom. First, is the separation of teaching and assessment. Referred to as a "folk view of assessment" (Fautley, 2010, p. 3), this view is strongly linked to instrumental assessment experience where a period of learning occurs, followed by an assessment, and then the recurrent cycle starts again. The teaching period is separated from the assessment, as shown in Figure 5.

Figure 5

Teaching and Assessment (Fautley, 2010, p. 3)



This compartmentalising of assessment as separate to learning is deeply rooted in the psyche and influences all forms of classroom music assessment. The second prominent assessment technique employed is the focus on performance assessment. Fautley (2010) draws the following relationship between the 'folk view of assessment' and the tendency to focus on performance:

> This way of assessing learning in music detaches assessment from teaching, the learner from the learned, and the teacher from the taught. What it does is to prioritize such that the only thing that counts is performance at the appointed hour of the assessment itself. The learning process that has been gone through is subsumed within the presentation of that which has been learned. (Fautley, 2010, p. 3)

As music performance is identified by many teachers as the most authentic form of music assessment (Asmus, 1999; Fautley, 2010), the high levels of subjectivity within performance assessment presents concerns pertaining to assessment validity (Shuler, 2011; Russell & Austin, 2010; Cantwell & Jeanneret, 2004). Findings from Russell and Austin (2010) highlight some of these assertions, set out forthwith. The researchers surveyed 4,889 secondary music teachers, yielding 352 usable surveys to establish the assessment and grading practices of secondary music teachers in the southwestern region of the United States. Although the main focus of assessment was on performance, the authors describe music teachers as using a "combination or "hodgepodge" of achievement and non-achievement criteria to determine student grades" (p. 43). Only 82% of teachers identified assessing knowledge associated with the performance repertoire and noted that this represented only 12% of reportable assessment.

Whilst 97% of teachers reported assessing knowledge of music terminology, symbols, or notation, related to performance repertoire, only 50% assessed music theory (literacy) knowledge and the most common method for the assessment was via classroom quizzes (74%). Again, research into music assessment undertaken in Australia (Cantwell & Jeanneret, 2004) focused on music performance and composition by investigating validity and measurement of components of assessment. In this study, researchers discuss the inconsistency between measuring elements of performance and found that:

> while the criteria-specific measures appeared to reliably describe technical competencies, the shared variance between these competencies and the interpretation measure suggested that significant portion of the quality of performance lay in factors additional to the technical competence of the musician. (Cantwell & Jeanneret, 2004, p. 3)

Moreover, the identification of the difficulties in comparing performance assessments from different genres, contemporary and art music performances, along with different instrumentation, call into doubt the ability to "reliably indicate both qualitative (competencies) and qualitative (expressive) elements of musical outcomes" (p. 2). This finding further creates doubt about the validity of assessment outcomes relating to music performance and therefore provides more evidence that a reliance on this assessment form should not dominate learning measurement. A similar finding relates to composition where the researchers found that the quantitative and qualitative elements did not deliver a valid overall outcome when combined to give a summative result. Whilst performance and composition are primary outcomes of music education, the current manner in which they are assessed does not provide sufficient and valid data for the use of improving learning outcomes for students and program and pedagogic evaluation. The existing focus on these forms of assessment is detrimental to improving learning and excludes certain groups from attaining high levels of success, through entrenched inequality, as students with disability, diverse ethnic backgrounds or socio-economic disadvantage are left behind (Cain, 2015; Costa-Giomi & Chappell, 2007; Elpus & Abril, 2019; Popham, 2009). It must also be noted however, that Looney et al., (2017) found this to be a more general concern whereby teachers identified levels of anxiety in relation to developing "fair and equitable assessments for all students including students with disability" (p. 12). A major concern with a focus on the area of music performance is that of equity, inclusivity and opportunity for all (Ministerial Council on Education, Employment, Training and Youth Affairs [MCEETYA], 2008). Prior learning experiences, in the form of private music lessons and even the access to an instrument, can create high levels of inequity in a classroom. The concern with the prioritisation of performance is that when performance assessment is conducted on instruments being studied outside of the classroom environment, teachers are powerless to ensure equity and inclusion (UNESCO, 2017b) and are unable to provide support or equal opportunity to all learners. The demographic profile of secondary school music ensemble students conducted by Elpus and Abril (2019) confirms that "students from the highest socioeconomic status quintiles were overrepresented among music students" (p. 323), particularly in areas that required the use of an instrument. Moreover, the propensity to focus on Western Art Music (WAM) in Australian schools is not inclusive of student experience, leaving high functioning music students from non-western backgrounds, disengaged and failing to achieve their potential (Cain, 2015). Despite the requirement for differentiation and equity in the classroom, the Australian Education Review documents the propensity of Australian music teachers to teach to potential (Ewing, 2010). Additionally, Popham (2009) identifies that teachers with poor assessment literacy tend to construct assessment that fails to provide precise information on how well students are being taught and perpetuates inequity though assessment that measures the "affluence-level" (p. 7) of the students and school. Furthermore, Elliott and Silverman (2015) remind us that the intense focus on music performance, which is further narrowed through the lens of WAM, does not address the multidimensional concepts of holistic musical development.

In the United States, where the propensity for large scale ensemble music has dominated music education and where assessment has almost exclusively been performance based, studies are indicating (Williams, 2011) that new models of assessment need to be identified with the specific purpose of reducing the reliance on public performance. Such a move will invite teachers as assessor to concentrate on individualised learning and a variety of classroom activities with a wider selection of music genres, ultimately designing learning experiences that are relevant and meaningful so that, music will remain with students after they leave school.

This propensity to focus on a narrow range of assessment types limits the development of assessment-literate school cultures. Moreover, a collection of different assessment types is needed as not all achievement targets can be met when only one form of knowledge is being examined, providing incomplete data on student learning and intended outcomes of programs

(Stiggins, 1995). Research indicates that there is a disproportionate focus on “informal assessment (observation, mental record keeping, subjective impression) over formal assessment techniques such as paper-and-pencil tests” (Russell & Austin, 2010, p. 38) and a propensity to apply grades based on emotional interpretations of student effort and participation over student achievement levels (Bibbens, 2018; Russell & Austin, 2010). Further complicating assessment data, is the issue that teachers described using student attendance and attitude as factors in their assessment, with the majority of participants stating that they used both recorded documentation and subjective impressions in their judgements (Russell & Austin, 2010). Additionally, the researchers found differences between attitudes to assessment and weighting dependant on teacher specialisation and year levels being taught in a similar way to the role differences described by Wayman et al., (2012). This is not surprising considering that music teachers rarely have administrative assistance in assessment or change their assessment approaches and are “given extraordinary autonomy and little support or guidance in relation to how they assess. It would appear that a “culture of benign neglect” exists–one that allows secondary music teachers to maintain status quo assessment practices without consequence” (Russell & Austin, 2010, p. 48).

Shuler (2011) acknowledged teacher prior experiences of music assessment as a principal cause of poor assessment strategies and engagement, asserting teachers held on to the “painful memory” (p. 10) of having failed an assessment or having suffered through a major exam. He further identifies “stressful feelings related to evaluation”, and that such memories held by many music teachers lead to reservations in their own classrooms (p. 10). Fear and anxiety are identified by a number of researchers (e.g., Shuler, 2011; Smith, 2018) as an influential factor in teacher perspectives on engaging with formative assessment data generated from music literacy assessment, identifying theory of music exams as a source for this anxiety. In Australia, the peak body for the examination of young musicians is the Australian Music Examinations Board, which conducts performance, musicianship and theory of music examinations based on its own syllabus and requirements. For most Australian music teachers, these examinations were an annual event, separated from the learning (Fautley, 2010), that has shaped their careers and their fears. Whilst Watson (2010) brings to light the differences between the curriculum requirements of classroom music teaching and that of the AMEB syllabus, it is noted that the majority of Australian music teachers’ experiences relating to music literacy is associated with the anxiety of undertaking musicianship or theory of music exams with the AMEB. Additionally, high levels of fear and anxiety have existed for

Australian music teachers in the primary schools since the 1920s when the Chief Inspector for NSW schools, Hugh McLelland, declared that all teachers who claimed an inability to teach music should be named in reports (Tearne, 1921).

Lack of curriculum-based knowledge is an influential factor in music teacher attitudes to assessment (Asmus, 1999; Shuler, 2012). Asmus (1999) posits that "[i]f the teacher has a thorough understanding of the musical knowledge to be taught and can accurately present it to the students, then the essential building blocks of assessment are already in place" (p. 19). Teachers lacking a strong sense of curriculum-based knowledge are ill-equipped to guide student progress as subject knowledge is the base for decision-making in the classroom and allow a teacher to respond to student needs and align assessment strategies to suit the desired outcomes (Jones & Moreland, 2005).

Curriculum Clarity

When the essentials of what is to be taught are known, it is relatively simple to establish the most appropriate techniques for assessing the student learning (Asmus, 1999, p. 22). However, neither The Shape of the Australian Curriculum (ACARA, 2009) nor the subsequent advent of the Australian Curriculum (ACARA, 2014) provided little clarity for music teachers, particularly in secondary school, and as a result, each school and teacher apply their own interpretation to the document. The greatest impacting factor when applying the achievement descriptor level statements from the ACARA documentation comes from the multifarious nature of what has gone before. The level set for entry to the initial year of secondary school, has rarely been met as music is not a compulsory subject in primary (elementary) school. Teachers are faced with a greater range of difference than that found in other subject areas as they have students who have had classroom music, those who have had the additional benefit of instrumental music lessons and those who have had no exposure to music learning at all (Watson, 2010). Teachers with poor assessment and data literacy are unable to engage with assessment to help guide a more differentiated program to counter the discrepancies in student prior learning, resulting in the tendency to teach to potential (Ewing, 2010) in order to achieve the descriptor levels outlined.

Formative Assessment in Music: Assessment Purpose

Quality assessment systems serve four primary functions; to improve student learning, to improve teaching, to improve programs and for accountability by informing stakeholders including parents, students and school or state administrative bodies. Of paramount importance is improving student learning.

> *Improving student learning* is the single most important reason for assessment. We assess students first and foremost to provide *us* with information that enables us to help them achieve, and to provide *students* with information that empowers them to improve their own work. (Shuler, 2011, p. 11)

To provide an assessment system that enables the teacher to improve student learning outcomes, teachers must have high levels of assessment literacy, a clear purpose for the assessment and a supportive assessment identity and put aside the fear and anxiety of their own experiences.

Music education has been well researched. Existing research themes relating to music education include instrumental music teaching (Fredrickson, 2007; Watson, 2010), teacher self-concepts (Bernard, 2009; Jones & Parkes, 2009; Künsting et al., 2016), the musician as teacher (Hargreaves et al., 2007; Parkes & Jones, 2012), teacher preparation (Pascoe et al. 2005) and cognitive development (Collins, 2014; Costa-Giomi, 2014; Schellenberg, 2004) and more recently, the benefits to mental health (Venter & Panebianco, 2022). Throughout the limited research investigating assessment in classroom music, a number of researchers (Eisner, 2007; Fautley & Murphy, 2014; Leong, 2014; Leong & Qiu, 2013; Murphy, 2007; Sadler-Smith, 2015; Wong, 2013; Zandén & Ferm Thorgersen, 2014) identified idiosyncratic, inconsistent and conflicting practices.

3.5 Engaging with Data: Influencing Factors

3.5.1 Identity Formation.

Determinants contributing to teacher engagement with data in the music classroom include teacher identity formation and experience within the social position. The term identity as it applies in the music education literature is articulated in the following way by McCall and Simmons (1978):

> the character and the role that an individual devises for himself (sic) as an occupant of a particular social position. More intuitively, such a role-identity is his (sic) imaginative view of himself (sic) as he (sic) likes to think of himself (sic) being and acting as an occupant of that position. (p. 65)

Music educators form their identities over extended periods (Ballantyne et al., 2012; Randles, 2013) resulting in entrenched stability that is inherent with formation over time. Therefore, as a meta-collective, the profession is made up of individuals who bring with them their musical history and experiences of music pedagogy and assessment. Moreover, the failure to establish a new pedagogical and assessment identity in the early teacher preparation stages, restricts long-term development of teaching praxis. As the duration of involvement as a music student is far more extensive than exposure to classroom pedagogic and assessment strategies offered in teacher preparation courses, the essential inner character becomes resistant to change (Maslow, 1962). This is particularly the case for those teachers who initially identify as a performer, as there may be a conflict with the interplay of changing self-concepts between that of teacher and that of musician resulting in the dominant performer identity hindering self-actualisation associated with the assessment identity. Maslow (1962) further explains that "[t]he inner nature may persist underground, even though denied and repressed" (p. 35) but the pressure to self-actualisation and identity, when not met, can impede potential and lead to the development of idiosyncratic tendencies. This has been explored over a period of time by a number of researchers (Black & Wiliam, 2005; Eisner, 2007; Fautley & Murphy, 2014; Fellenz, 2016; Fredrickson, 2007; Leong, 2014; Leong & Qiu, 2013; Murphy, 2007; Pascoe et al., 2005; Sadler-Smith, 2015; Thorpe & Lamb, 2019; Wong, 2013; Zandén & Ferm

Thorgersen, 2014) finding that most tertiary students who study to be musicians ultimately enter the teaching profession in varying forms, with minimal pedagogical training, with findings from the National Review of School Music Education: Augmenting the Diminished (Pascoe et al., 2005) recommending that tertiary institutions specifically address music pedagogy in all music courses. Further research indicates many current initial teacher education courses for music education, develop student's personal skill as a musician rather than pedagogies required as a teacher and that there is a "tacit assumption by most involved […] that having spent time in this environment renders one capable of moving from the role of student to the role of teacher" (Fredrickson, 2007, p. 327). Moreover, fifteen years on from Fredrickson's study, research undertaken in Ireland (O'Flynn et al., 2022), describes the current adherence to a "narrow and conservative model of music education" (p. 369) in undergraduate music degrees as failing to prepare pre-service teachers for the reality of teaching classroom music in line with recent curriculum reforms in Ireland.

Further, the work of Randles (2013) highlights the influence that personal history has on teaching practice. He claims that teachers regularly imitate ways of *doing* that have worked for the people who have influenced them. Rather than acknowledging when those ways no longer work or fail to meet new requirements, Randles suggests that teachers invent new methods to realise the goals rather than undertaking further learning that would require accepting their own limitations thus protecting their sense of self-efficacy and need for control. Improving self-efficacy is a determinant in improving music teacher's willingness to engage with data. Social learning theory (Bandura, 1983) stresses that when people believe they can exercise some level of control over a situation, the level of fear arousal can be lessened resulting in reduced impairment to task performance (Bandura, 1983; Dweck, 2000). Further research is needed in this area to determine the values, attitudes and meaning teachers associate with assessment in the field of music education. When a deeper understanding of teachers' perspective regarding the place of evidence-based assessment is revealed, only then can more authentic assessment in music education be generated.

3.5.2 Teacher Assessment Identity.

This section discusses the concept of music teacher identity and then moves into assessment identity, outlining the impact that identity has on the perspectives teachers hold about assessment and assessment data and the influence it has on their day-to-day assessment activities.

All forms of identity are developed through experience and circumstance and are influenced by personal and social history. Assessment identity, likewise, is formed by teachers as they bring their personal histories and experiences of learning and assessment into their professional domain and despite being exposed to assessment theories in initial teacher education, Looney et al. (2017) found that past experiences of being assessed were stronger influences on future practice. Teachers are strongly influenced by their personal experiences, some of which were experiences from being a student in class. Assessment identity formation is strongly influenced by personal experience of teachers and school and in particular, experiences of assessment. Further, due to the long exposure and influence of the assessment practices of others, teachers become resistant to change and simply imitate the practices they experienced as a student in class (Stiggins, 1995; Looney et al., 2017; Wiggins & McTighe, 2007; Xu & Brown, 2016). Considering the length of time teachers have already spent as a student, limited exposure to alternative approaches to assessment in the initial stage of teacher training, is not sufficient to cause a fundamental shift in the beliefs of teachers in relation to assessment. Moreover, most ITE assessment training is generic rather than subject-specific leaving music teachers with insufficient training to reform their assessment identity. Improved initial teacher education and in-service professional learning opportunities in assessment education are identified as vital to sufficiently prepare teachers to engage with assessment in a variety of forms and for a range of purposes (Xu & Brown, 2016). For many teachers, assessment was a negative experience which is carried on into professional practice and which manifests in a fear of assessment and evaluation (Shuler, 2011; Stiggins, 1995). Teachers' experiences of assessment are also noted as having represented compliance, ranking and are linked to judgement and directly impact the beliefs teachers have about assessment.

In research that examined the development of teacher assessment identity, Adie (2013) identified elements of teacher practice that support such identity formation. This empirical study based in Queensland, Australia, gathered qualitative data through observations from online moderation meetings. The focus was on middle school teachers as they approached a new standards-based curriculum, with 50 participants from diverse geographic and sociocultural locations and from different curriculum areas. The initial impact of the histories each teacher came with were noted as they influenced the interactions. The multiple identities acknowledged by Adie included "their teaching practice, their knowledge of year level curriculum, their assessment practices, their understanding of the teaching/learning process, their other professional activities, their involvement with communication technologies, their understanding of professional relations, and their skills as a communicator" (p. 102). Findings from this study centred on how teachers' assessment identities were formed through negotiating a shared meaning for outcomes in the standards-based curriculum.

The manner by which teachers engage with assessment data is linked to the identity they have constructed, both as a teacher and as an assessor. Assessment identity is not static but can be context dependant (Xu & Brown, 2016), combining elements including teacher theories of assessment, knowledge base, and the teacher's emotional interactions with assessment. Teacher assessment identity is influenced by self-efficacy concerning assessment and data literacy, which will be discussed in the next section.

Very little is known about teachers' deep thinking around these issues and it is clearly impeding state-of-the-art assessment practices in music education. Until such research on a grander scale is implemented, this will continue to be the case. The study proposed in this research is one small step towards that aspiration.

3.5.3 Teacher Assessment Literacy.

Assessment literacy encompasses both assessment knowledge and skills related to teacher practice as well as the ability to apply and interpret various measures of student achievement, translate evidence to inform instruction, generate feedback, guide student learning and report student achievement (Looney et al. 2017; Popham, 2009; Stiggins, 1995; Willis et al., 2013; Xu & Brown, 2016). The components of assessment literacy are further described as "the knowledge of means for assessing what students know and can do, how to interpret the results for these assessments, and how to apply these results to improve student learning and program effectiveness (Engelsen & Smith, 2014, p. 92). Stiggins (1995) however, adds that "assessment literates know the difference between sound and unsound assessment. They are not intimidated by the sometimes mysterious and always daunting technical world of assessment" (p. 240).

A comprehensive scoping review of teacher assessment literacy undertaken by Xu and Brown (2016), identified the knowledge and skills required for a teacher to be considered as assessment literate. They identified training requirements, efficacy in assessment and a well-developed contextualised understanding of assessment literacy. Additional to this are several factors: a sound understanding of classroom-based assessment, a knowledge base for assessment in specific subject areas and an understanding of assessment purpose. Assessment literacy, much like all things, is a situated concept, situated in the time and place of the participants. As such, teacher understanding of assessment literacy must change based on the most recent assessment research findings, which is one of the difficulties faced by school leadership teams as they manage educational change. However, as identified at the outset, while mandated policy changes continue, changes that attempt to force changes in teaching practices and provide little support for teacher transformation, assessment literacy will remain misunderstood by many excellent teachers of music education in Australia.

Although there is evidence that assessment literacy is increasingly being considered in initial teacher education courses (Wyatt-Smith et al., 2016) for large numbers of practicing teachers, there was no mandated requirement to have a thorough understanding of educational assessment (Popham, 2009; Popham, 2011; Stiggins, 1991; Stiggins, 1995). Moreover, for many practicing teachers, assessment was considered only as an end result; a measurement for grading and ranking students and which is often viewed, particularly by music teachers, as a "process external to their teaching" (Fautley, 2010). Stiggins (1991) aptly describes that teachers entered the profession to teach, not to assess and that assessment methodology was not considered to be anything other than a means for grading and ranking. Ongoing research (Dargusch et al., 2021; Wyatt-Smith et al., 2016) in the improved learning outcomes that can be derived from better skills and techniques in assessment now lead us to understand the importance of high levels of assessment literacy. The improved alignment of learning and assessment and the power of appropriate feedback to students can lead to improved pedagogy and programs. It is challenging to understand why this is not considered a high priority in pre-service teacher education, and further research on this topic is desperately needed so that improvements can be facilitated in the future.

Twenty-six years after Stiggins (1995) originally identified the importance of assessment literacy, research is continuing in the area, however, only marginal progress has been made in classrooms, despite evidence supporting the benefits to teaching and learning. One such study focused on assessment literacy within A*f*L. This narrative research carried out by Engelsen and Smith (2014) concentrated on the relationship between developing an assessment for learning culture with the need for assessment literacy. The importance of assessment literacy was identified for the purpose of providing comprehensive and useful feedback to improve learning outcomes and for the construction of valid assessment tasks. The three-year research project was conducted in two Norwegian elementary schools that function as pre-service teacher education training centres attached to their local universities. Both schools operate with a team structure and selected teaching teams, principals and experts on assessment participated in the research. As the researchers were trying to establish the whole story, narrative enquiry was used to understand the phenomena at intermittent points. Findings from the three participant groups provide interconnecting elements supporting the need for a highly developed assessment literacy. Principals stated that they felt both leaders and teachers were in need of improving their competency levels in assessment and that they had "no clue what the extensive new steering documents about assessment meant [and that they] disagreed with much of it without really understanding the intentions" (p. 95). Teachers identified having low self-esteem, being confused, angry and defensive about their collective capacity to assess, provide feedback and improve practice as a result of public criticism and scrutiny based on international PISA and TIMSS results (p. 96). Principals and teachers valued the learning they gained about A*f*L. Moreover, both groups benefitted from the flipped learning approach taken by the researchers, whereby participants had to undertake reading and develop an understanding of the material. Once again, being provided with enough time to understand and implement, work collaboratively and meet together was developed as a theme. In this case, the research project funded time for the participants to meet and discuss the learning and implementation. From the perspective of the principals, this was a vital step in the success of implementing A*f*L through building assessment literacy and was important for developing a shared knowledge and language around assessment.

Issues relating to the allocation of time identified in other research were again raised in this study in that once the project had reached completion, funding for meeting and implementation time ceased. The teacher narrative supported the benefits of improving assessment literacy but also stated concerns about provision of time:

> Now, two years after the researchers left our building, it is quite satisfying to realize that I can see a change in our school. I am bold enough to claim

> that I have become more assessment literate, and I would say, so is the whole school, including the principal, and even the students. Today my students and I jointly try to assess our work in relation to the learning goal through dialogue, using much of the vocabulary that was developed during the R&D project. But sometimes I feel it is quite time consuming and strenuous, and we really need to develop more effective methods for practising such a learning-oriented assessment. (p. 97)

Additionally, the theme of teacher anxiety and fear of analysis of individual practice, already identified by other researchers (Le Fevre, 2014; Shuler, 2011; Smith, 2018) appeared as teachers commented that the approach taken by the researchers allowed them to openly discuss the learning which "made it less dangerous to develop a critical approach to own and colleagues' practice" (p. 97).

The role of students in the development of teacher assessment literacy was also central to this study. Prior to the intervention, students reported struggling to know how to improve their learning based on the feedback provided, claiming that "they don't really tell me what I have to do to get better" (p. 98). Understanding that many students felt insecure about asking too many questions in class for fear of being teased, assessment feedback assumes a most important role. The teacher's role in empowering students to interpret and use feedback takes on new importance.

Engelsen and Smith (2014) found a disconnect between pedagogy and assessment and identified that teachers needed to move away from a critical approach to assessing students, one that served only for reporting, to a more learner-focused approach where feedback plays a crucial role. It was reported that one teacher "did not think that feedback was related to assessment, as assessment for her was giving a grade or a brief summative comment on assignments handed in for assessment" (p. 99). Improving teacher self-efficacy to assessment literacy produced a changed assessment attitude and improved learning outcomes. By improving levels of assessment literacy across all three stakeholder groups, learning outcomes improved through improved pedagogy, assessment and feedback. Principals and teachers reported an engagement in professional discussion among staff, an acceptance of constructive and supportive criticism and a learning culture that is literate in applying assessment for the promotion of learning. Specifically in relation to pedagogy, teachers identified a move toward learning orientated tasks over unchallenging activities, more specificity in feedback that allowed for learning over task completion the ability to clarify learning goals and capacity to empower students.

This work identified the need for all three stakeholder groups, principals, teachers and students, to build assessment literacy skills simultaneously for an A*f*L culture to develop. Each of the three stakeholders were identified as having a crucial and interconnected role to play within the development of assessment literacy and A*f*L.

3.5.4 Teacher Data Literacy.

Although a teacher may be considered to be assessment literate, they may not have the skills to be data literate (Mandinach & Jimerson, 2016). Data literacy includes the capacity to gather appropriate data, interrogate the data, interpret the data and draw conclusions that can be applied to their own teaching practice (Kennedy-Clark et al., 2020; Mandinach & Gummer, 2016). As with assessment literacy, teacher confidence and competence with data are generally considered to be low as overcrowded teacher preparations courses provide adequate training in data literacy skills. Although engaging with data is now a mandate of the APST, most initial teacher education programmes consider data use to be a peripheral part of assessment, and as such, teachers lack a deep understanding and struggle to apply data use in their planning or instructional practices (Lai & McNaughton, 2016; Mandinach & Jimerson, 2016).

The recognised importance of interpreting student data in the teaching and learning process is acknowledged by its inclusion in the APST (2011), as identified in the previous section. Research into the perspectives of teachers on engaging and using data indicate high levels of perceived risk in engaging in new pedagogical praxis and a fear of public failure (Le Fevre, 2014) which is heightened when the change is also interpreted to be used for external accountability purposes (Datnow & Hubbard, 2015).

Despite being identified in the APST (2011), low levels of self-efficacy relating to teacher capacity to engage with assessment data is reported (Mandinach & Gummer, 2016) which is indicative of insufficient ITE in data literacy skills. Teachers vary in their capacity to use data effectively, with common deficiencies being identified in relation to teachers using only the most superficial data to inform their practice (Datnow & Hubbard, 2015b; Mandinach & Jimerson, 2016). Moreover, concerns include making interpretive errors based on a misunderstanding of the data due to limited data skills and knowledge. Limited data literacy skills make it difficult for teachers to embed or integrate the use of data with their content knowledge and pedagogical understanding, resulting in superficial engagement that becomes an add-on rather than a core practice (Mandinach & Jimerson, 2016; Stecker et al., 2005). This cursory use of data inhibits teachers from moving beyond that limited understanding, impeding them from making interpretations that could lead to transformative praxis (Lai & McNaughton, 2016; Mandinach & Jimerson, 2016). Literature in this area indicates that one inhibiting factor is the lack of a shared and perspicuous definition for data literacy that encompasses all forms of data that teachers need to engage with. Gummer and Mandinach (2015) propose the following definition:

> Data literacy for teaching is the ability to transform information into actionable instructional knowledge and practices by collecting, analyzing, and interpreting all types of data (assessment, school climate, behavioral, snapshot, longitudinal, moment-to-moment, etc.) to help determine instructional steps. It combines an understanding of data with standards, disciplinary knowledge and practices, curricular knowledge, pedagogical content knowledge, and an understanding of how children learn (p. 2).

International research undertaken by Mandinach and Gummer (2016) indicate that overloaded initial teacher education courses have limited time to integrate data literacy into the degree program where ongoing implementation and change is achieved. To address this overload in initial teacher education courses and to ensure teachers are classroom ready, the Australian Institute for Teaching and School Leadership (2017) introduced the mandatory Teacher Performance Assessment (TPA) (Australian Institute for Teaching and School Leadership, 2017), as a tool to assess pre-service teachers' knowledge and practical skills. The implementation of the TPA means that the Australian pre-service context now provides a greater focus on improving the data literacy skills of emerging teachers (Alexander, 2018). However, Kennedy-Clark et al.'s (2020) qualitative study of the experiences of Australian pre-service teachers in engaging with classroom data for the purpose of adjusting learning and teaching decisions, indicates that still more training is required. Findings in this action research included participants “advocating for dedicated time to develop data collection, analysis, and visualisation skills and that these skills should be embedded in their degrees” (p. 60). Although Adie and Wyatt-Smith (2019) note that the TPA should ensure that graduating pre-service teachers meet the APST, ongoing educational change relating to engaging with data continues to be difficult as research from Mandinach & Jimerson (2016) and others, for example (Schalock et al., 2016; Timperley et al., 2007) indicates “the unique impacts of what teacher candidates learn in their teacher preparation programs washes out after two years because of the strength of cultures in schools” (Mandinach & Jimerson, 2016, p. 454). This highlights the need for ongoing professional development and mentoring for beginning teachers, and whilst research in this area is not a focus for this study, more empirical research projects are required to monitor graduating teachers’ perspectives on formative assessment and how they adopt these practices in their early years of teaching, including a focus on the state of their professional self-efficacy as they transition into the profession.

3.5.5 Assessment Practices: Teacher Beliefs about Data Use.

In addition to varying levels of self-efficacy in engaging with data, more recent studies indicate variants in teacher beliefs about the value and purpose of using data. The assumptions made by teachers about student learning progressions (Biesta et al., 2015; Popham, 2011), how data use benefits students and what data are meaningful, vary significantly. Mandinach and Gummer’s (2016) seminal definition, previously mentioned, evidences a number of elements including teachers’ beliefs, capacity and understanding of data literacy. However, Datnow and Hubbard (2015a) make note that beliefs around engaging with data can be role related, with teachers in more senior positions holding differing beliefs to general classroom teachers. Therefore, teacher’s beliefs about data may be largely informed by their professional communities and their self-efficacy in using data to improve instruction (Datnow & Hubbard, 2015) and their perception of why data is being used.

Although literature including teachers’ beliefs about engaging with assessment data indicate both a general acceptance of the benefits to student outcomes and to individual teacher practice, it also indicates a reluctance from teachers towards implementing the change. Thorough interrogations of why this is the case are required if this problematic teaching process is to be better understood and enhanced.

Emotionally negative interpretations of data use in the literature demonstrate the belief that data generated from student assessment is used for accountability and standards purposes and that these are used to evaluate the quality of teaching and teachers. Additionally, Datnow and Hubbard (2015b) claimed that some teachers "viewed data-driven decision making as a bureaucratic task to be completed" (p. 9). Nyberg (2015) attributes these emotional responses to the increase in externally implemented assessment and a belief that much imposed assessment is for "external control, auditing and ranking" and that it is not always "connected to education as an arena of pedagogic activity, but one of market economy" (Nyberg, 2015, p. 236). As cultures of continuous improvement develop and schools and systems engage data to identify areas for improvement or to assist with evaluating the effectiveness of programs or teaching practices, some teachers with low levels of self-efficacy in engaging with data, therefore feel exposed and under threat (Datnow & Park, 2010; Hargreaves, 2004; Nyberg, 2015; Smith, 2018). Other teachers fail to see the benefit in engaging with assessment data because of a "lack of training regarding how to incorporate data" (Datnow & Park, 2010, p. 216) for improvement into their practice. Additionally, as teachers are regularly excluded from the assessment process in national measurement tests (for example, NAPLAN, PISA) they do not develop skills in the marking process or initial analysis of data, but rather, are presented with spreadsheets extracted from the process. This lack of opportunity for engagement further alienates teachers from a process that they already feel they do not know enough about to be able to scrutinise or challenge (Popham, 2009). For many teachers engaging with data represents an educational change and as such, emotions are stirred (Hargreaves, 2004). Anderson (2010) discusses the "Stages of Concern" (p. 66) experienced by teachers as they are engaging with data in this way. Particularly identified are personal experiences and anxieties that involve the teacher's capacity to implement the change, the need for the change and the individual cost of involvement. These concerns may lead to emotions of frustration, disenchantment, professional anxiety, resistance and abandonment (Datnow & Park, 2010; Hargreaves, 2004). A perspective study needs to be designed to better illuminate, analyse and understand these emotions.

The emotional connection that many teachers have with their students, likewise, has an impact on the beliefs held by teachers in relation to the use of data (Russell & Austin, 2010). Additionally, although data only represents a point in time, many teachers react negatively to the reporting of assessment outcomes as they do not tell the whole story of the child. Equally, teachers report the negative consequence of increasing pressure to achieve improved results on high stakes testing is leading to teaching-to-the-test as a teaching priority (Griffin et al., 2014; Ro, 2018; Teddlie, 2010) thereby diluting the curriculum. This sentiment has recently been acknowledged and discussed in the media by the current Minister for Education, and yet no definitive action has been taken to address this long-standing concern; a concern that is leading many teachers to exit the profession.

As a result of research indicating that teachers found it difficult to use data in their classrooms, Hoogland et al., (2016) conducted a systematic literature review, to identify prerequisites for the successful implementation of DBDM. The research followed stringent data collection procedures which "aggregated evidence from multiple studies on the implementation of DBDM […], and verified and illustrated the results of the review using focus group results" (p. 378). After a rigorous process, 29 publications were identified as meeting the selection criteria for inclusion in the study and qualitative data were collected from focus groups encompassing primary teachers, secondary teachers and experts in the field of DBDM, to address the research question: Which prerequisites regarding (1) assessment instruments and processes, (2) the teacher, (3) the student and (4) the context are important for the successful implementation of data-based decision making in the classroom? Results were reported by themes incorporating the review of literature and qualitative data from focus groups:

(i) Collaboration: Whilst the collaboration of teachers was highlighted, the need for collaboration more generally across school leaders, teachers and support staff was identified as a priority for analysing and interpreting assessment data, for developing plans and strategies for ongoing instructional improvement. However, it was noted that collaboration of this kind rarely occurs, with teachers citing insufficient time to meet for collaboration purposes.

(ii) DBDM leadership: A number of issues were raised in relation to the involvement of school leaders in building an assessment culture based on the use of data. Leadership behaviour that encouraged the use of data, monitored the use of data, modelled good data use habits and demonstrated good data literacy were seen as essential in the successful implementation of DBDM in the school. Focus groups also indicated that they needed leaders to provide appropriate PL, set clear goals and provide resources for data use including time to collaborate and access to appropriate student data management systems.

(iii) DBDM culture: Building a culture that supports the engagement with data is reported to include clearly set out expectations that build trust in the use of data. This comprises of a continuous improvement focus for data use and a respect for the autonomy of the individual teacher. Again, teacher collaboration was identified as a requirement for building a DBDM culture within schools.

(iv) Facilitation by means of time and resource: Although facilities like computer systems and "technology for storing, analyzing, and reporting data" (p. 382) were identified, appropriate time allocation was deemed as essential.

(v) Factors external to the school: Teachers who work in senior secondary schools identified being restricted by external assessment requirements and others noted external reporting conditions as restricting their capacity to use DBDM processes when other requirements were imposed on them.

(vi) Professional development: Ongoing professional development in analysing, interpreting and using data, identifying valuable data and designing assessments that produce valid data were all identified as important for a DBDM culture to develop.

(vii) Data use attitude: Whilst teachers with positive attitudes to data use were seen to be more willing to engage with change, a positive attitude to data was not always found. A negative attitude was attributed to teachers resisting using data and an attitude that denied that data use can lead to improved outcomes for teachers and students.

(viii) Assessment instruments and processes: For assessment instruments to yield valuable and valid data, a collaborative approach to assessment tool development was identified.

(ix) Teacher knowledge and skills: In both the literature review and the focus groups, a number of areas of teacher knowledge and skill were identified as needing ongoing improvement. Teacher data and assessment literacy was identified as an area that impeded the successful implementation of DBDM as "teachers felt unprepared to design (formal) assessments, and experts stated that teachers cannot be expected to have been sufficiently prepared for this 'craftsmanship' during their education" (p. 382). Additionally, teachers' skills in technology used to enhance their ability to use data was identified as needing constant updating.

The findings from this study concluded that teachers need high levels of subject content knowledge and PCK. "Data can help teachers to identify the misconceptions students hold, and based on their PCK, they can determine how to alter their instruction accordingly" (p. 382). The impact that PCK has on assessment practices is discussed in the next section and is a significant factor that remains under researched in the field of education, and more specifically music education.

3.5.6 Assessment Practices: The Impact of Teacher Pedagogic Content Knowledge.

As identified previously in the teacher data literacy section, teacher assessment practices are impacted by levels of content knowledge and pedagogical content knowledge. Loewenberg Ball et al., (2008) identified *knowledge of content* and *students and knowledge of content and teaching* as subdomains of pure pedagogic content knowledge and differentiated this form of knowledge from specialised content knowledge. Knowing a subject for teaching requires more than knowing the essentials and basic concepts and it requires a vertical understanding (Willis et al., 2013) of what has been taught and what will be taught and the prior learning that a student brings to the classroom (Shulman, 1986). Shulman defines these differences thus:

> *Content Knowledge*. This refers to the amount and organization of knowledge per se in the mind of the teacher.
>
> *Pedagogical Content Knowledge*. A second kind of content knowledge…which goes beyond knowledge of subject matter per se to the dimension of subject matter knowledge *for teaching*…the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations–in a word, the most useful ways of representing and formulating the subject that make it comprehensible to others…pedagogical content knowledge also includes an understanding of what makes the learning of specific topics easy or difficult: the conceptions and preconceptions that student of different ages and backgrounds bring with them to the learning of those frequently taught topics and lessons (p. 9).

A similar statement is made by Grossman (1990) as she identified that:

> Teachers must draw upon both their knowledge of subject matter to select appropriate topics and their knowledge of students' prior knowledge and

> conceptions to formulate appropriate and provocative representations of the content to be learned. (p. 8)

It can be argued that teachers with limited pedagogic content knowledge are without the capability to engage with data and are therefore unable to ascertain students' prior knowledge, conceptions and preconceptions making engaging in the learning more difficult. Moreover, teachers with limited content knowledge struggle with developing curriculum or ways to measure student learning outcomes (Hoogland et al., 2016; Loewenberg et al., 2008). The move to one-year preservice preparation programs such as Master of Teaching degree, have placed many new music teachers in this category. Preservice teachers in these short programs and who have discipline specific undergraduate degree, move into education programs where attention to the subject itself is, as Shulman (1986) identified, the "missing paradigm," and where the concepts of general teaching are given greater attention than the music content require and used in teaching (adapted from Loewenberg Ball et al., 2008). This results in graduating teachers into the profession with limited content knowledge and with little idea how to teach it. The importance of pedagogic content knowledge (PCK) in music education was confirmed in research undertaken by Millican (2008), in which 214 in-service secondary music teachers ranked PCK as the greatest form of knowledge and skills for success in the profession. Confidence to control the social environment in which the individual operates is linked to instructional quality (Künsting et al., 2016). Therefore, improving professional learning for the purpose of strengthening teacher individual belief in their capacity to carry out assessment tasks with a sense of control must be an imperative.

Teachers who are less confident with specific content matter of the subject experience diminished control of the social and classroom environment, that threatens their identity. Research findings reported by Jones and Morland (2005) from a five-year exploratory research project in primary schools in New Zealand focused on PCK and how it impacted on teacher's willingness to engage with assessment. In this research project, the teachers were faced with a new area for instruction as the schools introduced technology into the curriculum. The decisions made by teachers in relation to assessment and feedback were directly impacted on by their PCK. The original three-year study from which the aforementioned research developed included eighteen primary school teachers from five different schools and two principals. The schools selected provided validity by representing city, small town and rural populations and was designed to 'investigate, develop and enhance teachers' technology education teaching, learning and assessment practices. The multi-faceted, three-year project included almost 700 hours of classroom observations, “case-study development, professional development of teachers through a jointly developed negotiated intervention programme, classroom observations, teachers and student interviews, and the examination of teacher documents and student work” (p. 194). The findings highlighted that change in pedagogy through the use of professional development and negotiated intervention led to improved teacher understanding of progression and teaching sequence and that they had “moved from thinking about progression in terms of a series of activities to examining the conceptual and procedural aspects of student learning” (p. 200).

Career change teachers and those that chose to study music rather than education, have a more restricted understanding of content and PCK understanding of classroom music and therefore default to a performance focus to the exclusion of much domain knowledge. This is also where the focus of teaching to potential has developed into a serious problem for equity among students. Faced with curriculum requirements that fall outside of their experience, teachers use defensive behaviours to mask deficiencies in pedagogy resulting in lower levels of self-efficacy and increased levels of doubt that they can cope effectively with hypothetically difficult situations. Therefore, teachers develop high levels of anxiety built on the possibility of negative consequences (Bandura, 1983). Subsequently, avoidance techniques are employed to reduce fear of failure. In the teaching of music, limited pedagogic strategy and low levels of PCK trigger high levels of anxiety in dealing with heterogeneous classrooms and defensive behaviours lead teachers to focus on what they know best in an attempt to avoid exposing their own limitations. What most teachers know is performance and for fear of damage to ego and reputation, other requirements of music education are often overlooked. One outcome of this is that teachers direct instructional time to those with potential or choose to leave out the elements of curriculum that they do not have the PCK to teach. An investigation in why teachers do so may illuminate more clearly the nature of teacher confidence regarding assessment and what strategies are required to move forward in closer alignment with assessment policy and evidence-based regimes.

3.6 Dilemmatic Spaces in Educational Contexts

Dilemmatic space is described as a situation in which there is no one right way of acting (Honig, 1996) and which emerges from the ambiguous and contradictory (O'Donoghue, et al., 2006; Winter, 1982) nature of teaching. It is also noted by Fransson and Grannäs (2013) and others (Cuban, 1991) that dilemmatic spaces are consistently present in people's lives and contribute to individual and professional identity formation. Fransson and Grannäs (2013) argue that dilemmatic spaces are social constructs created by relationships within daily practice. In the education context, teachers actively position themselves in relation to four types of dilemmas: control, curriculum, societal (Shapira-Lishchinsky, 2011) and ethical perspectives (Berlak & Berlak, 1981) both in their personal and professional beliefs. Whilst O'Donoghue et al., (2006) support the notion that dilemmas are common to all teachers, they also identify that specific educational situations can lead to more idiosyncratic dilemmatic spaces associated with only that educational setting. Furthermore, Winter's (1982) seminal work on dilemmatic space promoted the classification of dilemmas into three categories. Ambiguities: that can be tolerated. Judgements: which include complex and interesting actions that require a high level of skill to achieve resolution, and Problems: which may lead to the compromising of validity pedagogy and assessment practices.

The influencing factors for music teacher engagement with data discussed in section 3.5 of this chapter, identified a number of curriculum and ethical perspectives that led to the construction of idiosyncratic dilemmatic spaces to be navigated. Classroom music teachers operate mostly within two particular dilemmatic spaces. First, the dilemmatic spaces occupied by music teachers as they navigate the ambiguities of curriculum (Shapira-Lishchinsky, 2011) which include what to teach and what to abandon in relation to the time constraints, and in classrooms that are directly impacted by extremes of student prior learning. Second is the ethical perspective (Berlak & Berlak, 1981) on assessment that is problematic and juxtaposed to their identity formation as a music teacher.

These dilemmatic spaces are relevant in examining the identity formation of classroom music teachers. Teacher beliefs and values are challenged as they face ideological conflict associated with assessment and reporting requirements, where they confront the challenge between professional autonomy and official curricula decisions, which at times may be outside of researched educational practice. As literature in Section 3.5.1 identified, music teachers are more inclined to rely on ethical and philosophical perspectives which have evolved over many years through identifying as a musician, rather than the pedagogical understandings that form their teacher identity. Of particular relevance to this research is the formation of assessment identities within the subject specialisation of music and the pedagogical/philosophical belief the teacher develops while working within a dilemmatic space that they fail to interpret as a positive opportunity (Beijaard et al., 2004). In this aspect, dilemmatic spaces should be seen as a positive space for growth (O'Donoghue, et al., 2006), opening opportunities for teachers to expand on their pedagogic praxis, assessment and data literacy through ongoing professional learning.

3.7 Professional Learning

Introduction.

The ability to develop a sound level of assessment and data literacy to guide pedagogy in ITE is restricted by time and volume of content to be delivered (Laveault, 2016; Mandinach & Gummer, 2016; Xu & Brown, 2016), making on-going professional learning (PL), for both new graduates and in-service teachers, a vital part of professional practice and a component of policy enactment. Moreover, as PL budgets are usually very tightly controlled and an increasing level of compliance training has become the reality for many teachers and schools, PL money and time is increasingly being spent on programs that "often serve merely to satisfy legislative" mandates (Angeline, 2014), leaving little money for ongoing PL directly relating to the improvement of praxis.

There are also a number of factors that negatively impact on PL strategies failing to accomplish significant and sustained professional growth. A one-size-fits-all approach to PL has proven to achieve only little lasting change (Angeline, 2014; Popham, 2009; Zwart et al., 2014) as it does not provide a high degree of satisfaction for all teachers involved (Deci & Ryan, 2000; Hoogland et al., 2016; Ryan & Deci, 2000). As with students in a school classroom, teachers may have significant differences in terms of readiness for new learning about A*f*L strategies and implementation. Teachers with no previous experience in A*f*L and those with limited assessment literacy or mastery of assessment skills, such as aligning assessment with learning needs (Ruiz-Primo, 2016), will need to undertake PL within their own zone of proximal development (DeLuca et al., 2016b; Laveault, 2016) which may include direct instruction, mentoring or peer modelling. Moreover, Engelsen and Smith (2014) acknowledge that it is only when a teacher can take a critical view of their own practice and recognise that there is a need for further learning, can any PL lead to deep and lasting change. Traditional methods of professional learning such as the cascade model (Hill, 2011), have not successfully used collaborative measures and subsequently, have not tended to produce meaningful or continued teacher professional growth. This model has largely evolved from a cost cutting environment as professional learning budgets are tight in schools. This method focuses on training only a select few, and then requiring those teachers to facilitate the training of other staff. Angeline (2014) describes this model as the classroom model in which an "expert holds forth on a particular topic" to the assembled "students" (p. 51) further supporting the claims that the absence of an individualistic approach often stymies progress through its lack of application to the needs of music education professionals with different experiences (Bauer, 2007; Conway, 2008; Deci & Ryan, 2000; DeLuca et al. 2016b). This research is instructive in shifting the professional development paradigm into spaces where teachers experience, authenticity, meaningfulness, and a desire to transforming their teaching practices in legitimate ways.

Enabling factors for successful PL such as this, and implementation of A*f*L require systemic changes but also shifts in teacher self-efficacy and clearly defined and challenging outcomes (Brookhart et al., 2010; Hill, 2011; Laveault, 2016). Whilst self-efficacy is low, the ability to collaborate remains elusive (Angeline, 2014). Observing colleagues in and out of the music area is fundamental to pedagogical growth however, the fear of the scrutiny of a colleague assessing the strengths and weaknesses in practice often seems too much and is regularly interpreted as external control. Further, anxiety is induced when data from student learning outcomes is used to identify areas for teacher learning to target specific, individual professional learning needs. However, to align individual learning needs, this engagement with data is a powerful tool enabling a teacher to be an "active participant in designing his or her own professional learning" (Zwart et al., 2015, p. 580). Additionally, by using this form of data and tracking student progress, school administrators are able to identify classes in which progress is being achieved and areas for improvement highlighted, thereby identifying teachers' strengths or needs and providing mentoring and peer modelling. However, DeLuca et al. (2016b) claim that non-judgmental, positive attitudes and openness to feedback from colleagues is a necessary condition for any form of collaborative culture of learning to develop and be maintained. As already identified by Shuler (2011) and Smith (2018) there is a general fear and lack of trust displayed by teachers when using data for this purpose which Zwart et al. (2015) and others (Brown, 2008; Hill, 2011; Volante & Beckett, 2011) claim leads to patterns of active resistance, attempts to release and escape the pressure or increased amount of stress.

In a quantitative investigation into the manner in which defensive threat responses interfere with performance, Hodgins et al., (2010) studied 77 undergraduates to measure their responses to threat across a number of objective measures. In particular, they focused on the relationship between threat response and performance. The participants underwent one-on-one interviews and were subjected to a number of measurement scales to assess physiological change in relation to threat. A data analytic approach was taken to extract results from cardiovascular and blood pressure readings along with verbal defence, vocal acoustic and physiological change measurements being recorded. When compared with a control group, the subjects showed higher levels of agitation and defence which restricted their actions and made their responses more considered in an attempt to reduce the threat. The results found that these threat responses limited the capacity to function and magnified defensive behaviours. Additionally, Hodgins et al., (2010) identified types of statements as offering either controlled or autonomous situations typical to those in which teachers operate. Whilst ‘I usually have choice’ statements offer autonomy, syllabus documents generally present ‘you must do this’ statements that imply loss of autonomy and trigger defensive behaviours in those with low self-efficacy. A study such as the one proposed forthwith, will portray and analyse more deeply the sentiments underpinning this sense of bifurcation between policy and practice, and hopefully will generate recommendations for systems on a way forward to overcome the distress that teachers are experiencing in the domain of assessment.

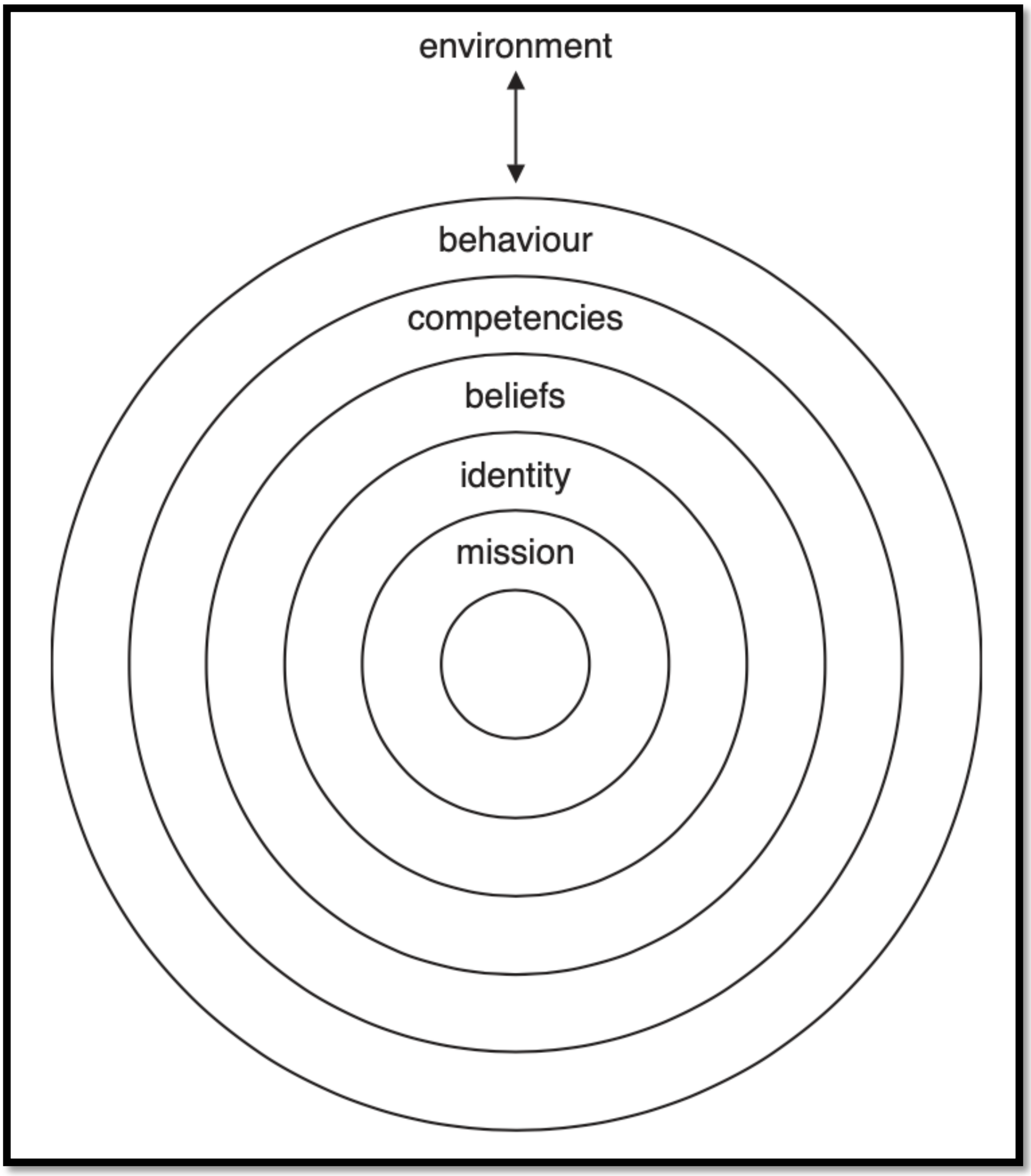
Professional Learning in the Domain of Assessment for Learning.

The capacity for teachers and school leaders to collaborate in their learning about the complexities of A*f*L has a high frequency in the literature (Bansal, 2017; Brookhart et al., 2010; DeLuca et al., 2016; Du Plessis, 2018; Hoogland et al., 2016; Jones & Moreland, 2005; Laveault, 2016; Nielsen, 2017, Schildkamp, 2018; Swaffield et al., 2016). In acknowledging the complexities of changing practice and learning the skills around implementing A*f*L, Laveault (2016) suggests that teachers need “time, support and collaborative work among teachers, school leaders and other professionals” (p. 139) and that intermittent training sessions, workshops and conferences are inadequate to drive lasting change. In addition to general collaboration, for lasting A*f*L change to occur, a collaborative assessment culture (Hoogland et al., 2016) must be established and maintained in an environment of trust and respect (DeLuca et al., 2016; Laveault, 2016; Swaffield et al., 2016). A further impediment to developing a collaborative culture is one of the other elements previously identified and that is time. As discussed in section 3.5, teachers regularly state that there is not enough time allocated to the change process or professional learning and that “training sessions are not followed up to monitor the degree of implementation of training goals” (Laveault, 2016, p. 135). When A*f*L is introduced, much literature indicates that unless adequate time is given to the implementation and to collaboration, only a superficial incarnation of A*f*L will evolve where the impact may be positive on novice teachers as they build initial skills but can be counterproductive through oversimplification when imposed on teachers of greater experience (James & Pedder, 2006). When teachers with greater levels of experience feel external pressure to conform without an understanding of the philosophy supporting the PL, they lose trust in the process. This occurs when a one-off PL exposes teachers to the tools of A*f*L rather than developing and implementing the practices of A*f*L and is seen as demeaning by experienced teachers. The need to see immediate action, or presentism, by school administrations therefore rewards the immediate implementation of the tools with no regard for the understanding or teacher values and beliefs.

Furthermore, the success of any PL is also closely tied to qualities and deeper values and beliefs (Biesta et al., 2015; Hodgins et al., 2010; James & Pedder, 2006; Nortvedt et al., 2015; Zwart et al., 2015) held by teachers and the cohesion between the layers of belief. As described by Korthagen (2004) when there is incongruence between a teacher’s beliefs, identity and mission with the environment, behaviour and competency, an emotional reaction is likely. This is displayed in Korthagen’s (2004) onion model of levels of change, Figure 6.

Figure 6

The Onion. A Model of Levels of Change (Korthagen, 2004, p. 80).


environment
behaviour
competencies
beliefs
identity
mission

3.8 Summary

The chapter has provided a crucial framework for the thesis. As an increasing quantity of literature indicates that approaches to music education in Australia have undergone constant conceptual change over the past three decades, the approaches to assessment and initial music teacher education have not kept pace. Changes in the understanding of assessment processes are not translating into changed practices in the area of music literacy. Teacher resistance to mandated policy change has been validated through research but a deeper understanding of the perspectives of teachers as to why they enact such resistance is required.

Within the literature, and in the early parts of this chapter, it was observed that many authors acknowledge the importance of teachers engaging with data generated by formative assessment in guiding the pedagogic process. This is deemed an unquestionable proposition in the field of education. The literature also recognises the importance of the strong formation of assessment identities by teachers in building their confidence and knowledge regarding their assessment literacy and data literacy as they shape their perspectives on engaging with data from music literacy assessments. Again, the research advocates the importance of teacher assessment identities but fails to recognise why this is not evident in many contexts where mandated practices regarding assessment are rejected or ignored by teachers based on lack of expertise, limiting confidence as expert assessors and a fear of failure. It is also noted that there continues to be a lack of a comprehensive initial teacher education and ongoing professional learning to address teacher assessment literacy. In Australia there needs to be a paradigm shift away from the mandating of policy in attempting to change teaching practices, to granting teachers greater autonomy in facilitating meaningful learning and adaptation of their professional thinking and practices for new times.

The examination of literature relating to the concept and development of teacher assessment identity, and the vicarious ways that these identities are formed, has high priority in the formation of this chapter and in shaping this research project. It examines research into teacher assessment literacy; how teachers develop and expand their understanding of assessment techniques and purposes. This section also examines teacher data literacy as a separate concept to assessment literacy. An examination of literature concentrating on teacher assessment practices was undertaken and finally in this chapter, literature seeking to understand teachers' perspectives on the purpose of assessment in music is reviewed. In all of these domains of knowledge relating to teacher expertise in assessment, many gaps are evident, calling for further research to address what is problematic in this field of endeavour.

Despite findings supporting the importance of teachers' engagement with data generated from formative assessment, this review of assessment policy and research literature has demonstrated a paucity of research into the perspectives of teachers in engaging with the practice. In particular, there is an absence of this research relating to music education in Australia. The literature review conducted on teacher perspectives on engaging with data generated from formative assessment found limited research directly investigating the phenomenon. Although research in other areas of music education is evident, particularly in relation to instrumental music teaching and the musician as teacher there are a number of gaps in the research literature, for example the development of music teacher assessment literacy and identity, perspectives on data literacy, PCK and collaborative professional learning. It is deemed that the voice of practicing teachers regarding the use of data in assessment in the domain of music education is silent in the research, particularly in relation to the use of data as integral to their professional work in the classroom. What follows is a small step to addressing what is silent in the current literature based on the critique that has unfolded in this chapter. This research study that is proposed in the next chapter is designed to address a discrete component of this silence, through the lens of the key research question; *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* In so doing, a step towards addressing the larger problem of authentic assessment in music education will be addressed and will contribute to a deeper understanding of what is problematic from the perspectives of classroom music teachers. This will enable deep insights into the assessment identities of a particular cohort of music teachers, from which will be generated a set of recommendations for policy makers, system decision makers and music teachers. Based on the findings, it is anticipated that a significant contribution to practices of formative assessment in music education will be celebrated and will eventually be instrumental in transforming current assessment practices in the teaching profession in Australia. However, recommendations for further, ongoing research across music education community will also be reported for future consideration, as this study, by its very nature, is a small contribution to substantive knowledge in the field of music education.

To best investigate this phenomenon, the methods discussed in the literature review will influence the research design and methodology of the study proposed and implemented in the thesis. This will be outlined and argued in the next chapter.

Chapter 4: Research Methodology

Introduction

This thesis reports the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from the assessment of music literacy. The study is situated in terms of classroom music teachers' perspectives on their role and purpose for engaging with assessment data in music education, identifying what they believe, think and understand. This is a qualitative perspectives study. The use of the term perspectives incorporates beliefs, meanings and understanding (O'Donoghue, 2019) and is used to explain the phenomenon of how teachers make sense of their experiences in the assessment process. Individual formation of reality is idiosyncratic and draws on personal history, experience and understanding of the interactions around them; they form a perspective. And whilst they are shaped by their perspective, their perspective in turn shapes their actions and interactions.

This chapter sets out the philosophical underpinnings for the methods used to gather data and consists of six sections through which the researcher makes explicit (1) the qualitative methodology, (2) the research design and participant selection processes, (3) the procedures adopted for the data collection, (4) and the data analysis, and finally (5) the ethical implications inherent in the process of research. The final section of this chapter provides a conclusion, drawing the theoretical framework together. First, the theoretical foundations for the methodology of this research are discussed.

4.1 Methodology

4.1.1 Theoretical Framework.

The ontological, philosophical grounding for this qualitative research design is articulated through its theoretical framework, depicted graphically in Figure 7 below. Ontologically the research is designed to investigate the research questions below; to generate data that captures the relativities of using assessment data from the perspectives of music teachers, albeit there is no one reality. Rather, that it is relative to how each teacher has experienced the phenomena across the contexts in which they have worked professionally. There was no intent on the part of the researcher to make a claim of "one truth" based on the findings. In line with the ontological constructs of this study the purpose was to generate deeper understandings of and to theorise how teachers' use of data guides their teaching of music in the contexts in which they are working.

The theoretical framework assured a consistent approach between the research problem, the research questions and the methods employed to approach the research problem; guided by the principles of the interpretivist paradigm (Crotty, 1998). This study was designed to collect rich data from Australian music teachers to address the lack of empirical research in the area of study. The intentions of the study are:

- To develop multiple understandings of classroom music teachers' beliefs, attitudes, self-efficacy and perspectives on using data generated from formative assessment of music literacy; and
- To understand and theorise how teachers' use of data guides teaching with a view to enhancing student music literacy learning outcomes and improving participation rates in post-compulsory music education.

It was clear at the outset that the realities shared by teachers would differ due to their unique histories, experiences and values that shaped their perspectives on using data generated from formative assessment of music literacy. The multiple interpretations and viewpoints that were to become central to this investigation reflected the relativity and richness of this research emanating from the individual teachers' sense of meaning making; meaning that is socioculturally constructed and historically embedded in the professional life experiences of practicing teachers.

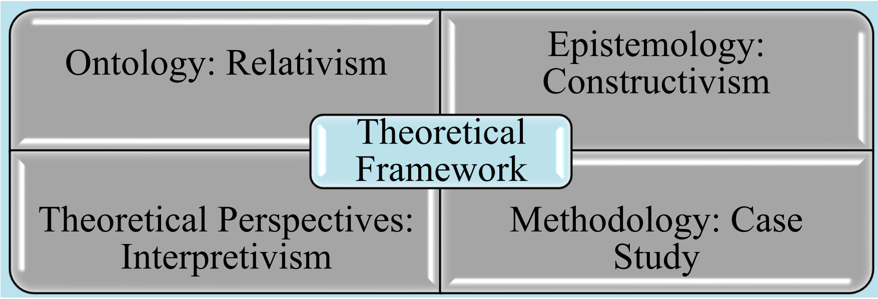
4.1.2 Qualitative Research Methodology.

Of the three typologies of educational research highlighted by Merriam (1998), the interpretive nature of a qualitative approach provided the most appropriate research design regarding the phenomenon being studied. Where positivist research investigates for example, schools and education as objects in which reality is stable and able to be observed and quantified and critical research examines for example, schools as a means of social and cultural reproduction and transformation primarily concerned with power, privilege, and oppression, it is only in the qualitative interpretive research paradigm where education is identified as a lived experience in which realities are constructed socially by individual participants. Aligning with the intentions of this study, the characteristics of a qualitative approach enabled the researcher to explore the research question and develop a detailed understanding of the central phenomenon using data that were analysed for description and using interpretive practices to understand the lived experience; the individual perspective (Creswell, 2012; Denzin & Lincoln, 2008; Merriam, 2009). The employment of qualitative research methods provided the researcher with a form of inquiry that allowed for the development of understanding of the social phenomena with little disruption to the natural setting (Merriam, 1998). As the study endeavoured to interpret and understand phenomena in terms of meanings the participants brought to them (Denzin & Lincoln, 2008), qualitative research methodologies were determined as the most appropriate method to gather rich data and make sense of the individual perspective. Moreover, the qualitative methodologies align more closely to the teacher's natural setting when engaging with data gathered from the teachers' perspective on assessment of music literacy (Denzin & Lincoln, 2008; Stake, 2010).

The research question being investigated in this thesis: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* examined the central phenomenon of teacher perspectives in relation to using data as a pedagogical tool in multifarious music classrooms. As the researcher is a participant in the culture being studied an emic approach (Merriam, 2009) to the phenomenon was employed. The importance of the emic approach regarding this particular research is to gather the data from the participants in their own words in an attempt to uncover the perspectives of those whose meaning is in question and where the information is provided by the participants in the study (Creswell, 2013; Huberman & Miles, 2002). The emic nature of the study also required the ability to empathise with the participants by sharing their personal experiences, further aligning with the purpose of the research question and justifying the adoption of a qualitative approach to data collection. Qualitative research, therefore, implies an idiographic perspective that uses a natural environmental context to gain an insider, or emic, experience of the phenomenon where the researcher is attempting to describe a particular culture in its own terms (Morey & Luthans, 1984; Morris et al., 1999).

Figure 7

Theoretical Framework.


Ontology: Relativism
Epistemology: Constructivism
Theoretical Framework
Theoretical Perspectives: Interpretivism
Methodology: Case Study

4.1.3 Epistemology: Constructivism.

As an insider, the researcher employed the constructivist paradigm to build an understanding of the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from assessment of music literacy. The constructivist paradigm allowed the researcher to construct meaning and understanding through a process of reflecting on and interpreting individual participants actions and interactions in the world (Hyde, 2015; Mercer, 2007; Morris et al., 1999), from the viewpoint of an insider in the socially constructed world of a music teacher.

There are both advantages and disadvantages to being an insider-researcher. Beneficial to the study was the ability to engage in insider language and understand the complexities of the music teacher role, which allowed a greater depth of conversation during the interview process (Unluer, 2012). Having an understanding of school practices and requirements of curriculum documentation permitted a greater level of interpretation and engagement with responses. Although there were many benefits to being in the position of insider-researcher, preventative measures were taken to ensure the accuracy of data collected (Kam, 2018; Kanuha, 2000; Mercer, 2007; Unluer, 2012). The researcher acknowledged the following limitations and took steps to reduce any influence during the data collection stage:

- Assuming meaning without seeking clarification
- Assuming shared meaning
- Proximity to the situation that hinders a wholistic view of the phenomenon
- Disregarding routine behaviours

It is important to establish the significance of the epistemological constructivist approach taken in this research and draw a distinction between the constructivist research and the constructionist world inhabited by music teachers. As a collective, music teachers enter a socially and culturally constructed space where the constructionist assumption that meaning is not discovered, rather, it is "constructed by human beings as they engage with the world they are interpreting" (Crotty, 1998, p. 43) determines their actions and beliefs. The social phenomenon that is the world of a music teacher has been created and then sustained through social practice, where people act in line with a constructed tradition determined by policy and curriculum. That tradition has been internalised and becomes the body of consciousness for the collective and becomes part of the consciousness passed on to future generations of music teachers, who in turn, internalise and make it part of their own consciousness and understanding of music education (Crotty, 1998; Hyde, 2015). By contrast, this research employed a constructivist approach to studying perspectives, as it is primarily an individualistic understanding of the phenomenon where meaning-making is undertaken through an interpretive theoretical perspective as an activity of the individual mind of the researcher (Crotty, 1998). In seeking to understand the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from the assessment of music literacy, the research focuses on meanings made exclusively by the researcher on how pedagogical knowledge has combined with personal and collective histories, experiences and beliefs to shape individual reality and the culture of classroom music education in Australia.

The use of a constructivist epistemology to investigate perspectives allowed the researcher to question culture: customs, traditions and habits through which teachers construct meaning and how they "hand on (their) understandings as quite simply 'the truth'" (Crotty, 1998, p. 59). To understand the individualistic nature of how teachers construct meaning in their world, an interpretivist theoretical perspective was employed.

4.1.4 Theoretical Perspective: Interpretivism.

The conceptualisation of this research was undertaken through an interpretive theoretical perspective to philosophically underpin the constructivist methodology as it provided a framework from which to develop an understanding and a way to explain the human and social reality of this specific sample of Australian music teachers (Crotty, 1998). Early interpretivist thinking in the work of Max Weber (1864-1920) and Wilhelm Dilthey (1833-1911) contrast Verstehen (understanding) with Erklären (explaining) whilst later work of Windelband (1848-1915) and Rickert (1863-1936) reject the "notion that there is some kind of real distinction between natural reality and social reality, [they] accept that there is a logical distinction, one posited by the mind, between the two" (Crotty, 1998, p. 67). Through empirical research, this thesis seeks to understand rather than explain the idiographic nature of perspectives held by music teachers on engaging with assessment data generated from music literacy tests and how culture, history, experience, and interpretation have combined to form this reality.

The interpretivist theoretical perspective enabled the researcher to build rich, local understandings of the experiences of the participants (Taylor & Medina, 2013). As perspectives cannot be detached from culture or the time in which the perspective is situated, so to, the individual's perspective becomes their reality. In acknowledgment of this assumption, the research design seeks to interpret and understand:

- The teacher assessment identity and its impact on perspectives on using music literacy data as a pedagogical tool in music classrooms
- The teacher's understanding of assessment literacy
- The teacher's assessment practices and individual experiences of assessing that have resulted in these perspectives
- The teacher's purpose of assessment
- Implications for praxis- which appear as a set of recommendations

Other theoretical perspectives were rejected by the researcher on the grounds that interpretivism was identified to be the best way to guide the gathering of rich and insightful descriptions and analysis of perspectives from the participants in the study. Whilst critical theory research may lead to change and improve data engagement levels within music education, a critical paradigm in the first instance, may not uncover individual realities and perspectives relating to engaging with data generated from music literacy assessment, thereby possibly overlooking beliefs and values at the root of the inquiry. Future research seeking to make change in the field may expand on the recommendations presented in this thesis by using a critical approach, but until deep understandings of the experiences, truths and realities of teachers are documented, the use of critical theory would appear to be pre-emptive. This thesis thus intends to address one gap in the research by focusing on individual teacher perspectives of using data to enhance praxis.

The limitations of interpretivism are also acknowledged. As all qualitative research is interpretive to some extent the researcher brings to the study her own history, beliefs, feelings and experiences, which necessarily shape interpretations of the data. The subjectivities of the researcher cannot be dismissed; rather they are owned and acknowledged as integral to human interaction and meaning making. Thus, to ensure authenticity and in search of credible narratives at the level of analysis, multiple sources of data are considered as set out in Section 4.5.2. Additionally, sustained member checks and peer examination formed part of the verification process as the researcher continued to share the data analysis with participants over the period of the data collection and analysis.

In conclusion, this study sought to understand the meanings that people assign to objects, social settings, events, and the behaviours of others and the implications that these meanings have in the practice on engaging with data from music literacy assessment. To further align with the intention of this thesis, the interpretivist paradigm was supported through the use of case study methodology for the purpose of data collection.

4.1.5 Case Study.

Case study provided a method which supported the use of appropriate data gathering procedures which reflected the theoretical perspective underpinning the study and aligned with the intent of the research (Creswell 1998; Saldana, 2015). As Yin (2009) described, case study is an empirical inquiry that:

- Investigates a contemporary phenomenon in depth and within its real-life context especially when,
- The boundaries between phenomenon and context are not clearly evident (p. 18).

The implementation of case study method facilitated comprehensive exploration of the phenomenon of teacher perspectives at a point in time, thereby addressing the desired outcome of the research (Creswell, 2012; Creswell, 2013; Crotty, 1998). Exploring the perspectives of classroom music teachers as they relate to assessment and engaging with data gathered from the assessment of music literacy presented a contemporary phenomenon where little research has been undertaken but also where the only genuine way to gain that understanding was by talking directly to the participants, further supporting a case study approach (Kvale & Brinkmann, 2009). The literature review in Chapter 3, identified that substantial research had been conducted into the use of data to inform pedagogic practice (Black & Wiliam, 1998; Black et al., 2004; Guskey, 2003; Hattie, 2009; Shaddock, 2014) however, sparse research in this area related to music education. Thus, this is a case study specifically designed to interrogate the research questions in the context of music education.

Understanding the phenomena of perspectives in engaging with data, through descriptive case study, provided a detailed account of the phenomenon and addresses the existing gap in the research (Merriam, 1998). This study will have important implications for music teaching in Australia through the exploration of the research question: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* therefore providing the nexus between method and desired outcomes (Crotty, 1998). The emic nature of pursuing the participant's reality in their natural environment provided the greatest opportunity for making significant contributions to the knowledge base and practice of education through the collection of insightful, valid data, that allowed for discovery and understanding from the perspectives of those being studied (Kemmis, 1980; Merriam, 1998). Fundamental to case study method is the notion that reality is constructed as music teachers interact with each other (Merriam, 1998). To this end, the researcher sought participants' perspectives from an insiders' point of view.

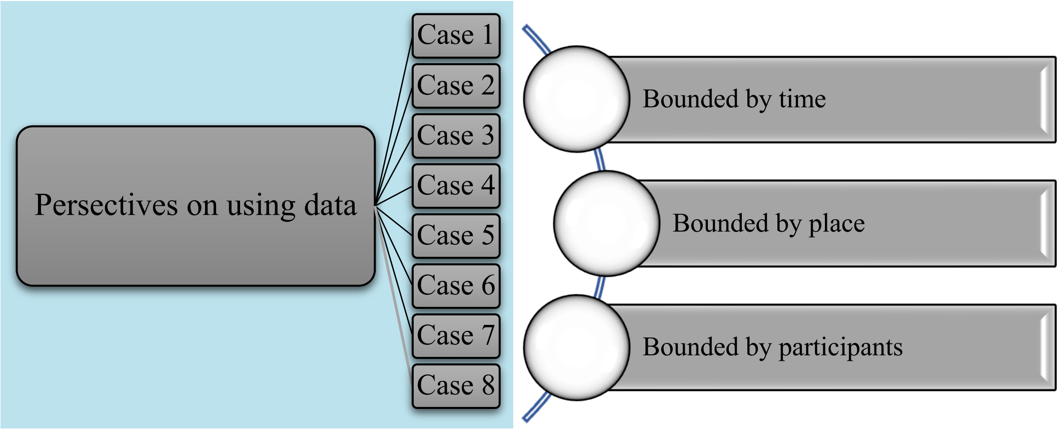
The intent of this case study is to understand the perspectives of eight music teachers on engaging with data generated from music literacy assessment; therefore, requiring a bounded, multiple instrumental case study (see Figure 8). The research is bounded by time, place and individuals, focusing on eight classroom music teachers from a variety of educational settings in Australia. The use of case study method permitted each participant to share their individual story.

The limitations associated with case study method to which Merriam (1998) alerts the researcher are acknowledged also. First, that the results of case studies are unable to predict future behaviour and are restricted to simply describing the phenomenon, in the first instance. Additionally, inaccurate interpretations by readers and exaggeration or oversimplification of the phenomena can impact the research recommendations. Researcher bias and levels of researcher sensitivity and integrity are also raised along with verification, credibility and generalisability.

The methodology's strength in gathering rich, thick description of the phenomenon, is ironically linked to the final limitation as identified by Merriam (1998). She asserts that time can be a limitation if the thesis is too long and detailed for a reader to use, or if too much data that are irrelevant are collected. In acknowledging these limitations, the researcher argues that case study method is the most appropriate approach to "uncover the interaction of significant factors characteristic to the phenomenon" (Merriam, 1998, p. 29) and to address the overall intent of the research purposes. The remainder of this chapter elaborates on the methods used for data collection and analysis, participant selection, and steps taken to ensure trustworthiness and authenticity as well as considerations of the ethical implications for the study.

Figure 8

Bounded Case Study Design (Adapted from: Creswell, 2013, p. 466).


Persectives on using data
Case 1
Case 2
Case 3
Case 4
Case 5
Case 6
Case 7
Case 8
Bounded by time
Bounded by place
Bounded by participants

4.2 Research Design

Introduction

The dominant criteria for the application of a case study method are the type of research questions being posited. As the research endeavoured to address how and why questions to elicit the perspective of participants (Yin, 1994), defining the research questions was one of the critical processes (Miles & Huberman, 1994) required at the beginning phase of this research.

4.2.1 Research Design.

Restating the central research question: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* The research question determines a case study approach and is directed by a set of guiding questions which were developed to yield a richness of data, imperative to the central research question (Blackledge & Hunt, 1985; O’Donoghue, 2019). These questions reflect the constructs of a perspectives study (O’Donoghue 2019) and are integral to keeping the discussion focussed on the professional practices of music teachers while at the same time delving for deep meaning making, including values and ideologies that underlie such practices.

Research sub-questions included:

1. What are the aims of music teachers when assessing music? What are their aims for assessing music literacy and engaging with the formative data they generate? What reasons do they give for these assessment aims?

2. What strategies do music teachers use to achieve their aims in relation to the assessment of music and using formative data from music literacy assessments? What reasons do they give for using those strategies?

3. What significance do music teachers say they attach to their aims or intentions and their strategies and what reasons can they give for this?

4. What outcomes do music teachers expect from pursuing their aims or intentions? and what reasons can they give for this?

5. Are there any inhibiting factors that prevent teachers from actively using formative assessment data?

6. To what extent, if any, does professional learning have? What impact would individually designed professional learning have on music education praxis?

The sub-questions served to generate data and were expanded on as the researcher wanted to understand rather than explain the idiographic nature of perspectives. As perspectives cannot be detached from the culture nor the time in which the perspective is situated, so the individual’s perspective becomes their reality. In acknowledgment of this assumption, this research design also aimed to interpret and understand:

- Personal experiences of being assessed in music
- Personal experiences of the assessment process as a teacher
- Personal perspectives on using data as a pedagogical tool in music classrooms
- Implications for praxis-which will appear as a set of recommendations

Such foci are typically central to a perspectives study such as this one where the complexities of meaning making are always contextually embedded in the personal and professional lives of the participants, in this case, teachers of music education.

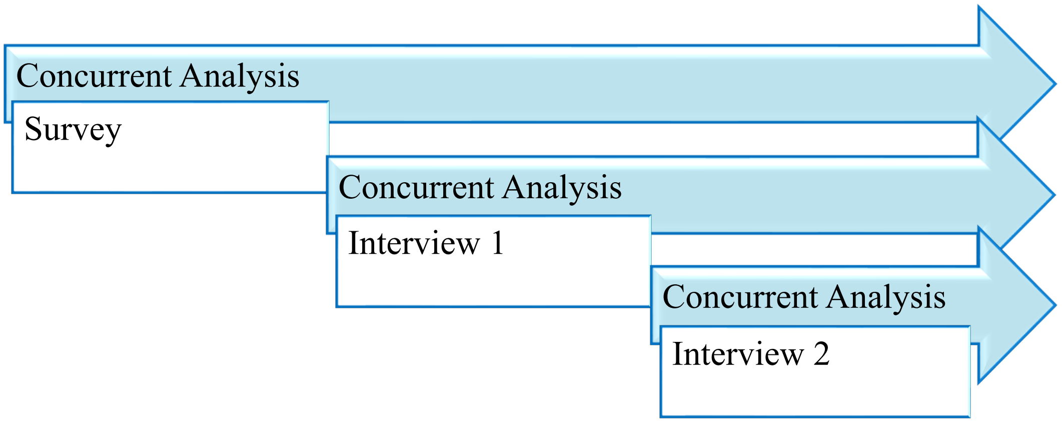
4.3 Data Collection Methods

Introduction

Two data collections methods explore the complexity of the central phenomenon (see Figure 9). These methods include the employment of a qualitative survey and semi-structured interviews. These will be expanded upon in the following section.

Figure 9

Data Collection Framework



In supporting the case study's theoretical framework, data were collected directly from participants through the two methods to capture the complexity of the phenomenon. In seeking to understand individual perspectives, the researcher endeavoured to understand the lived experiences that have moulded and nurtured the perspective. The qualitative survey served as the first step in gathering data.

4.3.1 Qualitative Survey (N=86).

While some may argue that the use of a survey within a qualitative study may be contradictory to the ontological framing of the study, Braun et al., (2020) contend that such an argument is misplaced. They argue that qualitative surveys can be useful “with numerous applications” for researchers and participants alike (Braun et al., 2020, p. 641).

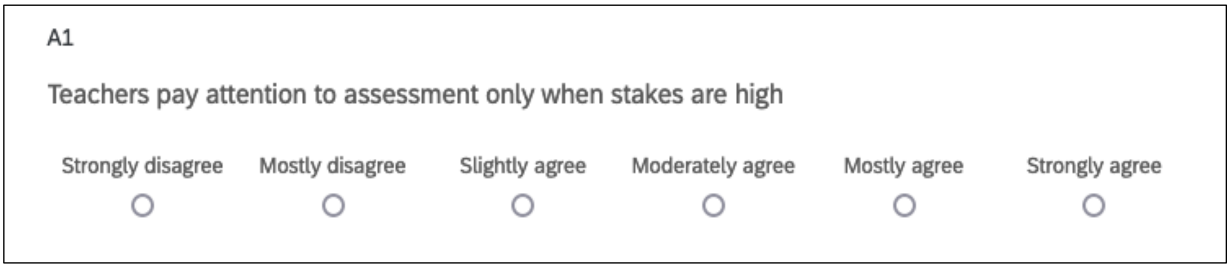
In this case the qualitative survey proved useful on three fronts. It provided demographic data about a large range of music teachers employed across Australia, it enabled an invitation to survey participants as to their willingness and interest in a longer-term commitment to the study providing a list of potential participants for the study. Further, it opened up the space for interrogation through the provision of open-ended questions that formed the basis of further probing during the interviews.

The qualitative survey was delivered through Qualtrics and was used as the initial data gathering instrument with the preliminary section designed to gathering demographic information. This was followed by three distinct sections.

Part A of the qualitative survey was adapted from Brown’s (2006) Teachers’ Conceptions of Assessment (CoA111A) consisting of 50 statements on which teachers self-rated their personal beliefs of assessment (see example in Figure 10) using a six-point Likert scale. The adaptation of the qualitative survey was utilised in this research with the expressed permission of the authors. It was useful in generating a high-level view of music teachers’ perspectives regarding assessment.

Figure 10

Sample Question-Teacher's Conceptions of Assessment



A1

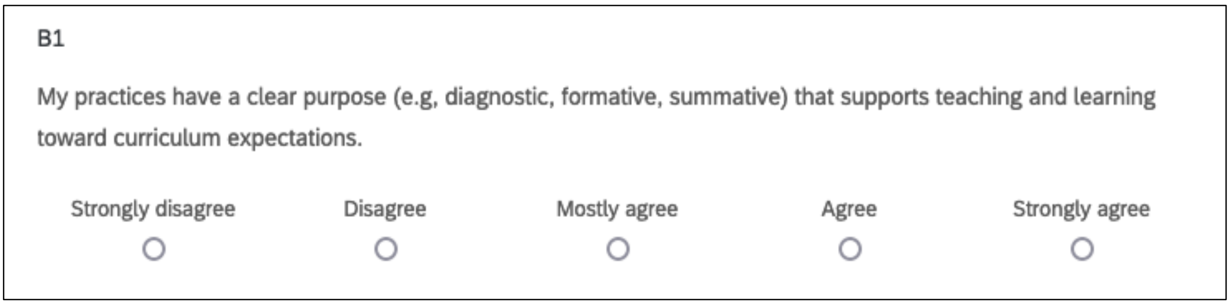
Teachers pay attention to assessment only when stakes are high

Strongly disagree ○
Mostly disagree ○
Slightly agree ○
Moderately agree ○
Mostly agree ○
Strongly agree ○

Part B of the qualitative survey, using a five-point Likert scale, required teachers to respond to a further 28 questions designed to self-assess their professional capabilities and level of skill in relation to assessment practices. An example of this suite of questions is illustrated below in Figure 11.

Figure 11

Sample Question-Self-Assessed Skill Level in Relation to Assessment Practices



B1

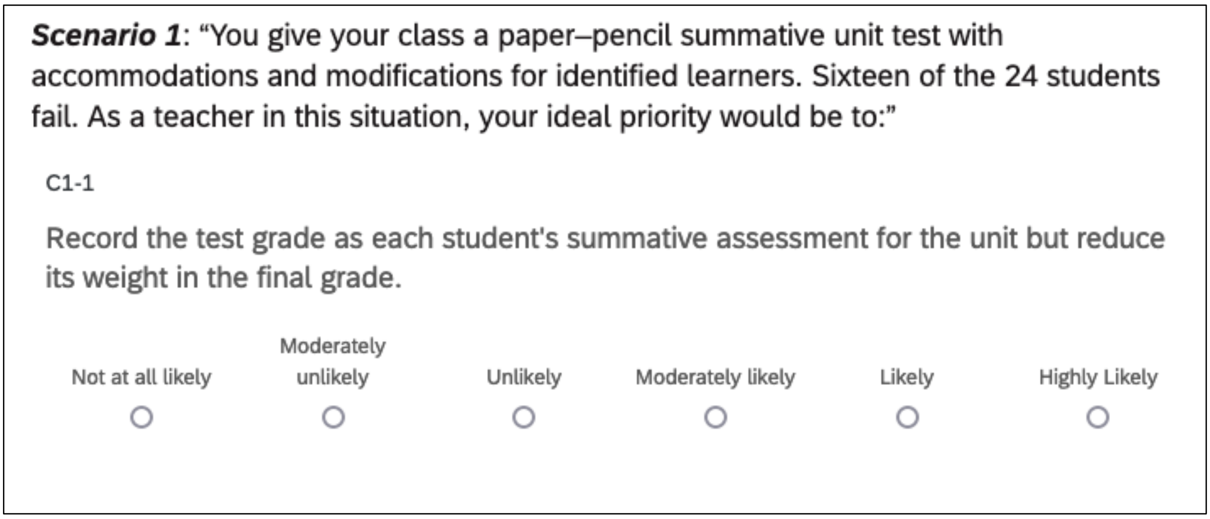
My practices have a clear purpose (e.g, diagnostic, formative, summative) that supports teaching and learning toward curriculum expectations.

Strongly disagree ○
Disagree ○
Mostly agree ○
Agree ○
Strongly agree ○

The more open-ended questions included in Section C of the qualitative survey required teachers to respond to five scenarios focusing on individual assessment identities. Assessments were made against a six-point Likert scale. Scenario One by way of example is shown below as Figure 12.

Figure 12

Sample Question-Scenarios Focusing on Individual Assessment Identities



Scenario 1: "You give your class a paper–pencil summative unit test with accommodations and modifications for identified learners. Sixteen of the 24 students fail. As a teacher in this situation, your ideal priority would be to:"

C1-1

Record the test grade as each student's summative assessment for the unit but reduce its weight in the final grade.

Not at all likely	Moderately unlikely	Unlikely	Moderately likely	Likely	Highly Likely
○	○	○	○	○	○

Both parts B and C were drawn from DeLuca et al.'s, (2016) Approaches to Classroom Assessment Inventory and both were used with permission of the authors. A complete copy of the qualitative survey is attached as Appendix 1.

The initial data generated through the qualitative survey was analysed through Qualtrics to portray (i) demographic data; (2) the high-level thinking of the participants as a basis for generating key questions for Stage 2 - the semi-structured interviews and (3) a list of participants who were willing to commit to the next longer-term stage of concurrent data collection and analysis through a series of interviews over a 12-to-18-month period. Moreover, the demographic data ensured participant selection that represented teachers with a variety of music teaching backgrounds, including length of teaching experience, qualifications, state-based jurisdictions, age, and gender. The demographic data also ensured that interview participants represented rural, urban, metropolitan, single gender and co-educational settings as well as government, independent and religious based schools.

The key themes that emerged through the analysis of qualitative survey data will be analysed in Chapter 5.

4.3.2 Individual Semi-Structured Interviews (N=8).

As one of the key intentions or purposes of this research was to develop multiple understandings of classroom music teachers' beliefs, attitudes, self-efficacy and perspectives on using data generated from formative assessment of music literacy, it was imperative that perspectives being sought were freely and openly given by participants in their own words; determining that of the three main typologies for interviews (Creswell, 2012; Merriam, 2009; Punch, 1998; Stake, 2010; Yin, 2009), semi-structured interviews would produce the most data-rich responses. Additionally, the use of one-on-one interviews as a data gathering tool in a study aimed at identifying individual perspectives allowed participants to share personal information in greater detail and gave the interviewer greater scope to delve further into participant responses through asking specific questions to draw out deeper information (Creswell, 2012).

The initial stages of the first interviews included unstructured, open-ended conversations about the participant's history and how they came to be a music teacher. The in-depth conversation provided a "way of understanding the complex behaviour of people without imposing any *a priori* categorization which might limit the field of inquiry" (Punch, 1998, p. 178). The first interview established rapport with the participant by allowing them to share their life-history in a relatively unstructured way; participants described their personal histories in becoming a music teacher. The flexibility afforded by this form of interview allowed the researcher to start building an understanding of each participant, focused on the following themes: What motivates them in the classroom? Why they became a teacher? What they value in education? What frustrates them in the classroom? Who inspired them at school/university? How they describe themselves professionally?

Research sub-questions

In the second half of the interview, a more semi-structured approach was introduced to understand the perspectives of each teacher related to the use of data in their classrooms. These discussions were shaped by the questions that underpin perspective studies – the research sub questions namely:

1. What are the aims of music teachers when assessing music? What are their aims for assessing music literacy and engaging with the formative data they generate? What reasons do they give for these assessment aims?

2. What strategies do music teachers use to achieve their aims in relation to the assessment of music and using formative data from music literacy assessments? What reasons do they give for using those strategies?

3. What significance do music teachers say they attach to their aims or intentions and their strategies and what reasons can they give for this?

4. What outcomes do music teachers expect from pursuing their aims or intentions? and what reasons can they give for this?

5. Are there any inhibiting factors that prevent teachers from actively using formative assessment data?

6. To what extent, if any, does professional learning have? What impact would individually designed professional learning have on music education praxis?

The researcher prompted deeper thinking throughout the interviews with informal probing questions that included those about experience, behaviour, opinion, belief, feelings, knowledge and those relating to demographic/background (Patton, 1990). The following figure sets out prompts and probing questions that complemented the research sub questions but were designed to "engage participants in conversations across as wide a range of areas as possible to yield data that would facilitate the development of theory regarding their perspectives" (O'Donoghue, 2019, p. 40) and in turn, develop an understanding of the participants' perspectives on assessment in music (see Figure 13).

Figure 13

Probing questions to complement the research sub-questions.

	Unstructured conversation • Tell me about how you came to be a music teacher • Did other members of your family play an instrument? • Was your music learning at school? • What did you want to do when you grew up?
1.	**What were your experiences of being assessed in music?** • In what ways did you get assessed in music? • How was this different between instrumental music and classroom? • Emotionally, what sort of experiences were they? • What were the aims of the assessments?
2.	**What have your personal experiences of music assessment and the assessment process been as a teacher?** • In your opinion, are there things that get in the way of assessing • What do you think are the essential skills teachers need to assess students in music? • How confident are you when assessing students?
3.	**What are your intentions or aims when you assess students?** • Do you conduct both formative and summative assessment? • In what ways do you use data from assessments? What for?
4.	**What are your intentions as a music teacher towards professional learning about assessment?** • Why are skills in assessment important? • What types of training in assessment have you undertaken or received? • What types of assessment professional learning do you think would be valuable? • In your opinion, what motivates teachers to participate in professional learning activities?

5.	**What strategies do you use to achieve your assessment aims?**
6.	**What are your personal perspectives on using data as a pedagogical tool in the music classroom?** • In your opinion, what impacts would using data have? • What do you believe are the factors that encourage or discourage you from using data in the music classroom?

During the first interviews, participants continually moved away from responding to questions about music literacy and constantly reverted to only respond and discuss performance tasks as the basis of their assessment work. This led to the addition of a further prompt question which was designed to keep the data collection on track. The additional question was added during the first interview to garner the specific data relating to assessment of music literacy: What are your perspectives on teaching and assessing music literacy? This is presented in Figure 14 below and includes prompt questions that were also useful in staying focussed on the purposes of the research.

Figure 14

Additional Interview Prompt

7.	**What are your perspectives on teaching and assessing music literacy?** (Written notation, terms, signs and symbols. Not aural literacy) • Do you have the same aims and intentions for assessing literacy? • In your opinion, would there be any benefit for engaging with data from music literacy tests? • In what ways do you gather and report on literacy skills

While always remaining cognisant of the key research questions, at the level of practice and reflection, the accretion of rich data from the first interview was cross-checked with qualitative survey responses and then used to develop probing questions for the second interview that were designed to clarify and refine the researcher's interpretation of data (Stake, 2010). The second interview assisted in providing saturation of themes.

The second interviews were undertaken using "topical conversation with probing" (Stake, 2010, p. 91) where the pre-planned research sub-questions were adopted to clarify responses from the first round of interviews and enabled the researcher to encourage participants to a more focused examination of previous responses in an attempt to clarify meaning. This was an important process as the level of discrepancy between qualitative survey responses and first interviews was significant.

Verbatim transcription of each interview was entirely conducted by the researcher to both protect the identity of participants and to internalise the responses. Each participant was given a copy of the transcript for verification, modification and addition of further responses if required. Participants were invited to make changes and clarify comments if deemed necessary. As a final step in ensuring that interpretations were consistent, each participant was informed that further follow-up interviews or conversations for clarity may be conducted over a period of 12 months.

4.3.3 Data Collection Limitations.

Although one-on-one interviews are identified as one of the most time-consuming approaches to data collection, the researcher considered that the quality of data collected through this method outweighed the limitation. Additional limitations include the risk that information becomes filtered by the interviewer's beliefs and the possibility of interviewer bias, the desire of a participant to provide the perspective the interviewee wants the researcher to hear, the respondent's memories, self-deception and even dishonesty (Creswell, 2012; Punch, 1998). Limitations associated with the emic nature of the research have previously been mentioned (see Sections 4.1.2 & 4.1.5). In acknowledging that these limitations may diminish the quality of response, processes for mitigation included careful planning, research design and triangulation of data.

4.4 Data Analysis

Introduction.

As previously discussed, the researcher's role in this interpretive case study was that of the insider, serving both as instrument for gathering data and as the tool for analysing data, attempting to structure and understand the data collected. The stages of data analysis in this study of teacher perspectives on using data in classroom music education is displayed in Figure 15 and expanded on in the following sections.

According to Corbin and Strauss (2008), "analysis is a process of examining something in order to find out what it is and how it works" (p. 46), whereby the role of the researcher is to break the data apart into its component parts for the purpose of "identifying their **properties** and **dimensions**" (p. 46) and then to make inferences about the phenomenon as a whole. Analysis in an inductive qualitative study relies on the researcher's interpretation of events and experiences that may have multiple meanings and in which both researcher and participant "bring to the investigation biases, beliefs, and assumptions" (p. 80). Creswell (2012) discusses analysis in qualitative studies as ways in which the researcher makes sense of data gathered so that answers to research questions can be formed. To ensure that data are collected and analysed in a systematic and ethical manner, careful planning, preparation and the use of appropriately selected analytical tools assist with delimitation. Immediate analysis of data followed the collection of data to enable the development of research and probing questions for clarification purposes for the first interview stage. The flexibility afforded through the employment of the interpretivist paradigm permitted the researcher to manipulate questions for clarifying, or further probing to ensure that a rich description of the phenomenon was gathered (Creswell, 2012; Merriam, 2009; Stake, 2010).

Figure 15

Data Analysis Stages

Data Analysis Stages	Case Study
Initial demographic information survey	➢ Survey information for maximum variation selection purposes
Stage 1	
Data collection	➢ Survey
Data display	➢ Data for participant selection
Deliberations on data	➢ Identifying high level thinking of teachers
Analysis and generation of further research questions	➢ Further research question for the interview phase of data collection
Stage 2	
Data collection	➢ First interview
Data display	➢ Transcribing interviews
Deliberations on data	➢ Multiple readings of data ➢ Identifying potential themes
Coding of data	➢ Open coding - descriptive ➢ Inferential coding
Analysis and generation of themes	➢ Use of iterative process ➢ Analysis of individual cases ➢ Abstraction of themes
Stage 3	
Data collection	➢ Second interview
Data display	➢ Transcribing interviews
Deliberations on data	➢ Multiple readings of data ➢ Potential saturation of themes
Coding of data	➢ Open coding - descriptive ➢ Inferential coding
Analysis and generation of themes	➢ Use of iterative process ➢ Confirmation/saturation of themes
Interpretation and conclusions	➢ Presentation and discussion of themes ➢ Generation of new findings and recommendations

By way of summary, Figure 15 demonstrates that the analysis of qualitative survey responses served multiple roles. The qualitative survey provided demographic data, a snapshot of the high-level thinking within teacher perspectives from a larger sample group, as well as eliciting interest from those who wished to join the longer-term research project. In contrast, initial interview data opened up the individual's fundamental beliefs, values, histories and positioning that were used to guide further interviews and probe participants' perspectives and ideologies regarding the key research question and sub-questions.

4.4.1 Management of Data.

Miles and Huberman (1994) claim that "[h]ow a qualitative study is managed from Day 1 strongly influences the kinds of analysis that can be done, and how easily" it can be achieved (p. 43). They highlight that without a careful data management plan, data may be "miscoded, mislabelled, mislinked, and mislaid" (p. 45), a sentiment echoed by Merriam (1998) that "some system of organizing and managing data needs to be devised early" (p. 164). Stake (2010) supports the assertion that data management is of crucial importance and describes coding as a powerful method for sorting "all data sets according to topics, themes, and issues" (p. 151) further claiming that "[c]oding is for interpretation and storage more than for organizing the final report" (p. 151). Miles and Huberman also link the management of data to confirmability by claiming that a clear management plan may permit a study to be "verified by someone else or be replicated" (p. 45). Although this is an interpretive study, the researcher deemed that "identifying conceptual categories implicit or explicit in the data" (Punch, 1998, p. 211) would be best done through the coding approach shaped by the key principles of analysis implicit in grounded theory (Corbin & Strauss, 2008).

As "qualitative data are typically so voluminous, bulky and dispersed" (Punch, 1998, p. 203), the researcher used the NVivo qualitative data analysis software package to assist with the management of data. Interview audio recordings were transcribed and filed for use in the software package. Data was also organised according to the collection method used to gather them, with a principal folder for each technique and a file naming system. Figure 16 shows the digital data management scheme including pagination.

Figure 16

Digital Data Management Scheme

Principal Folder	Sub-folder	File name
A Survey	A1 Original responses to survey	Q[participant identifier] Q[participant identifier], etc.
	A2 Original responses to survey with coding	Q[participant identifier]code Q[participant identifier]code, etc.
B First interview	B1 Original transcript of interview	Int-1[participant identifier] Int-1[participant identifier], etc.
	B2 Transcript of interview with coding	Int-1[participant identifier]code Int-1[participant identifier]code, etc.
C Second interview	C1 Original transcript of interview	Int-2[participant identifier] Int-2[participant identifier], etc.
	C2 Transcript of interview with coding	Int-2[participant identifier]code Int-2[participant identifier]code, etc.

4.4.2 Methods of Data Analysis.

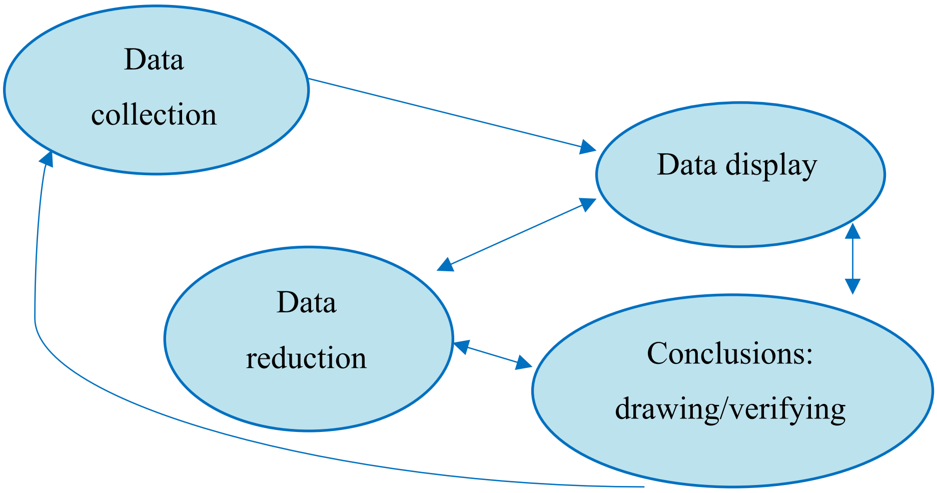
The recursive and dynamic nature of data collection and analysis central to an interpretive perspectives study allowed the researcher to refine or verify data already gathered and therefore, examine the complex nature of the phenomenon in more depth. The nature of inductive qualitative research required the data to be collected and analysed simultaneously (Merriam, 1998) and analysed systematically and continuously so as to be verified (Krueger & Casey, 2009; Miles et al., 2014). In line with the model established by Miles and Huberman (1994) the researcher used three concurrent flows of activity: data reduction; data display; and conclusion drawing/verification" (p. 10) as shown in Figure 17.

4.4.3 Data Reduction.

Miles and Huberman (1994) describe data reduction as "the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes or transcriptions" (p. 10). Punch (1998) supplements this description by adding that data reduction "occurs continually throughout the analysis. It is not something separate from the analysis, it is part of the analysis" (p. 203). However, Punch (1998) highlights the importance of not losing information by stripping the data from their context through the reduction process.

Figure 17

Components of Data Analysis: Interactive Model



(Miles & Huberman, 1994, p. 12)

Data reduction was undertaken continually during the analysis by the process of selecting, simplifying and summarising interview transcripts (Miles & Huberman, 1994) and coding and memoing with analysis occurring simultaneously with data collection (Lincoln & Guba, 1985; Miles et al., 2014).

Throughout, the researcher annotated and summarised data using the coding outlined in Figure 18, identifying key themes in relation to each of the guiding research sub-questions. Punch (1998) describes two dominant types of codes: descriptive and inferential. He elaborates on this by stating that "[f]irst-level coding mainly uses these descriptive, low-inference codes" (p. 205) which can be beneficial for summarising data and that second-level coding can then be used for identifying pattern codes which are more inferential. These later codes are said to "be more interpretive, requiring some degree of inference beyond the data" (p. 205). Both descriptive codes and inferential codes were developed as themes emerge and were coded with the use of the NVivo qualitative data analysis software. An example of initial coding and data reduction is listed in Figure 18. What appears in the table reflects the researchers initial coding attempts by taking a direct quotation from the interview data and allocating a code to the quote; a code which may or may not be relegated to another quote at some point in the analysis.

Figure 18

Example of Data Reduction

Participant	Interview transcripts	Coding
P5 Helen	That's the thing about music there is so much of it that is about the creativity and the person and that needs to be celebrated as well and that is why I am a bit reluctant to assess that in some way because on some levels it doesn't matter whether it is right or wrong it is about their experiences and expression, but I can see that there are times when things need to be right or wrong in order for them to become better at doing it. But I always hate to crush somebodies' beautiful little piece of creativity by saying, you probably needed to put a few more bars in there or something.	purpose of music education? - creativity attitude to assessment acceptance that some assessment leads to improvement impact of assessment on creativity *Question was about music literacy. Does this indicate reluctance to engage with music literacy?*
P2 Bronwyn	My personal opinion. I would prefer not to assess in music. I don't like assessing children because I find they sometimes get upset if they do badly. I find it can really affect them especially with music because it is so exposing. It's not like English or maths where you are by yourself and no one can see what you are doing, but in music, everyone can see where you are at	attitude to assessment personal impact on teacher negative impact of assessment moved away from music literacy to performance

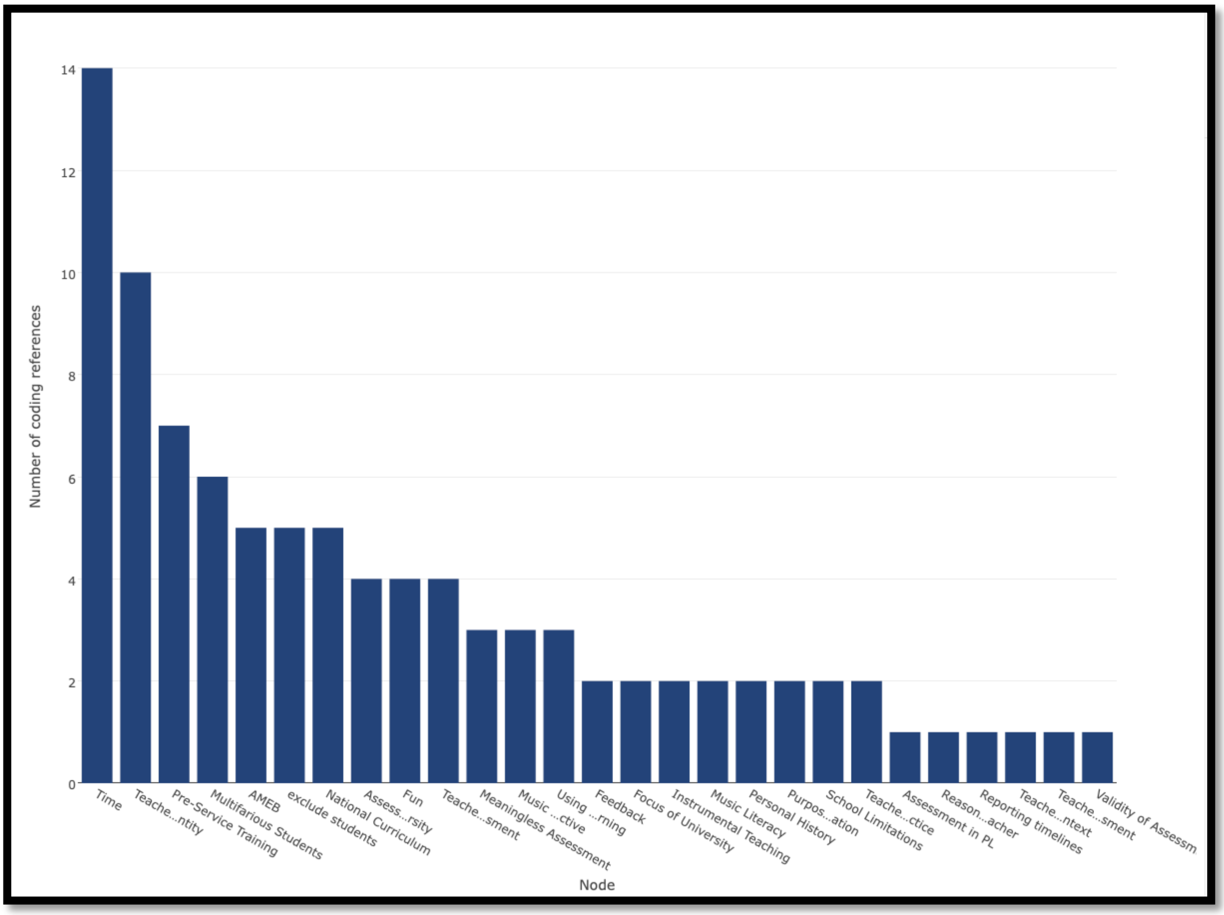
	and some kids can make fun of you or, you know, they are exposed.	
P4 Harriet	Often students don’t get why they are doing the tests, they do it because they have to. They don’t see any value in it in any particular way, it’s just more for the school really just to gain funding or status within society to show that they are the top or wherever they are and that they are meeting the requirements of education bodies and that they have improved. It’s just a number crunching exercise. But in terms of value for the individual student, no I don’t see much it’s just really about the number crunchers at the end of the day. They get a lot more out of it than the individual student.	student value of assessment sceptical? Teacher attitude to assessment purpose teacher accountability value of assessment for students **classroom assessment environment for students?**

4.4.4 Data Display.

To ensure data were organised in a way that permitted the drawing of conclusions, charts, tables and graphs have been used to summarise data gathered and display the data so that rich description of the phenomenon can be extracted (Miles & Huberman, 1994). NVivo qualitative data analysis software was used to organise and display interview data. Figure 19 provides an example of the word frequency derived from Margaret’s (P3) initial interview.

Figure 19

Example of Word Frequency Data Display



Analysis of data used both descriptive and inferential coding to identify themes from the data. This level of coding permitted the researcher to look more closely at the perspectives and draw out greater meaning from which sub-categories could be inferred from the guiding sub-questions (Saldana, 2016). Figure 18 illustrates an example of the data reduction process, while Figure 20, below, represents an example of the complex coding process that took place throughout the duration of the data collection and analysis phases.

Figure 20

Example of Descriptive and Inferential Coding

Participant	Transcript excerpt	Extraction	Descriptive coding	Inferential Coding
P4 Harriet	I guess the way that things are structured within the high school setting is quite different to the requirements of the AMEB, the expectations to a certain degree are different. So I guess you keep that in the back of your mind but because of the way that the syllabus is structured within the high school setting obviously you have to meet the requirements of that more so than the AMEB situation but you are keeping that in mind because of students that are heading toward university and the expectations around that at a university level.	syllabus is structured within the high school setting obviously you have to meet the requirements of that more so than the AMEB situation but you are keeping that in mind because of students that are heading toward university	aware of conflicting requirements takes focus to performance for university entrance auditions	less focus is given to literacy in school as university entrance relies on performance audition
P7 Craig	I think you really have to know what you are doing when			

	you create a test. At first you can’t know what you are doing but if you are aiming for a test that actually gives you good feedback. It needs to be targeted and give you the ability to see the students that you have and spread them out in a bilateral way, that kind of a test would be a very precious thing and it takes a lot of expertise and a lot of evaluation.	At first you can’t know what you are doing It needs to be targeted that kind of a test would be a very precious thing and it takes a lot of expertise and a lot of evaluation.	low-level knowledge and skill-confidence Assessment design and implementation beliefs about assessment knowledge and skill-confidence	teacher assessment identity impacted due to limited training in assessment Recognises the importance but it is not a part of the assessment practice

This process continued from the outset of the first interview until the last verification stage from each of the participants. These tables were dynamic and evolved with new understandings that were elicited from the data.

4.4.5 Drawing conclusions

The final stage of the data analysis enabled the articulation of themes and the drawing conclusions as a result of the study. Traditionally the drawing of conclusions may lead to making generalisations through reporting the findings of the study. However, this was not the purpose of this study. The drawing of conclusions reflected the researcher’s responsibility to articulate the deep insights that were generated through the analysis of the case study regarding teachers’ perspectives on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. Typically, these themes are expressed as theoretical propositions built on the concepts that were implicit in the interview data and generated through analysis within each participants transcript and across all of participants world views to generate depth and breadth across the data. Theoretical propositions of this type incorporate beliefs, meanings, and understanding (O'Donoghue, 2019) and are useful in explaining the phenomenon of how teachers make sense of their experiences in the assessment process.

Music teacher perspectives on engaging with data are presented in the next chapter as a set of theoretical propositions. The analysis of participant interviews and the theoretical propositions that followed exposed a complex web of dilemmas that directly impact on teachers' abilities to carry out their assessment responsibilities and their capacity to engage with the data generated by music literacy assessments. A comprehensive portrayal of the web of dilemmas is presented in the next chapter.

In closing this chapter, however, two further components of rigorous research will be addressed including the selection of participants and the ethical dimensions of practice underlining this research.

The next section discusses the selection and characteristics of the research participants.

4.4.6 Participant Selection Process.

The selection of participants to contribute to a case study is a process that varies in line with the purposes of a research study. As outlined earlier as this case study is bounded by time, place and number of participants, the complexity of selection is somewhat reduced. As the research question and aims of the study are the principal factors in determining participants, purposeful selection based on the initial demographic survey was pursued as the researcher who "want[ed] to discover, understand, and gain insight and therefore…select[ed] a sample from which the most can be learned" (Merriam, 1998, p. 61). A qualitative survey was adopted to facilitate the collection of demographic data and from this, the selection of participants.

The survey was distributed to 220 music teachers across Australia and 86 responses were received (N=86 surveys).

The use of a demographic information survey ensured that teachers who were identified as "information-rich cases" (Merriam, 1998, p. 62) were invited to participate. The research subjects needed to come from a variety of educational pathways that led to their current roles, providing a good cross section of the general population of music educators. Additionally, the demographic information ensured that a maximum variation selection process identified music teachers “who represent the widest possible range of the characteristics of interest for the study” (Merriam, 1998, p. 63). From this initial qualitative survey, 8 participants were invited to contribute to the second component of the research, the interviews. The 8 participants all indicated their willingness to engage in up to 18 months of interviews and follow up discussions (N=8 semi-structured interview participants).

Participant selection from the demographic data was shaped by six criteria for inclusion:

1. currently teaching a classroom (home school) music curriculum at the time of the research
2. represented a range of qualifications and a variety teacher preparation course
3. their inclusion achieved representative gender balance
4. their inclusion represented a variety of school types
5. their inclusion provided a range of experience in years as a practising teacher
6. was willing to participate in interviews over a period of 12 -18 months.

The recruitment process included a participant information letter and an informed consent form outlining the aims of the research, the level of involvement and commitment required of the participants and ethical considerations. This was in alignment with the institutional policy requiring strict compliance with Ethical Research Standards

The group of participants who were invited and agreed to participate in the interviews is listed below in Figure 21.

Figure 21

Participant Profile

No	Participant	Gender	Age	Years of experience in classroom	School Type	Position
P1.	Kelly	Female	40-49	3	Co-educational Urban Pre-K to 12	Teacher classroom & instrumental
P2.	Bronwyn	Female	20-29	6	Co-educational Regional Pre-K to 12	Teacher
P3.	Margaret	Female	50-59	28	Single gender independent boys' school	Teacher classroom & instrumental
P4.	Harriet	Female	30-39	11	Single gender independent Girls School	Teacher
P5.	Helen	Female	50-59	> 20	Distance Education/Home School	School Leader
P6.	Luke	Male	40-49	20	Single gender independent boys' school	Head of Faculty
P7.	Craig	Male	50-59	> 20	Co-educational Urban Secondary School 7-12	Head of Faculty
P8.	Frances	Female	40-49	< 2	Co-educational Suburban Pre-K to 12	Teacher classroom & instrumental

The group reflects diversity across gender, age, positions held, years of experience, school context and school population. There was some diversity regarding educational qualifications, but this was limited by minimal initial teacher education pathways available in the field of Music Education. Nevertheless, the extent of the diversity was in keeping with a perspective study and highlights the importance of gathering the widest range of perspectives possible within the constraints of a bounded case study.

Prior to participant selection, a set of mandatory requirements were established in accordance with The National Statement on Ethical Conduct in Human Research (2007.)

4.5 Ethical Implications

4.5.1 Verification.

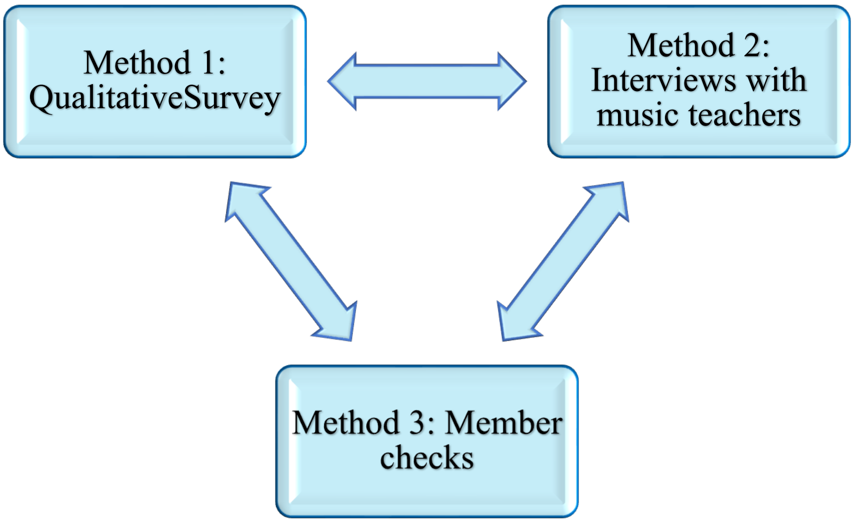
Ary et al., (2010) describe four criteria for verifying qualitative research: credibility, transferability, dependability and confirmability. The researcher employed strategies to address each criterion.

4.5.2 Credibility.

In ensuring that inferences from data were consistent and that credibility was established, the researcher used multiple sources of data to develop structural corroboration through triangulation (see Figure 22). As Ary et al., (2010) claim, a "combination of data sources, such as interviews, observations, and relevant documents, and the use of different methods increase the likelihood that the phenomenon under study is being understood from various points of view" (p. 499). Additionally, the researcher enhanced data verification through referential adequacy via conducting member checks; seeking participant feedback on the accuracy, meaning and interpretation of data collected. Moreover, the researcher heightened credibility through metacognitively monitoring her bias.

Figure 22

Methodological Triangulation


Method 1: QualitativeSurvey
Method 2: Interviews with music teachers
Method 3: Member checks

(Adapted from: Denscombe, 2010, p. 351)

4.5.3 Transferability.

Although transferability is not one of the researcher's primary concerns in this study, findings from this study may influence teacher preparation courses and professional learning programmes in the future through providing "detailed, thick descriptions of the context so that potential users can make the necessary comparisons and judgements about similarities and hence transferability" (Ary et al., 2010, p. 501).

To increase transferability in this study, maximum variation participant selection ensured a variety of teacher preparation courses and years of experience were represented.

4.5.4 Trustworthiness.

Further underpinning the verification process, the researcher ensured that the research was trustworthy and credible. Participants were involved in the verification process checking data and emerging themes. Participants were provided a copy of interview transcripts and accepted these as a true reflection of their positions and opinions (Lincoln & Guba, 1985). Continual checking was undertaken by the researcher as themes and sub-theme formed.

4.5.5 Ethical Considerations.

The study has been subjected to rigorous ethical scrutiny through the Australian Catholic University's ethics review process to ensure that the study is ethically sound. In accordance with the values and principles of ethical conduct, research merit and integrity, justice, beneficence and respect, as set out in The National Statement on Ethical Conduct in Human Research (2007; updated May 2015) (The National Statement), the researcher further addressed methods to safeguard participants by deidentifying all data.

4.5.6 Research Merit and Integrity.

The potential benefits of this research may be far reaching and may impact on future teacher preparation courses or the way in which professional development programmes are structured and implemented. The benefit therefore becomes dualistic; improvements in pedagogy through a greater understanding of teacher perspectives and needs relating to the use of data in music education and subsequently, in student learning outcomes through an alignment of teacher needs and learning requirements. As set out in The National Statement (2007), the research has been carried out "based on a thorough study of the current literature, as well as previous studies" (p. 10) as documented in Chapter 3 and was "designed to ensure that the respect for the participants [were] not compromised by the aims of the research" (p. 10) through careful collection, display and management of data.

The integrity of this study has been assured by adherence to the four ideals set out in The National Statement (2007), as the researcher is committed to:

(a) searching for knowledge and understanding;

(b) following recognised principles of research conduct;

(c) conducting research honestly; and

(d) disseminating and communicating results, whether favourable or

> unfavourable, in ways that permit scrutiny and contribute to public knowledge and understanding (p. 10).

4.5.7 Justice.

In guaranteeing a just study, the researcher carried out data collection procedures in a manner that reduced the burden of time and disruption to participants. This included going to locations of the participants' choice to conduct interviews and to be flexible in allocating times for interviews. Moreover, justice within the study was further promoted by conducting member checks on data; allowing participants to verify that transcripts accurately display the participants meaning. The distribution of research results will be fair and provided to all participants in a form that is useful and within a reasonable amount of time.

4.5.8 Beneficence.

The National Statement (2007) identifies three areas of responsibility for researchers:

> (a) designing the research to minimise the risks of harm or discomfort to participants;
> (b) clarifying for participants the potential benefits and risks of the research; and
> (c) the welfare of the participants in the research context (p. 11).

The welfare of participants was of high priority and the risk of harm was minimised by reminding participants that they may withdraw from the study at any time and that their confidentiality was assured. All data were de-identified through coding during the data analysis stage and participants assigned pseudonyms. The potential benefits of the research were outlined in the participant information letter and were discussed during the interview stage. The likely benefit from this research to the participants and to the wider music education community are higher than the risk to the participants.

4.5.9 Respect.

The National Statement (2007) defines "[r]espect for human beings [as] a recognition of their intrinsic value" (p. 11), elaborating that "[r]espect also requires having due regard for the welfare, beliefs, perceptions, customs and cultural heritage, both individual and collective, of those involved in research" (p. 11). Ethical considerations of utmost significance to this study are: free and voluntary participation, avoidance of harm to participants, protection of privacy and confidentiality. The researcher took steps to ensure the ethical considerations were met in the following ways. These are clearly set out in Figure 23.

Figure 23

Ethical Consideration Procedures

Strategy for Data Gathering	**Ethical Consideration: Procedures for data gathering and reporting**
Survey	• Survey is voluntary • Although these are not anonymous, data will not be shared with a third party • All surveys will be de-identified • Graphical representations will be used to provide transparency of survey results
Interviews	• Interview data will be de-identified and participants assigned pseudonyms • Participation in the research is voluntary and participants may withdraw at any time • Informed consent will be obtained in writing • The purpose of the study will be clearly stated • Teacher perspectives, beliefs and understandings will be documented as accurately as possible • Participants will be informed that interviews will be digitally recorded for transcription purposes and will only be heard by the researcher • Interview transcripts will be member checked for accuracy and meaning
Field Notes	• Field notes will be member checked for accuracy and meaning

4.6 Conclusions

This chapter provided details outlining the methodology used in the study on music teacher perspectives on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. In support of research merit, as outlined in The National Statement, the study was designed and "developed using methods appropriate for achieving the aims of the proposal" (p. 10). First, the justification for electing an interpretivist paradigm for the study was elucidated and the methodological approach to data collection and analysis was identified.

This section was followed by discussion of data collection methods designed to align with the aims of the research and to support the interpretivist paradigm. The use of qualitative surveys, interviews and member checks provide triangulation of data and align with the qualitative methodology by sourcing data from the participants in a naturalistic environment. Next, methods for data management and display were approached and demonstrated in the data management scheme (see Figure 16) and further elucidated by Miles and Huberman's (1994) components of data diagram (see Figure 17). This segment naturally led to discussion of data analysis techniques used, including the adoption of descriptive and inferential coding and data reduction (see Figure 20). In the latter part of this chapter, the participant selection methods were identified. That was followed by a section outlining the processes that were taken to ensure rigorous, ethical and responsible methods were enacted throughout this research study.

From this methodological approach focussing on teachers' perspectives within a bounded case study analysis came a series of propositions that constitute the findings of the study. These will be dealt with in the next chapters and are articulated as dilemmas that the teachers faced as they considered the adoption of formative assessment in the domain of music education in the first year of secondary schooling.

Chapter 5: Preliminary Analysis and Findings

Introduction

This chapter presents the perspectives of participant music teachers regarding their use of data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. The findings reported in this chapter represent the analysis of the data elicited from both the initial qualitative survey questions and the two rounds of semi-structured interviews as outlined in Chapter 4, the methodology.

It can be recalled that the research question was:

> *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?*

The research sub-questions, in keeping with a perspectives study (O'Donoghue, 2019), include:

> *1. What are the aims of music teachers when assessing music? What are their aims for assessing music literacy and engaging with the formative data they generate? What reasons do they give for these assessment aims?*
>
> *2. What strategies do music teachers use to achieve their aims in relation to the assessment of music and using formative data from music literacy assessments? What reasons do they give for using those strategies?*
>
> *3. What significance do music teachers say they attach to their aims or intentions and their strategies and what reasons can they give for this?*
>
> *4. What outcomes do music teachers expect from pursuing their aims or intentions? And what reasons can they give for this?*

5. Are there any inhibiting factors that prevent teachers from actively using formative assessment data?

6. To what extent, if any, does professional learning have? What influence would individually designed professional learning have on music education praxis?

As stated in the previous chapter, the first round of data collection was generated through a qualitative survey distributed to all participants. This was followed by a second stage of in-depth interviews.

The analysis of the survey data is useful to report both in terms of (i) the demographic data that was useful for participant selection for the interview rounds and (ii) in presenting a broad overview of participant thinking regarding the key research question which proved useful in shaping the deeper questions for the interviews. As noted, the number of participants who took part in the qualitative survey was 86. It should be noted at the outset of this chapter on data analysis that the complexities underpinning teachers' thinking regarding assessment are not evident in the survey data.

However, it is useful for both the purposes of transparency and by way of introduction to the data analysis chapters to present a snapshot of some key messages that came through the initial survey. These include the following:

> 86 % of classroom music teachers acknowledge the importance of assessment for the purposes of improving student learning. (A45)
> 94% believe assessment data can identify student learning needs. (A18)
> 94% of teachers identified opportunities for teacher learning regarding assessment and the use of assessment data in music education. (B14)
> 92% of participants identified learning areas in their schools that are engaging with data and areas where data are being used to identify modifications and adjustments to learning and teaching approaches (A33).

However, in contrast,

> 51% of respondents also claimed that assessment forces them to teach in a way against their beliefs. (A16)
> 75% of participants stated that assessment is objective. (A13)

> 97% of participants identified external assessment tools such as NAPLAN, as providing formative information that teachers were using to guide pedagogy and, in some cases, professional learning that schools would then be implementing to assist teachers in delivering learning requirements. (A6)

The open-ended questions provided some diversified examples of high-level thinking from the teachers who participated in the qualitative survey. The varied responses clearly indicated that each teacher was a willing participant in the use of formative assessment, adopting varying methods of assessment and high levels of engagement with data. Interestingly, 83% of all surveyed teachers and all eight interview participants claimed to "use a variety of strategies to analyse tests and assessment results at both student and class level" (B16) and further, that 94% of survey participants claimed to "regularly integrate various forms of formative and diagnostic assessment" (B23) in their instruction. The *big ideas* that were evident in the survey suggest a healthy regard for the use of data through formative assessment in music education.

This overall positive attitude to engaging with formative assessment data and a clear understanding of the pedagogical benefits of using assessment data for the purposes of improved outcomes was also evident in the early interview stages, as demonstrated in this statement from Luke:

> I'd love to do it if I had the time and ability to sit there and digest the information. If I was looking at purely a music literacy one, or an aural test and being able to look at it and go, 'okay what are these results telling us about this particular cohort of students, about their backgrounds? Can we delve a little further into the marks they are achieving for this particular question or for this particular section? Can we look at that and how that informs our practice?'. That would be amazing. That is almost the utopian space of being a teacher, to have the time to do that. (P6.1118:6)

However, perspectives that teachers shared in the second component of data collection, the semi-structured interviews, revealed far more complex thinking, emotions, and differing attitudes towards the use of assessment data in music education. Surprisingly, and ironically, despite their earlier acknowledgement of the importance of assessment data throughout the qualitative survey data, as the interviews unfolded, participants identified a common reluctance to implement this form of data use in the process of music education. The following section brings to light a sample of the discrepancy that occurred over time between survey and interview data. This sense of contradiction that appeared early in the data collection and the data analysis phases, transformed into a significant component of the analysis and the thesis findings as will be illustrated below.

Data Discrepancy: The Role of Survey Data in this Study

The level of incongruence evident between ideological focused responses gathered from the qualitative survey responses and the deeper discussion implicit in the interview responses about using data to inform differentiation and guide the teaching process was noteworthy. For example, the multitude of affirmative responses to the two survey questions: B10. *I differentiate my assessment practices to meet the specific educational needs of all students*, and B13. *For each student, I use multiple, well-designed assessments to measure learning so that I am confident in the grades I assign*, were not consistent with the interview data.

By way of example, these two questions as presented by the interview participants, as a sub-group of the survey population, were measured on a five-point Likert Scale ranging from strongly disagree to strongly agree. Focused data are displayed in Tables 1 and 2 below, show the responses of interview participants only.

Table 1

Participant Response Distribution 1

Question B10	**I differentiate my assessment practices to meet the specific educational needs of all students**				
Response	Strongly disagree	Disagree	Mostly agree	Agree	Strongly agree
No. of responses	0	0	3	2	3

Despite responses to question B10 indicating all eight interview participants differentiate assessment practices to meet the educational needs of all students, in contrast, they indicated a number of conflicting situations when elaborating on this during the interview stage. On reflection, the teachers indicated that whilst they were theoretically supportive of differentiated learning as they indicated in the survey, in practice they opposed data-based assessment that required ranking students on the same assessment task, and the also avoided using assessment tasks that might disadvantage students who had less experience in music.

A similar level of ambiguity can be seen in the survey responses of the selected participant group to question B13, as displayed in Table 2.

Table 2

Participant Response Distribution 2

Question B13	**For each student I use multiple, well-designed assessments to measure learning so that I am confident in the grades I assign**				
Response	Strongly disagree	Disagree	Mostly agree	Agree	Strongly agree
No. of responses	0	1	2	4	1

During the interview process, teachers validated that theoretically, they would like to be able to develop multiple, well-designed assessments within their assessment processes as expressed in the survey data. However, all but one teacher of the group of eight, identified through the interviews that they neither had the skill and understanding to develop these tools nor the time to develop, implement or analyse the data they generated. This theme of ambiguity was to become very significant as the interviews unfolded.

It has been acknowledged earlier that the qualitative survey data was not designed to be a reliable source of data to investigate the key question. However, it is of significance that the interplay of the survey data with the interview conversations, early in the study, revealed the complexities faced by teachers regarding assessment, reflecting a reluctance in teachers to adopt particular forms of assessment in music education.

This was the first indication of ambiguity and contradiction that became more evident as the interview data was collected. One participant, Bronwyn, exemplified this contradiction by explaining that her school expects teachers to be interrogating assessment data and using information to improve pedagogy. She claimed to have responded to survey questions in the manner her school would expect, but she confessed during in-depth interviews that this is not what is happening. Kelly, a teacher who had moved from being an instrumental music teacher to the role of classroom music teacher, made a similar comment. She indicated that she knew she was supposed to be looking at assessment data but did not have time and did not know what to look for and was unwilling to let her school know that she lacked the understanding to engage with data. She added:

> I think sometimes there is a lot that is assumed about teachers that have been teaching for a long time and there's possibly a certain pressure as well on not to divulge your weaknesses…I think sometimes in my school setting it's tough and, you know, there's a culture of *you must keep up* and so showing weakness is not a good thing. (P1.1018:6)

The contradictions, dilemmas and frustrations reflected in these few introductory examples shape the discourse for the analysis of the qualitative data. The insights gained during the interview stage led to the generation of a set of themes that captured the multiple levels of ambiguity reported by the teachers when the research began, to deeply probe their actual practices of assessment in music education in the first year of secondary education. As a result, the data are presented as a set of dilemmas in the remaining part of this chapter. Each of the dilemmas presents the conflicting perspectives of teachers and is outlined below. On completion of this analysis by way of dilemmas for teachers, a discussion chapter will follow.

Prior to progressing into the next section, it is important to frame the discussion with an explanation of the concept of dilemma and articulate why it is useful in this context. The concept was not pre-empted at the level of design but has bubbled up through the data as the inner assessment conflicts that teachers experienced were made overt to the listening researcher.

In describing the theory behind dilemma analysis, Winter's (1982) seminal work identified sociological conceptions of contradiction as a basis for establishing a dilemma. He identified dilemmas as an individual conceptualisation that is systematically indecisive or disjointed and a motive for actions that are mixed and purposes that are contradictory as underlying influences that lead to ambiguities, judgements and problems that form the dilemma. Further, Cuban, (1991) provides a definition for dilemma which is suitable for the current research, in that "dilemmas are conflict-filled situations that require choices because of competing, highly prized values that cannot be fully satisfied" (p. 6). The following section examines the dilemmas that evolved throughout the study and in particular were deeply embedded within the interview data shaped by the research sub-questions outlined in Chapter 4.

A Web of Dilemmas and Conflicts

Music teacher perspectives on engaging with data are presented here as series of dilemmas identified through inferential analysis of survey responses and individual, semi-structured interviews with participants. The semi-structured interview process generated six key dilemmas expressed by classroom music teachers. The analysis of participant interviews exposed a complex web of dilemmas that directly impact on teachers' abilities to carry out their assessment responsibilities and their capacity to engage with the data generated by music literacy assessments, subsequently inhibiting their use of data to achieve improved outcomes for music students.

Deep Dive into Dilemmas

Delving deeper into the interview data and probing across the participants' perspectives reported in the data, six key dilemmas can be identified and will be articulated forthwith. The six dilemmas can be further classified into two macro categories namely, (i) Professional Expectation Dilemmas and (ii) Personal Belief Dilemmas. This higher-level analysis is listed thus, but is in fact, far more complex and interrelated than each of the dilemmas alone reveals. Each of the dilemmas will be analysed in turn. Then, in the conclusion of the chapter, a fulsome and complex representation of the interplay of the dilemmas will be portrayed and discussed and in doing so the confluence of professional expectations, personal beliefs and teachers' assessment practices will also become evident.

The six dilemmas are listed below. Each will be taken in turn and analysed comprehensively from the perspectives of the participants.

Professional Expectation Dilemmas: Teachers' Perspectives Regarding Assessment and DBDM

- Dilemma 1 (*Commitment versus time-poor environment*). Teachers are strongly committed to authentic assessment and DBDM but are constrained by a time-poor environment in which teaching and learning takes place
- Dilemma 2 (*Curriculum expectation versus experience of students*). Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary school constrains the delivery of a full curriculum
- Dilemma 3 (*Assessment expectations versus assessment literacy*). Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy.

Personal Belief Dilemmas

- Dilemma 4 (*Fun versus rigour*). Teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning, resulting in the detriment of assessment for DBDM
- Dilemma 5 (*Professional expectations versus assessment literacy capability*). Teachers' perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs
- Dilemma 6 (*Personal experience versus professional knowledge*). On the one hand teachers value the professional knowledge they have acquired through professional learning but

> on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

The complex nature of connectedness among the key dilemmas makes the Professional Expectation Dilemmas conceptually different from, but at the same time, inextricably linked to the Personal Belief Dilemmas — such is the nature of ambiguity, contradiction, and dilemmas that permeate this analysis. Figure 24 captures the connectedness between the two macro categories but as each of the dilemmas, its themes and sub-themes are deconstructed through the discussion that follows, the depth of the complexities within and across Professional Expectation Dilemmas and Personal Belief Dilemmas will become evident and supported by rich data from the participants.

Figure 24

The Connectedness Between the Two Macro Categories and Each of the Dilemmas

Professional Expectation Dilemma		**Personal Belief Dilemma**
Dilemma 1. Commitment versus time-poor environment Teachers are strongly committed to authentic assessment for DBDM but are constrained by a time-poor environment in which teaching and learning takes place.	↔	*Dilemma 4. Fun versus rigour* Teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning, resulting in the detriment of assessment for DBDM
Dilemma 2. Curriculum expectation versus experience of students Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary	↔	*Dilemma 5. Professional expectations versus assessment literacy capability* Teachers' perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs

school constrain the delivery of a full curriculum		
Dilemma 3. Assessment expectations versus assessment literacy Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy	↔	*Dilemma 6. Personal experience versus professional knowledge* On the one hand teachers value the professional knowledge they have acquired through professional learning but on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

5.1 Professional Expectation Dilemmas

Professional Experience Dilemma 1: Teachers are strongly committed to authentic assessment for DBDM but are constrained by a time poor environment in which teaching and learning takes place.

> **“Curriculum is out the window because now we have to do this concert”.**
>
> (P2.1118:4)

Introduction

Across the profession, teachers from all faculty areas complain about the lack of balance between available time and educational expectations with the Grattan Institute reporting that Australian teachers work, on average, 44 hours a week during term-time and do not have enough time to prepare effectively for class (Hunter & Sonnemann, 2022). Constant interruptions, overcrowded curriculums and ever-increasing government oversight, documentation and regulation distract teachers and limit teachers' time for their core business. This is regularly noted in the media (Carey, 2019; Caro, 2021; Joiner & Sonnemann, 2022; Visentin, 2022). Notably, the analysis of interview data in this study indicates a conviction by the participants that music teachers have greater pressures on their time than those of many of their colleagues working in other disciplines. Moreover, participants reported time limitations to be one of the greatest influences in their ability to improve student outcomes through engaging in assessment data. The analysis of survey and interview data identified the following sub-themes regarding time that underpin the dilemma reported in this section:

(i) a lack of curriculum contact time;
(ii) the requirements of artificial reporting and assessing timelines;
(iii) the number of classes taught by an individual teacher; and
(iv) the interplay of co-curricular expectations and performance opportunity are interruptions peculiar to music teachers.

The numerous sub-themes capture the challenges that shape learning and teaching in music classrooms and subsequently on teacher perspectives and their capacity to engage with data and their willingness to dedicate additional time interacting with data and working on assessment tools.

First, this section will report on the first of four major sub-themes of the first of three Professional Expectations Dilemmas; themes relating to dimensions of time, namely curriculum time allocated to music education in schools.

5.1.1 Curriculum Time.

Access to classroom teaching time is varied across jurisdictions and is contrary to the mandate of the Australian Curriculum. Participant interview responses exposed a variety of curriculum delivery models regarding music education as students entered their first year of secondary school. Of note however, only one participant's school offered music for the mandated full academic year. There was also variety in which years of music education were deemed compulsory. Across the various contexts and jurisdictions, on entry to secondary school, four dominant models of music education were identified in the data:

(i) Schools deem students must undertake only one Arts subject from those on offer
(ii) Music is compulsory in Year 7 only

(iii)Music is compulsory in Year 7 and Year 8

(iv)Music is offered as an elective only. No Arts subjects are compulsory but undertaking instrumental music lessons and participation in school ensembles is mandatory for inclusion in classroom music.

As stated, the data revealed that there were no nationally consistent time allocations for music education among the participants' schools or feeder schools. Within these delivery models, further inconsistencies appeared with some schools offering the subject of music for one semester and others for only a term. Additionally, at the individual school level there was no consistency with the provision of different numbers of lessons within the semester.

> **Craig:** It [music] is elective right from the beginning [Year 7]. There are no compulsory years. And we have one-hour lessons twice a week for the whole year. If you elect to do music it is compulsory to take both classroom and instrumental music and you have to be in ensembles if you choose music. (P7.0919:8)

> **Kelly:** At our school we have music [in Year 7- the first year of secondary education] for a semester and it makes it very difficult for students because they view it as, well the school doesn't value it as much so it is not a yearlong experience. In Year 7 the students have three lessons a week of classroom music for a semester. I have a class that has all three of their lessons on one day, and it's Friday. (P1.0221:4)

> **Luke:** At my school we have a music general course [...] we have them for one lesson a week for only thirteen weeks in the semester and then [they] change over [to drama] […]. So how do you deliver that in thirteen weeks in a meaningful way and get some kind of musical growth and development out of the child that is going to excite and entertain them? You'd have to be pretty amazing to be able to do that. (P6.0619:9)

> **Frances:** Music is compulsory in our Middle School [Years five to eight– primary to secondary transition]. We only have one lesson a week in Years

> 5 & 6 [for the whole year] and two a week in Years 7 & 8 but they only do music for a Semester. (P6.0421:5)

The assumption, as identified by the research participants, that the documented Australian curriculum and that of each of the states, is that classroom music is offered for the full academic year. However, as stated by the research participants, access to students is not frequent enough to fulfill the curriculum requirements or to provide a sequential learning experience. The prescribed curriculum and reporting requirements are also negatively affected by the lack of consistent primary music education in the pre-secondary learning context, which will be addressed in Section 5.1.7.

The inconsistent nature of student access to primary years classroom music education and the varying number of contact hours in the first year of secondary education reported by the participants was identified as having a negative impact on teacher perspectives towards assessment. Additionally, the limited hours in which to address the learning outcomes set out in the Australian curriculum were identified as having a negative and direct influence on teacher perspectives regarding their commitment to assessment and engaging with assessment data. With such limited learning time, teachers identified a reluctance to taking time out from learning for the assessment process, clearly rating learning time as a higher priority than assessment time. On the one hand while they expressed a commitment to the value of assessment, teachers were loathe to reduce teaching time in the interests of testing and reporting. Further, issues relating to assessment expectations and teacher assessment literacy were identified. These will be discussed more fully below in Sections 5.2.12 and 5.2.13. It is important to note at this stage, however, that participants in this small-scale study identified that on the one hand, they could see that having greater specific data on the learning of each child could save them time in the long term, but on the other hand, they were unable to see any way that they could make this happen. Harriet, the teacher who also taught in the English faculty discussed that she used data to guide her work within the English faculty but not in music. When asked to explore the reasons for this perspective, she replied:

> I guess because it is a lot of work to set something up like that and it’s finding the time to set those things up. And as a teacher you often have these great ideas and that sort of stuff but it’s having the time or dedicating the time, […] to see those things through […] so that they can enhance

> your teaching and the learning of the students. But it is time really. (P4.1118:6)

Although supporting the premise that having specific knowledge of the needs of the students through a commitment to quality assessment processes, the participants did not believe they had the time to develop such materials. Luke expressed the sentiment clearly in stating; “I can see that once you have that data you can look at how you can value add and differentiate. But are you willing to give up a lesson to do it? No! And no-one has the time to develop that type of assessment”. (P6.0619:5)

Clearly, teachers are unwilling to give up any opportunity to teach and see giving up time to do formative assessment as an imposition on their teaching time. The interpretation that the Australian Curriculum and each of the State-based music curriculum documents presumes a full year of contact, means that there is not enough time in which to teach the prescribed curriculum. Moreover, there was no consistent interpretation of music education and instruction. As evidenced above, teachers continued to experience a major quandary: On the one hand, they could see that collecting data on the learning of each child could save them time in the long term, but on the other hand, they were unable to see any way that they could make this happen.

Attention now turns to the challenge that the number of classes faced by music teachers has on the time available for assessment and teacher perspectives on engaging with assessment data.

5.1.2 Number of classes.

As identified by interview participants, the Australian curriculum (Australian Curriculum, Assessment and Reporting Authority, 2015) supposes both an expected level of prior learning on entry to secondary school and a full academic year of access to classroom music, despite the fact that most schools do not meet this requirement through being limited to a term or semester. Additional to this restriction is the manner in which schools structure the timetable to fit within the limited allocated time. Participants identified the number of classes that they faced has a direct influence on their time and therefore on their perspectives on engaging with assessment data. All interview participants identified this as an influencing factor in their assessment behaviours, both during formative and summative practice.

Participants regularly compared their face-to-face class numbers with those of English teachers, with participants explaining that for every one class that an English teacher had, research participants saw five music classes. Although participants acknowledged that the teaching time as per a timetable was the same as other teachers, when it came to assessing and reporting time, music teachers had five times the number of assessments to mark and report. As Bronwyn noted:

> I have more face-to-face classes than an English teacher. …I teach every class and because we don't see them as often, some only once a week and other twice a week so when it came to assessing and reporting, there were a lot, between 400 and 500. So, when an English teacher has one class, five times a week, I might have three-to-five classes. If an English teacher has four or five classes that they see five times a week, I have more than ten and therefore when it comes to assessing and reporting time, we have double, maybe triple the number to do. There is no time to do theory or literacy tests and mark them and analyse them. (P2.0119:4)

Margaret affirmed the challenges of time when she reported:

> Time is the biggest issue in music teaching because we have so many classes (but) only infrequently and there isn't time for collaborative conversations and it's just, here's the program just teach it. (P3.0119:5)

Frances took a different stance in contrast to her colleagues when she argued:

> In one sense there is no difference (across disciplines), no teachers have enough time. They are all having the same issues. The difference for music teachers is in the co-curricular and the number of classes, especially at assessment and reporting time. Like I have two Year 8 classes at the moment and Year 7 but another teacher like an English teacher only has one class in the same timetable allocation, so I have to write over 70 reports, do over 70 assessments and mark them and write comments and they only have the one class, you know like 27 students. (P8.0421:6)

As stated by Frances, the number of classes is only one of the inhibiting factors faced by music teachers, with the added requirement of leading public performances across the school year resulting in limited opportunity for music teachers to engage with assessment data. It is evident that on the one hand teachers recognise the value of assessment for DBDM but argue cogently that it is impossible to do so as the work of music teachers intensifies, rendering the finding of time for classroom assessment virtually impossible. This is particularly relevant when it comes to the requirement for music teachers to oversee and develop music performances across the school year and the subsequent intensification of teachers' work that accompanies the requirement. The following section addresses this subtheme.

5.1.3 School Performance Requirements and Extra Curricula Expectations.

All participants reported additional deficits in curriculum time due to school requirements that they and/or the students participate in performance activities not related to learning and curriculum expectations. These extra curricula requirements are peculiar to Music Education and very rare in other Learning Areas. An element of *presentism* (Thorpe & Lamb, 2019) from school leadership was identified, whereby a teacher would be requested to prepare students for a performance with insufficient time and for purposes other than the curriculum requirements. Participants identified a high level of reluctance to refuse these requests and revealed high levels of anxiety that the quality of such performances would reflect on them. The reluctance to refuse these requests was summed up by Harriet as she stated, "I guess we don't want to be seen as being inflexible […] We don't want to be seen as being difficult" (P4.1119.4). Harriet further explained that she had been instructed to prepare a performance for an upcoming school assembly. The song had been chosen without any consultation and she said, "we have to stop teaching the curriculum, to teach this particular piece of music to meet the College standards and expectations around what the students should be doing at an assembly level…the quality of that being presented is representative of what we do" (P4.1119.4). In addition to Harriet, all participants identified that these requests resulted in curriculum time being used for the purpose of rehearsal of unrelated music at the expense of valid learning. Participants expressed frustration that teaching and learning cycles are interrupted so that entertainment can be provided. Moreover, participants identified that the timing of performances often aligned with crucial assessing and reporting times and that curriculum and core business were disregarded for the purpose of entertainment. This will be further discussed in Section 5.1.4. Bronwyn asserts:

> A lack of time is the biggest problem. Because we are always rehearsing because there are so many events on at school that you are preparing for that I feel like teaching gets put aside a lot of the time, like while you are trying to get, well you know, it's the Christmas concert at the moment and like your lessons are just…gone down the drain. Curriculum is out the window because now we have to do this concert. (P2.1118:4)

Helen expressed feelings of frustration when she stated: "[Performance] is a school issue. It's about schools not valuing what actually happens in music. They would never do that to a mathematics teacher or any of the others either" (P5.0619:7).

It is the perspective of the participants that the additional expectations of the music teacher in the sample schools negatively limits their time to plan curriculum, develop lesson materials and resources and significantly reduces time to develop, implement and reflect on assessment, assessment tools and data that may be generated from the assessment. Frances stated that with the additional expectations of "school productions and concerts and other things like choirs […] you are not going to get the quality [learning outcomes] that you want unless you spend every weekend, working every weekend" (P8.0421.6).

Additional to regular requests for performances by school leadership members are the weekly scheduled extra-curricular requirements of music teachers. These regularly scheduled weekly rehearsals hamper teacher planning and preparation time and therefore limit the participant teachers' degree of engagement in assessment in three ways.

I. Time for assessment moderation, meetings and professional learning is reduced when compared to regular classroom teachers;
II. Acknowledgement of preparation for performance and performance time is not provided;
III. The amount of extra-curricular in addition to regular duties results in higher workloads for music teachers.

Margaret was one participant who voiced the first of these extra-curricular concerns in her interview, stating that even when assessment, curriculum or professional learning issues were identified, nothing was ever resolved or addressed. This was as a result of staff meetings rarely happening as the "Head of Department didn't have time and we didn't have many meetings because of rehearsals" (P3:0119.9). Attendance at school-based professional learning was also impeded by rehearsals, which left some teachers feeling they did not always know of new initiatives or directions within their schools or the wider education community.

The second point raised by the participants, acknowledgment of preparation time for rehearsals and performances, seems to go largely unnoticed and under appreciated by those in school leadership. Interview participants had varying ensemble roles, including conducting bands, orchestras and choirs. However, as ensemble conductors, all participants identified that they needed to source music, plan performance repertoires and undertake score preparation for each piece. Sourcing new material required hours of listening and score reading time and then when selected, has to be prepared and learnt. Participants Harriet, Helen, Bronwyn and Kelly also discussed the length of time it took to learn every vocal part for their choirs. Kelly, who is a full-time classroom teacher, and is also responsible for choirs and general accompanist for the school, explained her lack of time dedicated to assessment data, stating that she had "taught all day and then I had to stay until 9 pm and accompany all of the woodwind students at a concert. […] It's a common expectation of the music teacher. Even though I am completely in the classroom now the expectation is that as one of the music teachers, I have to go to all of the concerts" (P1:0221.11). This sense of frustration and concern about teaching demands was expressed regularly by many participants across the study and shaped the Professional Expectation Dilemmas experienced by music teachers.

Craig, the most data-engaged of the participants, conducts five bands. He sources and prepares repertoire for five bands, and then leads the rehearsals and performances. This is in addition to his Head of Department and teaching roles, leaving him very little term-time to improve assessment tools to gather valid data. He stated, "I split my time. I could sit down and develop the perfect test and I spend a lot of the holiday time doing that, but I am happy to just tinker a little bit with it and go well that is alright and do that each year, and each year it gets better" (P7.0919:6). Throughout the interview stage, all participants discussed having a minimum of three ensemble responsibilities for which they had to prepare and run after or before school rehearsals and small ensembles that they rehearsed during lunchtime. Yet, participants reported that these extra duties were not acknowledged when it comes to the day-to-day expectations of all teachers within the school.

In relation to general day-to-day operations of a school, interview participants expressed a sense of inequity and a lack of respect for their roles from school leadership teams. Participant teachers specifically identified the requirement for all teachers within their schools to do the same number of yard duties, despite the number of lunchtime rehearsals the music teachers led and supervised. This inequity was seen as further eroding any time that might be used for reflecting on assessment data. Kelly's level of frustration was evident when she discussed these expectations, concluding with "and then there is yard duty […] we don't have the time" (P1:0221.10).

The perspectives of classroom music teachers in relation to engaging with formative assessment data, is clearly influenced by the extra-curricular expectations of the schools. It is clear through these interview statements that teachers value improved student learning outcomes that could be gained by data engagement, but at the same time, are conscious of the time restrictions and the importance put on standards of musical performance which are the public face of most schools. The additional complication that high profile performances regularly fall at the same time that reporting is undertaken, adds to the complexity of the issue. End of semester/year concerts, carols night and speech night celebrations usually require extra rehearsals on top of the usually scheduled ones and subsequently, teachers make assessment decisions based on what is manageable rather than valid. Although somewhat tongue-in-cheek, Luke made the following statement:

> I've got to mark the test and reports are due next week. Got to get them in. Got to get this done. Got to get that done. Far out, my own kids haven't had dinner yet. Okay, jump in and get it done. Actually, no. The teachers wouldn't be feeding their kids because they would still be at school trying to get their marking done after a rehearsal. (P6.0619:6)

Participants also identified the intrusive nature of reporting on the teaching and learning cycle and how this has influenced their perspectives on engaging with assessment data. These are addressed in the next section.

5.1.4 Reporting Requirements and Timelines.

Participants discussed the nature of reporting requirements and timelines in three interwoven focus areas that link other identified themes and dilemmas:

(i) Time – Number of classes to be assessed and reported on and the timing of reporting
(ii) Curriculum expectations
(iii)Assessment expectations and teacher assessment literacy

Only (i) Time, will be discussed in this section. The complications of the number of classes have already been established in the previous section where participants highlighted the difficulties of assessing, marking and reporting on hundreds of students within a constrained timeframe. However, the additional complicating factor identified by participants was the timing of reporting and the additional requirements of providing end of semester and end of year performances, as discussed in Section 5.1.3.

On one hand, participants were ideologically committed to valid assessment but on the other hand, teachers expressed low levels of assessment literacy and poor time availability that prevented them from engaging fully in authentic assessment. Margaret discussed this dilemma and explained the over-reliance on performance assessment in relation to the limits of time:

> Most of the assessment is performance. It's much easier for the teachers to do this. They mark a performance on the spot and don't really have to take home tests and mark them. Easier for them to comment and easier because you don't have to teach them the literacy because the result is performance based. There's not time to teach them the literacy. (P3.0119:7)

Frances, the most recently qualified teacher expressed her concerns about the reporting timeline in the following manner:

> You have to have results into the reporting system at particular times regardless of where you or the students are in their learning. Sometimes it's not the best learning time or that sort of thing. It's definitely a problem. (P8.0421:3)

Luke, a Head of Faculty, also expressed his perspective that assessment data was not used in a manner that he preferred, as assessments were often dictated to by reporting timelines. Further, he reported that assessment was sometimes not rigorous or valid as it was designed quickly to meet the report timeline. Some assessments were designed to suit the management of teacher time and were not focussed on the learning or improving student outcomes.

> I don't think they [classroom music teachers] ever, no I can't say that. That is not right. I would say very few of them actually do analyse data at all. It is simply about, quick, [...] reports are due next week. (P6.0619:6)

Craig, also a Head of Faculty expressed his support for the use of formative assessment data to improve student learning outcomes but responded in a different manner. He noted that assessment tools could be improved to generate better data if he had time and this, he argued, would lead to further improved student learning outcomes: "If I had time to do Rasch analysis on the outcomes of every question, I could fine tune every question really well. But I don't have time to do that". (P7.0919:6)

A number of participants supported a view that styles and types of assessment adopted by music teachers were shaped by the timeline and the degree of complexity implicit in the assessment type. All participants agreed that the volume of work implicit in gathering and analysing data from assessment was excessive and subsequently, a preferred practice of many teachers was to reduce assessment data to a single summative grade. However, the perplexity expressed by Luke was found in the recognition that although a summative grade was quick to arrive at, he acknowledged that a grade does not provide information on specific learning and therefore, assessment becomes a compliance task only. Harriet and Frances both referred to the frequent use of "tick-box" (P4.1118:4; P8.0421:8) assessment, tasks designed to simply have something to put on the report. They deemed this as necessary as teachers have little time to complete their marking or interrogate the data. Luke described current assessment practices by saying, "it is just the sheer volume of work that we have got to do that would prevent data analysis happening. Assessment purely becomes about compliance and the use of tick-box assessment is as a result of being time-poor and is compounded by the co-curricular expectations of music teachers and their lack of time to mark assessments let alone analyse or look at data" (P6.0619:7). Luke acknowledged the feelings of ambivalence that characterise this problem for him in terms of his practice which is often in contradiction to his preferred professional aspirations.

In contrast, Craig responds positively to reporting timelines and engagement with data as he detailed the change to live reporting at his school:

> We have live reporting, so they get grades on a report but essentially, they [parents and students] get them when they do the assessment. And that has made a pretty drastic difference really because parents are getting live feedback and they are able to contact us and say they are very concerned. And you can see changes in motivation and things like that when they do well. (P7.0919.4)

It must be noted that Craig's experience of live reporting is different to those experienced by other participants in the study who have engaged with live reporting. These participants reported that live reporting was also supplemented with more traditional end-of-semester reports that include a summary of grades and a written comment from the teacher. This was not the case in Craig's context. Kelly, Bronwyn and Harriet's schools all have live reporting of each task which is doubled up in end-of-semester reports which require an additional written comment from the teacher. These participant's schools also required end-of-semester assessment, concentrating the assessing, marking and reporting into a very small window of time. For these teachers, the contradiction between their desire to provide comprehensive reporting, albeit limited by time and additional duties, and their practice of moving towards a summative grade was not alleviated through live reporting. The conflicts and ambiguities remain real for these teachers. Further they were not prepared to forgo teaching time for the demands of reporting. Nor were they willing to sacrifice fun and enjoyment in the music classroom of diverse students in order to collect the assessment data required. Clearly while this Professional Dilemma was a result of the pedagogical and assessment challenges in the classroom it is also inextricably linked to each teachers' personal beliefs that shape their teaching. This will become more evident in the following sections.

The Professional Experience Dilemma discussed here has strong connections to Personal Belief Dilemma 1 relating to perspectives of participants where teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning to the detriment of assessment. This dilemma will be discussed Section 5.2.

5.1.5 Summary Part 1.

Each of these sub-themes has been derived from analysis of the data and are significant findings in themselves but they also form a part of the overall map of the complex assessment dilemmas faced by music educators. In this section, Professional Expectations Dilemma 1 has been addressed:

> Teachers are strongly committed to authentic assessment and DBDM but are constrained by a time poor environment in which teaching and learning takes place.

A number of concepts related to the dimension of time that are inextricably linked to the raw data, underpin this dilemma. The concepts have been collated into a set of subthemes that are implicit in the contradictions, ambiguities and dilemmas experienced by participating teachers as they struggle with their desire to engage in rigorous and instructive assessment of music literacy in their first-year music education classrooms with a view to improve student learning outcomes

The subthemes included:

(i) inconsistencies in curriculum contact time offered across schools,
(ii) the requirements of artificial reporting and assessing timelines,
(iii) the variability in number of classes taught by an individual teacher; and
(iv) the inordinate number of cocurricular expectations and performance opportunity interruptions.

While the frustration of their lived experiences as music educators is evident in the data analysis to date, it will be revealed how this becomes far more complex as each of the dilemmas unfolds. What follows is closely connected to teachers' professional frustrations with the dimension of time. In the next section the dimension of curriculum will be addressed through Professional Expectations Dilemma 2.

5.1.6 Professional Expectation Dilemma 2: Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary school constrains the delivery of a full curriculum.

"I don't think it is right, but it is the reality". (P5.0619:7)

Introduction

Six dilemmas have been identified that underpin the formation of teacher perspectives on engaging with data from formative assessment of music literacy to improve student learning outcomes.

The dilemma reported in this section is:

> Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary school constrains the delivery of a full curriculum.

In the dilemma reported in this section, two key subthemes have been identified. These sub-themes were recognised by the research participants as having an enduring influence in forming and sustaining their perspectives on engaging with assessment data and music literacy. These two additional sub-themes were identified as:

(i) A lack of consistent primary school music education and,
(ii) Extremely multifarious student cohorts in the initial years of secondary schooling

As stated earlier by interview participants, the Australian Curriculum mandates both a full academic year of access to classroom music and an expected level of prior learning on entry to secondary school. The participant responses have confirmed that most schools do not provide a full year of music education in the initial years of secondary school. What is of interest here is the diversity of prior knowledge that students demonstrate as a result of their primary school education in Music. Based on their experience, participants confirmed that not many secondary students meet the expected first year entry level of prior learning, with many primary schools either not providing a sequential music education program that is delivered by a qualified music specialist, or not offering music at all. Even when music is offered, in the primary years of schooling, the participants claimed that there was no consistency across school programs. On the rare occasion that students do meet or exceed the expected level of learning, participants further identified that the differentiation required to teach a cohort in the initial years of secondary school becomes even more extreme. In addition, students who have had the privilege, opportunity and support from parents to undertake private instrumental music lessons add to the extreme complexities inherent in the diverse levels of prior learning of students entering music education in the first year of secondary school. It was overwhelmingly agreed by all participants that the various levels of pre-secondary education were problematic in designing an inclusive and differentiated curriculum in the first-year secondary classroom. The various challenges faced by the participating teachers in trying to meet curriculum demands of this diverse cohort of first year students and attempting to design and delivery an inclusive and differentiated curriculum will be examined more fully forthwith. Initially, the next section examines participant perspectives regarding the lack of consistency in primary music and analyses how professional practices, including assessment, are shaped and formed by the lack of consistent approach in primary schools in Australia.

5.1.7 Lack of Consistent Primary Music Education.

All teachers identified the inconsistent nature of primary school music as having an inhibiting influence on their professional practices and perspectives of using assessment data in music classrooms. Additionally, participant teachers identified this as an inhibiting factor on their teaching of music literacy. As a result of the varying quality of prior learning that students had experienced in their primary years, participant teachers identified levels of inequity when it came to the delivery of student learning experiences in secondary school music. Subsequently participants expressed a reluctance to assess and report on student learning at the required regulatory Australian Curriculum levels. Evidence will be presented below that demonstrates the teacher perspectives, as they identified that it was impossible for them to develop valid assessment tools to cater for all levels of students and consequently, the teachers reported that it was deemed unfair to subject students to assessment tasks that were not aligned to their learning capabilities through no fault of their own. For example, according to Harriet and Luke, the foundations of music literacy that should have been covered in primary school are lacking in consistency, unlike foundational skills in English literacy and other curriculum areas.

Harriet reported:

> We have to look at things from an educational perspective and ask what do we want to achieve and where do we want to go with this? I think every single primary school should have a specialist because it is in primary school that the foundations are built. [...] But the thing that is really challenging as a music educator is that when you get those students coming in [to secondary school] that haven't had any music education or limited music. They are coming from basically nothing because of the way the system is structured where you have people who are teaching music who might just play a bit of guitar so its oh well, you can become the music teacher. (P4.0419:6)

Luke validated these concerns of Harriet's in stating:

> ...not everybody does music [in primary school] or not everybody has had a musical background in the lead up to studying that [Year 7 Music]. Every student that comes in has had a background in English, a background in maths, a background in science and humanities. They understand. There has been skill development over time. I suppose what lacks in music is that there is not that continuous cycle of learning from the early years. That depends on the student's background and where [primary school] they've come from. The other thing is the curriculum varies so greatly depending on what school you are at and what they are looking at. (P6.1118:5)

While Harriet identified the lack of teacher expertise as problematic in the primary context, Luke noted the lack of curriculum scope and sequence structure as well as the background experience of the students. Frances also identified the curriculum framework as a key challenge providing evidence that many music teachers were pedagogically weak in their style of professional practice. Her perspective is captured when she stated:

> A lot of music teachers [in the primary schools] aren't musicians and they don't even teach it [music] at some schools, I have discovered. I

> think that that is also a problem. This is a problem in the primary schools, because it is often a part-time job, so it's not appealing to a lot of people. I know the person that I took over from wasn't trained in music at all and they would just put YouTube songs on and the kids would just sing along every week to a different song. That was their music education. But that is what I said earlier, the curriculum is so vague that you can almost get away with anything particularly in the primary years. (P8.0421:5)

Taking a more proactive stance, Helen advocated that "there is a complete turnaround in thinking that needs to happen so that students are learning music literacy in primary school so that when they get to secondary school" (P5.0619:7). She argued that if the prior learning completed at primary school was more thorough then, "secondary teachers aren't having to teach the literacy that they should already have done" (P5.0619:7).

Helen continued to make the case that if students entered the first year of secondary schooling well prepared, the secondary teachers could focus on "building on those foundational skills". Of significance here, she concluded:

> ...I didn't use formative assessment...because there wasn't time...I've only got music once a week for an hour so there's no time to do any type of formative assessment in that scenario. I don't think it is right, but it is the reality. (P5.0619:7)

It can be argued here that the lack of continuous music education in the primary sector had a negative influence on music teachers' willingness to assess music literacy and engage in the data generated through literacy assessment. The participants perspectives demonstrated that with students having vastly different experiences of music, adequately assessing them was identified as problematic. Some students have instrumental lessons. Some had no primary music. With the national curriculum regulating an expected level, teachers were challenged to assess fairly and were reticent to do so as they believed they were being coerced into using grading systems that portrayed students with less experience as failing despite possibly making enormous progress from their point of entry into secondary education music. The data show teachers as feeling conflicted about failing students who did not meet the Australian curriculum levels despite learning years of music curriculum in a matter of weeks. This was best expressed by Harriet as she discussed her belief that assessing to the curriculum standards does not reflect the reality of the child or where they started from (P4.1118:4). This was supported by Bronwyn when she articulated that this dilemma resulted in students believing that they were failures in music and that this issue is one of the foremost reasons that she tended to focus on holistic assessment through teacher observation of performance rather than assessing music literacy. Moreover, she described the problem for differentiation in music classrooms as a direct result of inconsistent music lessons in primary schools meaning that only students from a small number of schools or those that have the means and opportunity to learn privately are set up to succeed and added that "no matter how hard a student tries, if they haven't had music, they basically have to do seven years of music learning in a semester or term" (P2.1119:12).

Bronwyn went on to explain that it is this inequity in music education, exposed in the initial years of secondary school, and the extent of differentiation required in the first year of secondary school that are the principal reasons for her preference to assess holistically and not to assess music literacy at all.

Clearly while the participant teachers were committed to educating their students in line with the curriculum mandate, their practices often contradicted the Australian Curriculum framework as they wanted to be responsive to students' capabilities and knowledge of music. Clearly, the teachers' perspectives revealed that, based on a variety of prior learning experiences, students entered the secondary classroom with a vast array of music capabilities and knowledge demanding a differentiated curriculum and requiring teachers to provide multileveled teaching and assessment during music lessons. In doing so teachers report that they needed to address the inequities that students had experienced and were comfortable doing so from a teaching perspective.

However as demonstrated above, while on the one hand, teachers were committed to the national curriculum framework, on the other hand they were not prepared to promulgate the inequities through misaligned assessment processes. The data to date as reported in this chapter links the experiences of the child with the multifarious nature of classrooms and the conflict felt by teachers when assessing against the Australian Curriculum. Issues are also identified regarding the types of assessment that can be used to assess such a broad range of student capabilities.

The following section explores participant teachers' perspectives on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education in the context of extremely multifarious student cohorts with differing levels of prior learning, and how these perspectives have been influenced by the need to differentiate and report on student learning outcomes against the Australian Curriculum standards.

5.1.8 Multifarious Cohorts that Constitute First Year Secondary Music Classrooms.

The variability in music programs offered across the feeder primary schools has been identified by participants as one of the contributing factors to the level of differentiation required in teaching, learning and assessment of music in the initial years of secondary school. Research participants stated that some students entered the first year of secondary education having no formal music education as a part of the primary curriculum, whilst others have experienced music classes ranging in quality and purpose. The lack of one consistent approach to music education in the primary sector results in students having vastly different learning experiences when they begin music education as a core component of the secondary school curriculum. As one participant recalled; "...depending on which school they were at you may have had no music at all or you may have had the music teacher that is not trained and who may be musically illiterate" (P6.0619:4). He continued to emphasise the inequalities that students experience in primary music education as compared to other curriculum learning areas:

> And it depends also on what each school is looking at. I think you could transfer most of what is being taught in humanities. You could pretty much transfer between schools and the same basic conceptual stuff is being covered. Probably through different applications but the same things are being covered. The same understandings are common throughout. With music, what happens in a Year 3 class here is completely different to what is happening at any other school and they

> are different from the next school. They are all completely different. And is something that has seemingly always been the case. (P6.0619:4)

In addition to classroom music, some students have had the opportunity to undertake instrumental music studies, often resulting in a greater need for differentiation to extend the more advanced students. Interview participants identified these differences in student experience along with the limitations of curriculum time to have a direct effect on their ability and willingness to engage with assessment data. Luke expressed this by explaining that "despite the Australian Curriculum, there is no clear curriculum content in music in primary schools" and that "teachers dismiss a lot of students that come to Year 7 with limited music learning because they believe there is too little time" (P6.1118:6).

Analysis of the research participant interviews generated a common finding that the extreme differences in student prior learning due to inconsistent standards in primary school music resulted in the need for curriculum differentiation that was almost impossible to manage. There were some exceptions. For example, as the only participant who had a second teaching area in English, Harriet argued that whilst differentiation is required in all English classes, there are never the extremes like that reported in music classes. The issues relating to differentiation were similarly discussed by Kelly during her third interview, in which she explained that it was easier to differentiate in the practical area of performance, because she could give advanced students difficult parts to play and simple parts to inexperienced students. She provided a specific example in making this point:

> So, the only way I can do it [differentiate] is to [...] have the most basic students doing the melody line and I would say to the next level of students, if you are a pianist, I know this is very basic for you but could you play the harmony parts or could you play the chords. And so, I let those students be more advanced and self-allocate parts of the music which is more interesting to them. So, in that way I can scaffold. That is the way I would do it. (P1.0221:8)

However, when it came to music literacy, her perspective reflected a more complex situation. Kelly reported the following. Teachers no longer teach music literacy. This is partly due to the wide range of student skill level that requires extensive differentiated teaching approaches.

Due to this context the expert teaching of music literacy by a teaching professional has ceased. Rather, students at her school learn music literacy through a self-paced computer program. However, although the learning is self-paced and therefore differentiated, all students have to sit a common music literacy assessment at the end of the semester.

This is deemed to be problematic for Kelly both from an equity perspective and when considering the authenticity and quality of the assessment for each individual. She exemplifies her concerns through the following example.

> They [the students] do literacy using the computer and Auralia [aural training software] helps with this because the students work at their own level. It's not really lock step, but in a music class with the literacy, the students can be self-paced through the computer. If they are using computers, it is differentiated. So, in that sense, they are where they are at and you can assess them. [...] Yes. Even though they are working at their own level, they get tested at the normal level. That is because the school has to put a grade on the report. But the student in Year 7 that might be studying the Year 9 course still has to do the Year 7 test. It is challenging because for that particular student that has done A.MUS.A (Associate in Music, Australia–Diploma) and did grade 4 theory, he was the student asking for more extension work because he needed a further challenge, but he was disrupting my class all the time to the point of being quite annoying and I had to say to him, I have asked you to bring your grade 5 book into class and you haven't brought it so therefore can you work with this other group of students and I was trying to instil in that student a sense of teamwork because in the real world that is a skill that we all need. (P1.0221:9)

In this interview, Kelly exposes the irony between differentiation and the reporting requirements of the school. Although trying to differentiate the learning for her students, the nature of the grade-based report required students to be ranked and therefore calls for the use of a common assessment task. This is quite at odds with the differentiated learning progressions students have experienced during the classes. Moreover, she provided an insight into the limitations of providing adequate extension by having students work independently on AMEB, (a national music education board) theory during class, as she teaches the other students. Later in the interview, Kelly commented that the computerisation of music literacy meant that teachers were often unaware of student progress or misunderstandings as the program corrected student responses. She explained that whilst it is possible to individually check student responses, it is time consuming and teachers tended to "just use the end result" (P1.0221:6). Thus, the implications for using data as the basis of assessment becomes negligible.

In a similar sentiment Margaret stated, "When you've got a class of 28, the easy option is to not test the kids or use a one-size-fits-all approach and just try to start from something simple" (P3.0119:6). Despite the participants not engaging with assessment data for the purpose of enhancing both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education, their perspective was positive and supportive of the benefits of doing so.

Luke identified the dilemma caused by a lack of primary music education and the conflict it causes regarding the expectations of secondary school curriculum. He affirms the willingness of teachers to engage with data to improve student learning outcomes and counter the inconsistencies in student learning. However, he notes that, in practice, this desire is difficult to manifest.

> The short answer is no. We are not looking at data from music or music related stuff. I think that would be really helpful to look at those certain things to be able to project and plan particularly were you can see outliers in every cohort of students. I think it would be incredibly useful to be able to access that data and manipulate it to be able to provide a fuller picture of what is actually going on for those students. Absolutely. (P6.1118:6)

Once again, this positive perspective was reinforced by other participants. When considering the question *If you had more time and you had the data and you knew how to interpret it, would you use it?* Margaret responds:

> Yes definitely. Then I would know what they know, and I would know how to plan. I'd know where they needed more help and what other things I could do. [...] I think we desperately need to have data and there must be a way of getting it especially if you have large classes and they all have different backgrounds so you know more about the students and you can structure the programs so everyone can learn. But we are so swamped with getting this assessment done and doing this program that we don't, we don't have time to understand what they know. We are so busy with the number of classes and the rehearsals and other expectations that we get to a point where we say, okay, you all stand there and sing me a song and I'll assess it, just so you have something to put in the report. (P3.0119:11)

As the teacher most engaged with assessment data, Craig made these comments when asked about why he uses formative assessment data.

> I can find out their limitations and what they can do and then what is the next thing that they need to be able to do. But we are also interested in how that looks on our teaching activities and looking for more potent ways to teach and to improve our skills and also the third one is evaluating the tests themselves about how well do the tests unveil to us what the students are capable of, what they are learning? The tests should be constantly evolving, and we should be changing them based on all sorts of things. One of those things is the improvement that the students are making. (P7.0919:5)

Craig's school is the only one in the study cohort where private instrumental music lessons are a mandatory requirement for student involvement in the music program and where select entry requirements for music ensure that students are all at a similar level of understanding and skill. This more homogenous group seems to be more suited to levels of appropriate differentiation as the differences in student learning are not as extreme as they are in a non-selective course. Simply put, the conditions for teaching in this context enable comprehensive assessment through the use of data. This was not the case elsewhere based on the perspectives of the participants.

5.1.9 Summary Part 2.

In the dilemma reported in this section, two key subthemes have been identified. These sub-themes were recognised by the research participants as having an enduring influence in forming and sustaining their perspectives on engaging with assessment data and music literacy. These two additional sub-themes were identified as:

(i) A lack of consistent primary school music education and,
(ii) Extremely multifarious student cohorts in the initial years of secondary schooling

In analysing the data, teacher participants acknowledged their professional desire to engage with well-structured diagnostic assessment that could assist them to close the gap in learning in the context of inconsistent primary music education. However, from a practice perspective they do not carry out this type of formative assessment due to curriculum misalignment and the overwhelming task of differentiating the curriculum for such a diverse cohort of learners.

Further, a group of participants recognised their work in other curriculum areas reflected successfully using assessment data to provide remedial and corrective instruction and they expressed explicitly that they believed the application of data in music could achieve similar outcomes. In contrast however, the participants stated that they did not know how to create such a tool and that, although inclined to do so, teachers reported that they had no time to do so. Moreover, teachers were unwilling to rank students in line with the curriculum mandate based on professional feelings of inequity.

Teacher participants expressed a belief that assessing music literacy in the initial year of secondary school was unjust and inequitable as a result of the inconsistencies in primary music education and avoided it when possible; teachers overwhelmingly opted for more holistic performance assessment. This perceived inequity negatively impacted the participants perspectives on engaging with data particularly when students who have had limited access to music education in the primary years were required to achieve expected levels in the Australian Curriculum. Teacher participants specifically identified the situations in which these students need to learn seven years of music within the very limited curriculum time allotted to music education at most school. As Bronwyn stated, “No matter how hard a student tries, if they haven’t had [a comprehensive primary program in] music, they basically have to do seven years of music learning in a semester or term" (P2.0119: FN). It was the teachers' perspective that the student who has made years of progress should be reported on their actual learning progress rather than against the outcomes-based syllabus.

The final point made by the participants regarding Dilemma 2, being reported in this section, related to what they believed to be the impossibility of differentiation to address the learning needs of all students in classes with extreme levels of prior learning. The lack of continuous music learning in primary schools resulted in more marked differences than that found in other subject areas and teacher participants claimed that these extremes were too difficult to address and overcome in the short time available to them. Correspondingly, the participants felt that differentiation was, at times, futile when their students were still required to complete common assessment tasks for reporting purposes.

Thus, it can be concluded that teachers were experiencing a great deal of ambivalence in their work as music educators in the first year of secondary schooling as they struggled professionally and personally with the curriculum expectations outlined in the Australian Curriculum in a context where the diversified prior learning of the students entering the first year of secondary school presented them with such diversification of knowledge and abilities that individualised data based assessment was deemed highly problematic. Once again it can be concluded that although teachers expressed a professional desire to engage in rigorous assessment processes, they found at the level of practice it was impossible to do so.

Throughout the interview process, teachers identified invalid assessment practices and limited personal resource and skill to create new assessment tools or to look at assessment in different ways. These personal insights into assessment practice and assessment literacy indicate a low level of self-efficacy in relation to assessment which gave rise to the articulation of the third dilemma: Assessment Expectations versus Teacher Assessment Literacy. The analysis of interview data pertaining to Professional Expectation Dilemma 3 will be explored next.

5.1.10 Professional Expectation Dilemma 3: Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy.

"There are various ways that people assess, I guess. You know, just testing the waters and stuff like that". (P4.1118:3)

Introduction.

Integral to the set of Professional Expectation Dilemmas that underpin the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education, is the final theme that evolved from the analysis of participant interviews. This Professional Expectation Dilemma, assessment expectations versus teacher assessment literacy, was expressed in interviews as participants claimed on one hand to be committed to the importance of a rigorous assessment regime, however on the other hand teachers acknowledged that they had little professional expertise to do so. As with the previous sections, the interconnected nature of the themes was evident and highlighted the complexities in understanding the phenomenon of teacher perspectives with many themes and sub-themes intersecting.

This dilemma was underpinned by three sub-themes as articulated by participant teachers.

(i) Validity of assessment
(ii) Initial teacher education (ITE)—assessment literacy and data engagement
(iii) Professional learning opportunities—assessment and data engagement

It was the perspective of all participants that they sometimes transact invalid, idiosyncratic assessment methods as a result of being both time-poor and in attempting to deal with such a diverse community of learners entering secondary schools. Further analysis of interview and survey data, likewise, highlighted low levels of self-efficacy amongst the participants for assessment literacy skills to design more appropriate assessment tools as well as a lack of willingness to adopt atypical assessment methods. Additionally, most participant teachers referred to reporting timelines and interruptions to learning time (through performance and extra-curricular expectations) as being influencing factors for their assessment decisions. Harriet acknowledged the implications of this behaviour on the validity of assessment by saying that "reporting takes precedence, but I don't always think it is best practice" (P4.1118:4). Participants referred to methods of assessment that were designed for teacher convenience and for the sole purpose of having something to put on the report, rather than rigorous and authentic assessment. Finally, participants identified emotional distress resulting from having to report against the Australian Curriculum standards when many students have had limited exposure to music education through no fault of their own. These themes will be further analysed forthwith and evidence provided that highlights why teachers fail to adequately engage with assessment data.

Although there are four integral areas for assessment in music education, performance, literacy (theory), aural skills and composition, participants avowed an imbalance in both the teaching of, and assessing of these components equally. Further, participants referred to idiosyncratic and misguided assessment methods which were unable to produce useful data to improve student outcomes or guide improvement in teacher pedagogical praxis, assessment or data literacy.

Although Australian teachers are required to fulfil the professional expectations for assessment as set out in the AITSL standards, participant teachers identified assessment practices that pay lip-service but do not meet these standards. Interviews with participant teachers described a restricted range of assessment methods and tools, a reliance on one form of assessment over others, and a deficiency in understanding data use for the purpose of improving student outcomes and pedagogical practice. Participants self-confessed a belief that they have a paucity of skills to meet current assessment expectations.

Each of the sub-themes, validity of assessment, initial teacher education and finally, professional learning opportunities will be dealt with in turn in the following sections.

5.1.11 Validity of Assessment.

One of the difficulties encountered during the interview process was to keep the participants focussed on the central theme of the research, that of formative music literacy assessment as we explored the research question, *what are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* In all semi-structured interviews, participant teachers reverted to discussing performance assessment first and foremost and needed regular refocusing to elicit their perspectives on music literacy assessment. Of particular interest to the researcher were the participant comments that although they primarily focussed on performance and performance assessment, they believed performance assessment to be fundamentally flawed and subjective. In contrast, they argued from their professional perspective that the assessment of music literacy would provide valid data on student learning. Although this research is designed to uncover teacher perspectives as they relate to music literacy, the interview data revealed something quite different. A consistent theme that was identified by all participants related to the purposes that they had assigned to the assessment of performance and the argument that performance assessment directly impacted on teacher perspectives on engaging with data from music literacy assessment. This was not the focus of the key research question; in fact, it is quite the opposite. However, it is a theme that consistently shaped participants perspectives regarding discussions around assessment and the use of data in music education classrooms. It is therefore important to understand the intentions of teachers in making their assessment decisions as the following sections will show.

Participant teachers felt they were more able to differentiate in the performance aspect of music assessment than in the testing of music literacy. It was further reported by the participants that performance in the initial years of secondary school was almost exclusively enacted within a group context. The analysis of interview transcripts showed that participants used performance assessment to *hide* students with lower levels of music knowledge, which subsequently enabled teachers to avoid failing or applying lower grades for students who may have made great learning progress, but who were still not at the required level to meet the curriculum standards. Correspondingly, participants recognised that high levels of subjectivity impacted performance scores, making them theoretically invalid in the minds of expert outsiders. Relating to performance assessment, Luke said "you are never going to get rid of subjectivity altogether. There is always going to be an element of subjectivity in what you are doing" (P6.0619:1). Furthermore, he articulated that many of the rubrics he used provided little help with regards to establishing a more objective approach to assessment. Luke argued that the content of rubrics was largely ignored as teachers gave the student the result that they "felt" was appropriate and resorted to their own prior experiences of being ranked in music performance. In justifying assessment methods through the mode of performance, Luke explained:

> I think still in music we have got very arbitrary things such as eisteddfods where numbers seem to be plucked out of the air, and it is luck of the draw because if you are the first candidate of the day, you are going to get a mark between 70 and 80 and the rest of the day is going to be picked depending on how that person played in relation to the very first candidate and there is no explicitly developed criteria, so what does it then come back to? Purely a selective judgement, whether one performance was better than another and to a degree in the AMEB examination too, because there is not published set of criteria for what an A is versus and A+ versus a B or a B+, how does one determine what justifies or quantifies the grade given at the end of the examination. Is it a check list in that examiners head at that particular time and for that particular instrument or is there wider criteria that is developed and therefore, if it is the former, is there room for complete subjectivity in assessment? So long winded answer to a short question is that I don't think we can ever get rid of the subjectivity but that may also be healthy because when you are playing in front of an audience, for performance, some people are going to love it and some will hate it. And they are making a subjective judgement on the basis of what you just did. (P6.0619:1)

The reference to audience judgement was made by all participants. Although Helen claimed to disapprove of assessment, she stated, "I obviously have my own subjective scale that I judge things on and [...] I could tell you which performances were the best. And it is interesting that whilst I say we shouldn't be judging people's creativity, we do every day" (P5.0619:10).

Likewise, in her second interview, Harriet claimed:

> I suppose it is very questionable, the quality of assessment, because music is often assessed subjectively and I think that it is hard for it not to be. It is not cut and dried, like an artwork, someone is going to come along and love it and another person is going to come along and say, "that's the biggest piece of rubbish I've ever seen in my life". It is a subjective subject. Some people are going to love it [a performance], some are going to hate it and that is great because that is what makes it exciting. But it makes it very difficult to assess and that is the real challenge because it is not black and white. (P4.0419:8)

Despite acknowledging the subjective nature of the method integral to performance assessment, participant teachers identified a number of reasons that they chose to assess the performance of music as the main, and sometimes exclusive assessment of classroom music. Firstly, using group performance reduced the number of assessments to be marked and reported on, providing the teacher with more time for teaching, as previously discussed. In this method of assessment, ensemble members (students) customarily got a group mark and the same report comment. Marking group performance and writing reports was therefore more manageable, particularly at the end of year when teachers had other performance commitments. Bronwyn described a more productive purpose for her use of group performance tasks by saying, "you can pair them [students] up with someone that might be really good musically with someone that hasn't done music before and if there is a group activity that would allow them to develop faster" (P2.0119:3). In comparison, the research participants reported that, from their perspectives, music literacy assessment was "black and white" (P4.0419:8; P5.0619:7), the student got it right or they got it wrong. The participants claimed that this assessment was more valid and produced valuable data for improving student outcomes. Despite this professional stance, many of the participant teachers felt conflicted about reporting low marks which became more evident through music literacy assessment than through performance marks. Helen said "I can see that there are times when things need to be right or wrong in order for them [the students] to become better at doing it. But I always hate to crush [their] creativity" (P5.0619:10). Bronwyn expressed a similar emotional response stating, "I get all sad because I don't want the kids to fail" (P2.1118:3). This emotional response directly impacted on the perspectives of participant teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. It is evident that on the one hand the participants reported a professional commitment to the inclusion of music literacy assessment as integral to learning in the music education classroom. On the other hand, the participants limited the use of such a strategy due to concerns about student self-esteem and confidence.

An additional influencing factor in the dominance of performance assessment identified by some participants was the inclusion of non-learning outcomes such as behaviour, effort and participation. These areas, although irrelevant to music assessment standards set out in curriculum documentation, seemed to be valued by some participants and were included in their own idiosyncratic assessment strategies. Participation, teamwork and behaviour could not be included in literacy testing, therefore providing less flexibility in outcomes. In Kelly's case, she used teamwork skills and behaviour as an influencing factor when reporting on student learning outcomes. She discussed one particular student's results as being impacted by non-learning outcomes by stating that "every time I asked him to help someone else, he refused to. So, because of his behaviour I marked him down [on his performance]" (P1.0221:9). As Head of Faculty at his school, Luke expressed similar concerns.

> The teachers aren't accurately assessing their level of performance. It's largely based on, "Oh the kid puts in so much hard work and he just wants to achieve and he's a lovely boy and he's doing a beautiful job on performance for where he is and we want to encourage and be pastoral about it". But the reality is, they are not playing that well and so they are not being marked with any sense of where they really fit. (P6.0619:3)

Further, Luke attributed these poor assessment practices in the lower years of secondary school as a contributing factor towards reducing enrolment numbers in the following years of study and poor results in the written component of elective music, particularly at the ATAR level. Luke stated that "there is a narrative that surrounds [music literacy] that says—don't do music because you are going to get smashed in the exams or, the written exam is too hard and you won't be able to score highly enough" (P6.0619:3). This teacher argued that this was a result of students finding the expectations to be too difficult "which is probably related to the fact that they are not being assessed properly in the first place and they aren't developing their skills in the middle years of schooling to be able to sustain them through to the end" (P6.0619:3).

The interview data suggests that teachers lack the professional expertise to differentiate across a range of assessment tasks to provide comprehensive assessment for music students. For example, Luke reported on the importance of balancing assessment and addressing each of the assessable areas to avoid skewing student results. Yet he was unsure of exactly how to do this. He stated:

> You can have one assessment task that gives you an incredibly skewed result. If I assess a student playing technical work and doing sight reading, and they might be really good, and that is an isolated assessment and they get 85, well that's great. But then I might sit them down to do an aural test and they get 30%. And I think, this is crazy. You absolutely gunned your practical assessment. What is going on here? But perhaps if we incorporated lots of those different elements into the one assessment task, we would get a much better picture [of where the student is really at]. (P6.0619:6)

However, the issue of skewed results and reporting was also a cause of conflict in the reporting process as teachers grappled with reporting in the form of one figure or overall grade when they were cognisant that a fuller and richer method would indicate more clearly the outcome of each student's learning. Participants felt that the provision of a single grade mark was not a true indication of the students' skills. As Craig stated, "What we are doing is a failure in understanding how to measure success. The assessments don't tell us what a child knows or doesn't know" (P7.0919:3). Teacher participants believed this was a concern as there are four distinct areas of learning and assessment.

The four main assessment areas of composition, literacy (theory of music), aural skills and performance, make up the main focus areas of the curriculum for music education, but many teachers offered quite unique perspectives regarding the role of literacy on the domain of composition. Some of the teachers (e.g., Frances and Kelly) suggested that the learning of composition should occur through either improvisation or group tasks in which students experiment with instruments with no requirement to notate, use expressive signs and symbols or articulation, despite notation being a requirement of composition in the Australian Curriculum from Year 7. Moreover, the participant teachers advocated that composition be assessed exclusively through performance of the piece. Frances gave the following example:

> Like what I did with the students last year. They had to compose a Gamelan piece in groups. We had looked at it over a week and then did the assessment performance at the end, and they said it was the best thing that they had done. [...] for me that is learning through a lot of playing. But not just mucking around like actually learning some skills and playing in groups. So, I guess I felt that that would be where I would assess all of those other literacy things like rhythm and melody, through performance. (P8.0421:8)

Craig provided an alternative perspective to that offered by Frances as he requires his students to notate their compositions individually. However, he assesses the composition exclusively through student's performance of it. This results in flawed measurement as the composition is limited by what the student can perform and likewise, a good composition may be assessed lowly because of a bad performance of it, rather than its own creative entity.

> I am really loving the compositions because students upload their scores and a performance of it. Many of the compositions that we thought were good in the past, were just composed by just using the theory side of music just following the rules and we couldn't hear them, because in truth, they couldn't play it. (P7.0919:4)

Clearly the data shows teachers' bias towards performance and the creative elements of music education, avoiding the more objective assessment strategies inherent in music literacy. In relation to composition Helen's perspective on avoiding music literacy was stated as:

> That's the thing about music there is so much of it that is about the creativity and the person and that needs to be celebrated as well. And that is why I am a bit reluctant to assess that [literacy] in some way because on some levels it doesn't matter whether it is right or wrong it is about their experiences and expression. (P5.0619:10)

As discussed in section 5.2, participant teachers expressed a belief that diagnostic testing and ongoing formative tests could be useful in providing individual assistance to students. However, they could not envisage the necessary strategies to make this happen and claimed not to have the expertise to separate these forms of assessment from summative tasks. It is significant to note that all participants offered a similar perspective regarding their preference for assessment in music education. This was best captured in Bronwyn's words: “Oh, a theory test” (P2.1118:FN).

In contrast, the only participant to discuss the explicit assessment of literacy skills in any other format than a traditional theory test was Frances. On the one hand she reported that her school used online quizzes, however she also claimed that these where largely invalid and designed for teacher convenience. The assessment program being used at Frances’ school marked each multiple-choice question as completed by the student. However, the student was able to resubmit responses until they found the correct answer. Frances thus argued that music literacy was assessed using online “quizzes where kids are pretty much guessing, hitting a button without thinking” (P8.0421:10) but the benefit was that the computer marked it and gave them the end result, saving a lot of time for the teacher.

As the interviews unfolded and the data analysis evolved, it became clear across the participating cohort that theoretically, the teachers continued to support the notion of using well designed formative assessment strategies that had the capacity to provide valid data that would guide the learning process. However, in practice, this was not the case. As one of the more experienced teachers, Margaret, a senior leader, commented that “the benefits would be programs that are more applicable to individual kids needs and learning styles and music would mean more to the kids as well we could apply the learning to the level of the kid” (P3.0119:10). Margaret’s belief was that this more nuanced teaching would lead to more valid assessment and “results would be less about how you felt about something and it would be seen as a more valid subject” (P3.0119:10).

This response was echoed by all participants, but they also felt they had no idea how to construct or develop assessment materials or how to use the data they generated. Research participants continued to emphasise that they had no time to develop or implement such assessments, were unwilling to give up any more of their teaching time, moreover, the participants claimed they received no training in their initial teacher education or in professional learning. This sentiment was expressed by each of the participants but is best captured in the words of Margaret.

> I would be more informed for when I set the class work...But there is no specific thing [test] for music knowledge, and we don't have the time to make or design them, we don't have time for collaborative talks. I don't think anyone would know how to make an effective test and we wouldn't have time to really look at the results anyway. (P3.0119:5)

It is evident that while the participating cohort continued to support the notion of using well designed formative assessment strategies that had the capacity to provide valid data that would guide the learning process, they actually struggled at the level of practice, for the reasons outline above, to develop and utilise assessment tools to meet their aspirations. One of the strongest inhibiting factors for engaging with assessment data in music literacy as identified by participants was a strong ethical dilemma where on the one hand teachers understood their professional obligation to use valid assessments and to report student learning outcomes whilst on the other hand, believed this to be unethical if having to report against Australian Curriculum standards in the instance that the child has had limited or no music education up to this point.

The lack of self confidence amongst the teachers as experts in assessment and DBDM became evident and is an important consideration in this research. The theme of self-efficacy around teacher assessment literacy is the focus of the next section with a particular focus on the preparation of music teachers through initial teacher education.

5.1.12 Initial Teacher Education - Pedagogy and Assessment.

As the most recently qualified teacher, Frances was the only participant who had received any form of preparation in the use of educational assessment data during her initial teacher education course. Craig and Luke had been exposed to data analysis through their Head of Faculty roles but could not recall any mention of data literacy in their initial preparation for teaching. In Frances' case however, she felt that learning to engage with assessment data as it was presented in her teacher preparation phase was superficial and was only addressed as it related to external assessments, such as NAPLAN and TIMMS data. She reported that the initial teacher education course on assessment did not relate specifically to music education or to the development of assessment tasks designed to elicit data for improving student learning outcomes or teacher pedagogy.

It became clear through the interview data that not one participant ever received any instruction in their preparation program that related to designing or implementing assessments for the use of gathering formative assessment data that had a diagnostic purpose, specifically within music education or more generally. Some of the responses that illustrated this point include the following:

> Craig: Not a bit. I honestly don’t think I learned anything in my teacher training education degree about how to teach. It was complete rubbish and nothing about assessment, but we did do some stuff about levelling in outcomes based. And we practiced matching performance against the crudity of outcomes. It was hopeless, just hopeless. (P7.0919:3)

> Bronwyn: I didn’t really have much from my degree. There wasn’t any or much preservice training on assessment techniques or strategies at university. (P2.1118:5)

Likewise, all research participants identified that they did not receive any training in the development of assessment tools, or music assessment in general. For example, Helen and Kelly made similar comments; Helen said, “So I certainly had no training in assessment in music” (P5.0619:8), and Kelly stated, “there was not a lot of instruction on how to construct or create assessment and nothing on understanding data at the end of assessing” (P1.0221:1). Luke provided a more elaborated response:

> A fat zero to put it bluntly. Nope none. [...] I learned on the teaching practice rounds. [...] And some of what informed that practice was my own experiences in high school, but not through university no. We had to come up with sample learning programme for a unit of work but there was nothing about how the course was structured or how to set

> up an assessment programme. [...] No. zero. Zero training at all. (P6.1118:7)

Consequently, a number of the participants suggested that as a result, they assess their students in the same way that they were assessed or judged in performance. Luke's previous comment highlighted this reliance on personal experience when he claimed, "some of what informed that practice was my own experiences in high school". Margaret's comment is similar:

> I have drawn on what I saw in my instrumental lessons. I had no choice really, I wanted to teach and so I did it the way I was taught, but I only had my instrumental lessons, how my violin teacher taught me. And then I had to keep doing professional development to improve and keep up. (P3.0119:8)

In Harriet's case, she described it as being "in the dark a lot of the time" (P4.0419:3) and just learning "on the job from other teachers that had no training in assessment either" (P4.0419:3). She described using data and designing assessment thus:

> It wasn't something that we touched on. There seriously should be a unit just on assessing students, but there is nothing like that. There is no guidance at all with assessing, you just have to learn on the job really and you are dictated to by school and state documentation to guide you as much as possible and that has its own flaws and limitations as well. (P4.0419:3)

The response was similar from all participants as Bronwyn also expressed that it "was a bit vague" (P2.1118:4) and she learnt on the job. Only Craig expressed confidence in his assessment literacy and engaging with data, but he states that these skills were developed in an area outside of teaching.

Throughout the interviews it was made clear that teachers entered the profession without sufficient knowledge regarding assessment for DBDM and they continued to express concerns and low levels of self-efficacy in developing or using appropriate assessment tools**.** This continued as their careers unfolded and the place of professional learning made little contribution to developing their confidence or overcoming the dilemmas they were experiencing with assessment in music education.

5.1.13 Professional Learning in Assessment and Data.

Participant teachers reported having limited access to professional learning relating to assessment or the used of assessment data in music education. The following issues of concern were raised:

(i) Accessibility and relevance of professional learning provided by schools
(ii) Accessibility and relevance of professional learning from outside providers

In the first instance, research participants declared that in-house professional learning was often difficult to attend as it often clashed with their extra-curricular expectations, as already stated. Additionally, however, participants identified that when they were able to attend, much assessment and data training was irrelevant to their circumstances and that they were not provided with learning to make it relevant or to improve their personal assessment literacy. In particular, participants identified professional learning days at the beginning and end of year, when whole-school staff were presented with externally sourced data like NAPLAN and ATAR data as the only time they engaged with any form of assessment data. It was also stated that other people on school staff conducted analysis and presented it at those meetings. The following statement was made by Luke.

> It is interesting really at the beginning of the year, a lot of the staff, particularly in the middle and junior school will look at the Orwell testing data. And they will look at the results of the students from the previous year, but those [teachers] that have a little bit of experience with data will have a look at it and pull it apart a little and go, compared to their Orwell testing results, what I am seeing in the classroom matches up or, What I am seeing in the classroom actually doesn't match at all, this kid should be absolutely gunning things but they are dragging their feet or making life difficult. They will use those kinds of things to that extent. But those that don't know how to interpret data, well it just gets dismissed. (P6.0619:5)

Luke’s comment highlights the issues around the absence of data literacy training in schools. Luke’s contention was reinforced with this comment from Margaret.

> There isn’t much [professional learning] about how to assess. I don’t think there is. There has been a bit [at our school] but not a lot and usually only about senior school requirements. When school runs something on assessment it’s because we are using a new system or something like that, but it is not geared to music. (P3.0119:8)

Harriet felt that professional learning that she had attended was generic and did. not allow her to learn or improve her practice.

> I think often you go to professional developments that are generic you don’t get very much out of them because you are not developing your own individual weaknesses, not develop weaknesses. You are not identifying your weaknesses and building or strengthening your skills in those areas. (P4.1118:8)

A different perspective was articulated by Helen who raised the concern that teachers are expected to provide individual learning plans for students, but teachers are expected to attend generic professional learning that rarely relates to music. She said:

> I am a really big fan of individual learning for students as well as teachers but it is really hard work [...] And therefore, whilst I think that [individualised professional learning] would be great for the teachers, what organisation is going to take that on and be committed to allowing teachers to that sort of specific professional development, even if it was going to make a huge improvement to their teaching and therefore to their students and overall to their school. (P5.0619:9)

The paucity of external professional learning available in assessment and data literacy, particularly in music was articulated by a number of participants. For example:

> Margaret: A lot of it is about how to teach something better. There isn't much about how to assess. (P3.0119:8)

> Luke: Nope. None at all (P6.1118:7)

Moreover, Helen discussed her concern that it is so difficult to find professional learning on such an important topic, but also questions teachers' willingness to give up time to do professional learning in the area of assessment. Discussing the paucity of professional learning in assessment, she said her state authority:

> "[...] puts out PD things and I have seen some related to assessment but not in music education and nothing to do with using data. For something that is so important and that needs to be used correctly, teachers are certainly under resourced in that area of professional development which says to me that a lot of teachers don't really know what they are doing with assessment or data and therefore, the data is not being looked at and therefore utilised properly. [...] But I also imagine that a PD in assessment would be pretty dry. How many people would voluntarily put their hand up to go to that, would be my question". (P5.0619.9)

The paucity of external professional learning available in assessment and data literacy, particularly in music education continued to be problematic for the participant teachers and when presented, are regarded as assessment strategies that pay lip-service but do not meet these standards.

5.1.14 Summary Part 3.

Drawn from the participant interview data, teachers identified a distinct gap between their professional assessment expectations and their professional assessment literacy capabilities. Moreover, the participants identified a paucity of music focussed professional learning opportunities in assessment techniques and data engagement strategies at the levels of teacher preparation and teacher career development. It is reported by participants that this absence of opportunity influenced their perspectives on assessment and data use in assessing music literacy. Once again, participants acknowledged the benefits that could be gained for student learning outcomes and the pedagogical insights that they could gain from understanding how to design and implement more valid assessment tools but felt that neither the opportunity was afforded them to undertake such learning, nor the time to design, implement and examine subsequent data was available to them. It was confirmed by all participants that they had limited or generic training in data engagement and had not found any professional learning relevant to assessment or data use in music education.

The analysis to date has presented three Professional Expectation Dilemmas that were generated through analysis of the data reporting on teachers' perspective regarding assessment for DBDM in the music classroom. Teachers identified that they normally gave much less focus to music literacy as they felt they could not differentiate literacy as extensively and successfully as performance and therefore, they could manipulate assessment results to avoid students with limited prior learning receiving poor grades. These invalid assessment results were further justified by participant teachers as they determined that students with limited prior knowledge would not be continuing in the elective subject and therefore the results had no bearing on future learning.

The three dilemmas reported to date are:

> Dilemma 1. Teachers are strongly committed to authentic assessment and DBDM but are constrained by a time poor environment in which teaching and learning takes place
>
> Dilemma 2. Teachers are fully aware of the curriculum expectations outlined in the Australian National Curriculum but the diversified prior learning of the students entering the first year of secondary school constrain the delivery of a full curriculum
>
> Dilemma 3. Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy

The next phase of the data analysis will turn to presenting three Personal Belief Dilemmas. While each of these will be reported in turn, as stated earlier, in reality each of these dilemmas is inextricably linked to another as the complex world of data-based assessment unfolds in the professional work of music educators. This complexity will be fully addressed in Chapter 6 but for now the three Personal Belief Dilemmas under discussion forthwith are:

Dilemma 4. Teacher's personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning, resulting in the detriment of assessment for DBDM

Dilemma 5. Teacher's perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs

Dilemma 6. On the one hand teachers value the professional knowledge they have acquired through professional learning but on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

5.2 Personal Belief Dilemmas

Personal Belief Dilemma 1: Teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning to the detriment of assessment.

> **"I had fun, but I'm done! - kids will have fun when they feel successful".**
>
> **(P6.0619:11)**

Introduction

Through analysis of interview data, three sub-themes underpinning this dilemma were identified. These include

(i) Due to the limited time available, pedagogical decisions are made based on trying to improve retention rates by making music fun. There is no time for literacy

(ii) Teacher perspectives on what students like shaped the teaching of music education. Theory is boring -The role of the Australian Music Examinations Board (AMEB) and initial teacher education (ITE)

(iii) Teacher perspectives on the value of music literacy problematised the implementation of curriculum expectations.

During interviews, research participants revealed a sense of internal conflicting beliefs when discussing the teaching and assessing of music literacy. Participants initially identified two principal hypotheses for making music fun, which were elaborated on and explored during the interview process and which led to the sub-themes. The initial values articulated by teachers leading to the first sub-theme were identified as (1) a desire to make music fun and achievable within limited curriculum time available for all students, including those with limited prior learning, and (2) the need to make music fun to encourage student participation in the elective years. Although initially claiming that making class fun was to make it appeal to a greater number of students including those that came from a limited musical background, participant teachers were aware that students with limited prior learning do not generally select to continue their music learning anyway and would never succeed in the elective years. As interviews progressed, participants drew on their own recollections of their learning experiences in music literacy and used these experiences as justification for the pedagogical decisions they made. Participants expressed personal beliefs that learning music literacy was “boring and dry” (P6.0619:9), further claiming that if teachers were going to improve participation rates in elective music, they needed to make music *fun* in the limited time they had with their students. Further, participants expressed paradoxical beliefs about the value of music literacy, stating that they want to create literate musicians, but at the same time, they do not prioritise music literacy. Moreover, participants articulated a belief that students do not like assessment, and therefore, based on this belief, participant teachers avoided the written assessment of music literacy.

The next section scrutinises participant interview data in reference to these sub-themes. The first sub-theme, insufficient time to teach music literacy, underpins this dilemma but also reflects some of the key concerns underpinning the Professional Expectation Dilemma 1 in section 5.2, further demonstrating how personal beliefs and professional expectations are inextricably linked. An analysis of relevant interview data follows.

5.2.1 Insufficient time to teach and assess music literacy (theory of music).

Participants reported that they did not have enough time to teach music literacy, particularly in the circumstance where extreme levels of differentiation were necessary. While the teaching of music literacy was limited by classroom time, number of classes, extracurricular expectations and reporting timelines and requirements, the participants also reported that they made pedagogical decisions through the lens of personal and emotional beliefs, particularly regarding what students enjoy and what might entice them into further study.

As already quoted, Margaret said “There’s not time to teach them the literacy” (P3.0119:7), however, this statement required deeper analysis of interview data to understand the intended meaning as is the interpretive nature of this research. This was particularly because participants contradicted themselves by concurrently claiming that there was not enough time to teach and assess literacy, whilst saying they did music literacy in a fun way. The contradiction in the statements centred on participant interpretation of teaching and assessing music literacy as either the explicit teaching of music literacy or the use of implied learning through performance. Bronwyn's response was typical of participants claiming her approach to teaching music literacy was based in repertoire.

> I feel that I do music literacy, but in a fun way. If we are learning about dynamics, we will use one of the songs that we have done within a game activity for example and I will hold up a card that has pianissimo or fortissimo and they have to do that particular thing. (P2.0119:4).

However, Bronwyn admitted that when she assessed in this manner, she did not really have individual data on student achievement stating it's “like observational assessment type of thing” (P2.1118:2). This is a result of a situation whereby the assessment of music literacy, as a group performance task, affected the rigour and authenticity of the quality of the assessment of individual capability. For example, there were circumstances in which students where merely imitating other students or completing a compliance checklist, rather than having interpreted any notated music. Luke stated, “teachers aren’t teaching them the process [of reading notation] it is just memorised rote learning” (P6.0619:6) Thus, recording individual achievement became unreliable and reporting invalid.

Moreover, interview participants claimed they regularly spent time on repertoire for the purpose of teaching a music literacy outcome, but subsequently ran out of time to realise the learning intention. It is from this perspective that the claim for not having enough time to teach and assess music literacy seems to have originated. In Craig's case, he too supported the need for literacy skills and learning to be derived from the repertoire being used in the classroom, saying that "we would do that [perform] before we even introduce the time name or the notation because if they can't do that then they will misinterpret what the notation means" (P7.0919:5). However, despite his intention, Craig claimed to assess the literacy outcomes through group performance. And thus, also recognised the ambiguity that he experienced at the time of reporting individual outcomes. The holistic nature of this assessment approach will be addressed in section 5.3.5.

Although participants expressed a fundamental personal belief in the importance of developing literate musicians, the explicit professional teaching and assessment of individual students on music literacy was not largely supported by participants for students in the first year of secondary school. Harriet endorsed the belief that "kids like to do things...at the end of the day, our art is a praxial art really, isn't it?" (P4.1118:7) shifting the focus back to performance. Further, she supported the belief that students "get that [instant gratification] from performing whereas [they] don't get that from theory" (P4.0419:5). As Harriet explained in her first interview, the difficulties in differentiation required for teaching and assessing music literacy coupled with a perception that students "want to be playing instruments", means that she often prioritised performance over the teaching of literacy.

> It's a combination of all of those things [...] but it is an easy way out isn't it. It's kind of, it could be a lazy way to teach, couldn't it? But at the same time, that's what kids want. They want to be playing the instruments. It's a tug-o-war, it's a tricky balance to get right I think as an educator. (P4.1118:8)

The importance of Harriet's comment is strengthened by the fact that in her role as both a music and an English teacher, she claims she would never take this approach in an English classroom. Additionally, she said that differentiation for individual student needs are not as extensive in English classes and there is adequate teaching time to differentiate and use a variety of pedagogical tools to ensure all students understood. She added.

> Music is a very different beast, I think. Because there are so many facets, you are teaching basically four subjects in one but not given the same timeframe as something like English. To get through all of those components is really challenging to be honest. (P4.1119:2)

The second justification for the focus on *fun* provided by participants identified the necessity for the music subject to be competitive in the elective process. Australian secondary schools' delivery core and non-core subjects, of which music is considered non-core. In most schools, non-core subjects become elective at Year 8 or Year 9, where students select between a large number of subject opportunities. In this competitive environment, teachers identified the need to ensure minimum numbers for the subject to be offered on the timetable. If there are too few students, the subject may not be offered and the teacher maybe redeployed to teach in a subject area they are not trained to teach, have their hours reduced in the case of part-time teachers, or become redundant. Therefore, the desire to provide a *fun* experience for all students as a mechanism for increasing participation rates in elective music becomes stressful and personal. The incongruity implicit in interview responses indicate that the lack of time to teach music literacy translates to a lack of willingness to teach and assess an element of music deemed *not to be fun* when time is short and in the absence of good pedagogical practice, as Luke identified.

> I could almost guarantee you that numbers of students in a specialist elective programme will be dependent on who is delivering the course and how they delivered it the previous year and the relationship that person has with those students. [...] theory and the music literacy components, the early stuff to do with literacy and aural work. The sort of stuff that was boring and dry as it was presented in the Dulcie Holland books, if that is what the teachers are doing in the classroom, [...] Then no wonder kids are not going to be choosing the course because it is delivered so poorly. (P6.0619:9)

It can be concluded from the perspectives of the participants in this study that through assessment methods based on performance and a reduced focus on music literacy, teachers generated a view that they could assign grades that might provide sufficient reason and motivation for students to pursue their music learning. Participants identified a desire to provide a *fun* experience for all students by having less focus on literacy so that students with limited prior learning would consider furthering their commitment to music education by enrolling in the elective music studies in the second and third years of the secondary program. However, the interview data shows that all participants contradicted their own statements by claiming elsewhere that students with limited prior learning experiences and knowledge were:

(i) less likely to continue with music studies
(ii) may not be permitted to continue if deemed not to have potential to succeed in ATAR (higher level) music

Under these circumstances, participant teachers then expressed a desire for students to have fond memories of their music education to look back on.

Participant statements clearly indicate a personal belief that the learning of music literacy does not provide a sense of enjoyment or fun for students, as Margaret explained;

> We are just trying to give them some sense of enjoyment, fun, because they won't be the ones going on with music. They are not the ones that want to learn an instrument or go on with it. So, it wouldn't be fun if it was too formal and it would put kids off. It's a way of, you've got to find a way to make it creatively interesting, so why teach kids literacy? (P3.0119:5)

The rationale provided by most participants was that students would not be successful unless they have had instrumental music lessons and a sequential music program leading up to the first year of secondary schooling, and those who had a solid grasp of music literacy from their instrumental studies were the only ones encouraged to continue. As Margaret said, "the kids that tend to do well are the kids that are learning the instruments". Kelly's comments relating to her colleague express a similar sentiment.

> We have a young graduate teacher at the moment who is second year out and [...] from my observations and from listening to his communication, [...] he believes that if a student hasn't done music before, they are not going to pass already. (P1.0221:4)

Considering the four main, integral of areas for assessment in music education, (performance, literacy (theory), aural skills and composition) need to be addressed as a central component of the first-year secondary school music curriculum, it was the participants' perspective that the limited class time forced them to abandon some parts of curriculum. It was agreed by participants that as literacy is the element most needing extreme levels of differentiation, they tended to give music literacy less priority as a result of personal beliefs that music literacy was the most *boring* element of music education. Subsequently, participants acknowledged making pedagogical decisions that were manifest in their own experiences rather than research and curriculum expectations.

5.2.2 Theory is boring!

In the initial stages of the interview process, participants regularly referred to activities that are fun and those that were not fun, with some using the term boring to describe music literacy or music theory. Margaret made her point by commenting that she did not "think they [students] think music theory or literacy or doing tests on them is fun" (P3.0119:9). Further, Bronwyn elucidated her practices, stating that she only does "short segments of literacy within the classroom, within the lesson...otherwise I find that they [students] get bored" (P2.0119:2). Additionally, Frances expressed a similar sentiment stating that "we are concerned that students will get bored if we spend too much time on that side of it [music literacy], rather than on them actually making and doing" (P8.0421:10). In these cases, participants made assumptions that students dislike learning music literacy, based on their own prior experiences. Participants expressed a preference for performance and described music literacy as something that they *had to do* to continue with performance. Bronwyn stated that as a student, she "tried more in performance than the theory or the history aspect of it because that is what [she] wanted to do" (P2.1118:2). Correspondingly, Luke expressed the inescapability of studying music literacy as:

> I did [AMEB]. I did up to fifth grade theory and then didn't pursue it past that. But it was mainly I guess as you have to do this if you want your eighth grade [performance] certificate. You've got to do it. You've got to do at least fifth grade theory. It's kind of, you have to do

> it. I didn't want to do it. It wasn't something I wanted to do necessarily. (P6.1118:3)

Clearly Luke carried this negative view of studying theory within his personal beliefs and into his current professional teaching practices despite also desiring to create literate musicians.

Harriet provided a different perspective, as she explained her belief that the issue is not that music literacy is boring, rather, that "people can teach theory really dryly and that becomes boring and the kids disengage with the meaning behind the things" (P4.1118:7). In an identified absence of pedagogical training to teach music literacy, many participants commented that they teach music literacy the way they were taught, despite claiming to have disliked the process. For most participants this was via the AMEB instructional model and the Dulcie Holland theory books.

In Frances' case, she described her own school experiences of learning music literacy as being based on the AMEB and having undertaken AMEB theory (literacy) exams. Further, she described her experiences of the undergraduate music degree by stating, "we never had to do any written essays and theory, no. There was a lot of playing...I didn't learn much about music literacy or music theory at all...I don't feel I came away from [my institution] with a huge amount of knowledge of theory at all". She further explained that her Master of Teaching provided no assistance in the teaching of music and stated;

> No. We didn't learn anything about teaching music at all. It was all pedagogy. [...] I've never been taught how to teach music theory or anything in music. That is what I thought I would be learning in my degree, in the course. And I think that is what we should be learning. (P8.0421:5)

The issue of teacher preparation is an issue that may well be one of the reasons teachers lack the confidence to engage in assessment for DBDM in music education in the first year of secondary schooling.

Confronted by their own limitations and in the absence of other pedagogical strategies to teach music literacy, most participants said they used the AMEB model when they did cover music literacy content. After having spent many years teaching ATAR music students, Margaret said that she “found it a challenge” to teach the initial year of secondary school as she “had to think differently because they had no music literacy”. She added.

> I wanted to go back and teach them some basic literacy, but I was basically told not to do it because we just wanted them to have fun. It’s because there is so much pressure on us to do, I don’t know, we don’t know how to make music literacy fun. ...I think we don’t know any other way to teach it and it wasn’t fun the way we learnt it and it’s not fun the way we teach it. (P3.0119:9)

For Frances, the most recently qualified teacher, having learned no other way to teach music literacy in either her undergraduate degree or the Master of Teaching course, said she:

> Some of it is from the AMEB and then I also try and think, what do I want my students to learn and what is going to be useful for them in their music career? and not just what I have to tick off right now. (P8.0421:8)

The interview data analysis also led to the additional conceptual interpretation of the term *fun* as being used by the participants. In this interpretation, the term fun seems to be used in place of the term engagement and is therefore linked to behaviour management for which the teachers believe when students are more engaged their behaviour is better, and participants believe that students behave better when engaged with practical music and the use of instruments. Margaret had already stated that there was no time for teaching music literacy and expressed concerns that music literacy was not *fun*. In the following statement, Margaret uses the term engagement as an alternative to fun. In this statement, Margaret discussed using computers as a way of engaging students and improving classroom behaviour but said that when trying to teach literacy “they didn’t engage and my challenge was to think of ways to engage them that meant they were not stuck on the computer” (P3.0119:4). Likewise, Frances interpreted fun and engagement through the lens of behaviour by saying, “[playing] music is fun and so I don’t think they need to be mucking around and doing whatever” (P8.0421:8). The connection between higher level of engagement in performance-based music and behaviour management indicated another area in which further study may be undertaken.

A lack of direct instruction in music literacy and the negative personal beliefs participants associate with music literacy informs the findings of the research. As the study investigates the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education, the emergent themes and sub-themes explored thus far indicate that teachers have a lack of data to engage with due to pedagogic decision making based not on professional expectations but also on personal beliefs. The pedagogical decisions made by participant teachers and expressed through semi-structured interviews is further elaborated in the ensuing section which examines participant perspectives on the value of music literacy.

5.2.3 Teacher Perspectives on the Value of Music Literacy.

Data collected through semi-structured interviews exposed internal value conflicts within many participants. On the one hand teachers acknowledge the need for musicians to be literate, however, on the other hand, participants clearly articulated their personal desire for a focus on performance and performance assessment, where the degree of literacy may not be evidenced. Once again, participant teachers made reference to having enough time to cover the requirements of the music curriculum, as Frances stated, “I’d be able to do more experiential things without the pressure for the other stuff like theory. I’d do more playing” (P8.0221:4). In response to being asked if teachers should be teaching music literacy, Kelly stated “Yes I do, but I don’t think it [having music literacy skills] equates with being a good musician” (P1.0221:8).

Notwithstanding negative perspectives held by participant teachers regarding time, class size, lack of opportunity and assessment uncertainty, all expressed a desire to create literate musicians. These sentiments are captured in the following quotations.

> Luke: Because in the classroom we should be teaching the raw music literacy components and helping the students to gain skills in that area and improve themselves and communicate and then connect that across to the analysis work. To be able to say, what are you hearing in that? Now be able to express that in musical language and now let’s delve in

> and be able to pull that apart and analyse what is going on here and being able to express that with a great deal of literacy. (P6.0619:2)
>
> Harriet: ...you want to develop that love of music but we need to develop literate musicians not illiterate musicians but I think the danger is that a lot of courses or units at school can turn into that. We are developing illiteracy where students can play but they don’t understand what they are doing. (P4.0419:5)

Clearly this ongoing dilemma regarding the place of performance and literacy assessment presented ongoing challenges to the teachers of music education as students entered secondary schooling in the sample study settings.

5.2.4 Summary.

To summarise this section is to further explore the phenomenon of dilemma. On the one hand the participant teachers believed they wanted their students to be musically literate, yet on the other hand they could not see a way to ensure literacy skills, a way to teach literacy to multifarious cohorts or how to assess and report on student learning without it having a negative impact on their ethical beliefs relating to equity for student.

5.2.5 Personal Belief Dilemma 2: Teachers' perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs.

"In my whole career I have never worked in a school that expected me to do any kind of written testing in music". (P5.0619:6)

Introduction.

Participant responses will be explored in this section as they relate to the research question, *what are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?* The dilemma presented here is that:

Teachers' perspectives regarding music education value holistic assessment and the report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs. The dilemma is underpinned by two sub-themes:

(i) Holistic assessment practices that provide inadequate data: and
(ii) Fundamental belief that the purpose of music education is the creation of professional musicians

5.2.6 Holistic Assessment Practices that Provide Inadequate Data.

The sub-theme, Reporting Requirements and Timelines, explored in Section 5.1.4 provided interview data from participant teachers that described the use of holistic assessment in performance as a way of manipulating student results and for teacher convenience within the timelines for reporting. However, during the interview process, a number of participants (for example P3.0119:4; P6.1118:3; P1.0221:3) repeatedly referred to assessment as being "just a mark on a page", raising the issue that holistic assessment and the application of a single summative grade is convenient but provides limited useful data for the student or teacher.

Margaret explained that at her school the students "had performance assessments and you [gave] a mark, but you didn't really [give] any feedback or feedback to help [the student to] improve. The aim of the assessment was purely to put a mark on a report" (P3.0119:4)**.** Bronwyn's elaboration of this statement is provided in the following interview exchange, which highlighted both the problems with the holistic approach and the limitations of teachers to develop assessments tool that provided valuable data, and an inability of teachers to pull apart the elements of music.

> Researcher: Do you check that the assessment task is providing you with the information that you need to improve student learning?
>
> Bronwyn: No, I hadn't thought of that. I just do assessment in the same way that everyone does it. And I give a mark at the end. I keep a folder for each of my students with results in it, but they are overall results, not for each bit. And if they don't get a good mark, I let them do it again. It's not kind of asking for help with assessment, I didn't even think about the assessment. We just always do it, have done it like this.
>
> Researcher: If you let students do it again, what have you done in class to improve the outcome for the next time? Or how do they know what to learn for next time?
>
> Bronwyn: I just get them to do more practice so that they can improve their mark.
>
> Researcher: Do you have the students graph or map their own progress, so that they can see growth?
>
> Bronwyn: No. No, I haven't thought about that before, but they just have it in their folder so they can see where they are at (P2.0119:7).

To elaborate on the holistic nature of assessment tasks being undertaken in classrooms, all participants were asked to describe the manner in which they assessed melodic dictation and the purpose for conducting melodic dictation assessment. Although this task is deemed to be an aural literacy skill, there are many parts to it, including notational skills that form a part of music literacy being examined in this study. All participants described the process in similar ways. In the initial years of secondary school, teachers described the process for undertaking a melodic dictation to be a series of steps: Tell the students how many bars long the dictation will be, the time signature, a starting pitch and how many times you will play it. They also identified the purpose of a melodic dictation as a way to check if a student can recognise the pitch direction and relationship between one pitch and another, and they all identified that this assessment task was given an overall grade. This exchange was extracted from Bronwyn's second interview:

> Researcher: What about something like melodic dictation? How do you do that for example?
>
> Bronwyn: Well, we only really do it in treble clef and I would give them the time signature. In Year 7 we usually do four bars and I tell them how many times I will play it on the piano.
>
> Researcher: So, in Year 7 why do you do melodic dictation? What are you reporting on to the parents?
>
> Bronwyn: If they can hear that relationship between the notes, like the direction and where the notes go.
>
> Researcher: And that's reported to the parents?
>
> Bronwyn: It's a part of the aural test.
>
> Researcher: How do they complete the melodic dictation?
>
> Bronwyn: In their books or sometimes just on paper. It's in the end of term test too.
>
> Researcher: Do you give them the rhythm first?

> Bronwyn: No.
>
> Researcher: So, what if they get that [the rhythm] wrong, does that impact their mark? And what if they write it on the staff incorrectly?
>
> Bronwyn: Yes. it's part of the dictation. But I suppose when you think of it. There are a lot of different parts, aren't there? I hadn't thought of it like that before. [...] I've done it that way because that's the only way I've seen it done. But now that you've said it that way, it's not right really, is it? (P2.0119:7)

All interview participant responses were similar to that voiced by Bronwyn. When Kelly was asked how she knew what part of the melodic dictation the student needed help with and if the results were valid, she responded: "That's a really good question. No, the results we send home in that case, are not valid. And it possibly doesn't help the student" (P1.0221:8). Further, when Margaret responded to a question about the use of holistic assessment, she acknowledged that she had difficulty in providing direct instruction on elements of music literacy and therefore could not really assess individual elements to ensure understanding. She stated, "I didn't know how to break it down into simpler bits for a whole class especially for kids that haven't done a lot of music". (P3.0119:10)

Additionally, participants expressed a belief that music itself is fundamentally a holistic act and this belief influenced their assessment practices. One comment made during Frances' interview, exposed the connection that teachers placed on music's principal function as performance and highlighted the Personal Belief Dilemma faced by teachers during the assessment process. She commented; "We have to assess holistically because that is what music is" (P8.0421:7). As already quoted, this belief was also expressed by Harriet who said, "at the end of the day, our art is a praxial art really isn't it?" (P4.1118:7). The responses provided by participants highlight the existing dilemma where teachers' personal belief that music is solely a holistic activity, despite their professional knowledge and understanding of pedagogy and the elements of music that make up the whole.

Once more, the focus on performing as the dominant assessment method featured throughout the interviews.

5.2.7 Purpose of Music Education.

A number of research participants expressed a personal belief that the purpose of music education in schools was for preparing students to become musicians. This belief, presented in the data, created another dilemma for music teachers who feel their job is to get students to a professional level, leaving little room or time to dedicate to students who may been seen as holding back those planning to make music their profession. Luke commented thus:

> [...] whether you are more on the side of wanting to become a performer or the side of wanting to become a composer and so both elements are weighted equally in that regard. (P6.0619:2)

And he added:

> If we want to prepare them to go into that space and play with a symphony orchestra or play at the jazz club, do gigs as a commercial musician, whatever it might be. (P6.0619:4)

Similarly, Frances' focus was on the students who have indicated completing senior secondary music and focusing on the students who will have success at that level.

> And it is also good to know where students want to go with their music. So, for example, I know that all of the Year 10 students I have, want to go on to [senior] music. (P8.0421:4)

5.2.8 Summary.

The perspectives of participant teachers in this study indicated that as a profession, there is a strong belief that the priority for music education should be on performance and the preparation of students to follow music as a career choice. To this end, participants focus their assessment practices on performance which, due to the subjective nature of the assessment already identified by participants, does not provide valid data that can be used to direct next stages of learning, identify areas of learning needing redress or indicate professional learning opportunities for teachers.

5.3.9 Personal Belief Dilemma 3: On the one hand teachers value the professional knowledge they have acquired through professional learning but on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

> **"Music performance, being a narrow degree, it does and it doesn't prepare you to teach in the classroom".** (P8.0421:10)

Introduction.

The final dilemma elicited from the analysis of participant teacher interviews explored the dilemma of teachers' personal experiences of music education juxtaposed with the expectations of teaching and their professional knowledge in music education. Teacher personal experiences of music education strongly correlated with their desire to assess in a holistic manner and to provide a fun learning experience for students however, two further sub-themes relating to the facilitation of professional learning and initial teacher education became evident as they related to personal experience. Therefore, the primary focus of this section relates to the two additional sub-themes that developed.

(i) Initial teacher education - preparedness to teach the Australian Curriculum in the music classroom
(ii) Provision of relevant ongoing professional learning

5.2.10 Initial Teacher Education (ITE)- Music and Music Literacy.

Evidence provided through the analysis of interview data related to experiences in ITE with a particular focus on pedagogy, assessment and engaging with formative assessment data to improve student learning outcomes has been presented in section 5.3.2. This next section explores the self-efficacy of teachers working in the context of a music classroom after having first completed a Bachelor of Music followed by a Master of Teaching and the implications for teaching music literacy and understanding assessment procedures and techniques. Two different perspectives were provided by participants; the perspective of the participants' personal, lived experience, or from the perspective of a Head of Department engaging with their staff. These perspectives expressed the difficulties of moving into the classroom with the limited preparation provided by the Master of Teaching course. The graduate participants felt that there was a level of assumed knowledge of what having a music degree meant in the context of teaching.

> Frances: I did a Bachelor of Music majoring in jazz and improvisation. Music performance, being a narrow degree, it does and it doesn't prepare you to teach in the classroom. In terms of music literacy or particularly genres of music in the curriculum, like hip-hop or African music or Baroque music, I have no idea. I have no idea about that sort of thing. So that is where you have to get help or do your own research and learn all of that other stuff. Like, obviously I am aware of those genres, but in music there are so many types of music that you have to teach. But if you did a music degree, it is really narrow and you don't know the other genres much. (P8.0421:10)

Harriet described music performance degrees as being quite specific, whereas teaching music required a more general knowledge of music and pedagogy. She explained that Master of Teaching students are not being given the knowledge required to be a teacher of classroom music.

> Harriet: With music teachers that have a music degree and then go and do education, the music degree could be quite narrow and limiting, yet music teaching in schools means that you have to know about all genres and periods. And this is really limiting for some teachers because you are expected to teach across every genre. [...] I don't know much about Renaissance or Baroque. They are not genres that I play in. I know some elements of them but I don't play them and I've never explored

> them. I have played some Baroque things but I guess my depth of knowledge isn’t there. [...] So, it's hard to assess [in music] [...] these are some of the limitations because we [classroom music teachers] are expected to know so many things and provide a diverse education and all of these opportunities for our students. But we are limited by our own experiences and what we have been given in education as well. (P4.0419:3)

Luke discussed his concerns with the level domain specific music knowledge of the classroom music teaching staff came through the Master of Education pathway. As Head of Faculty, he expressed concerns particularly around the scope of the Australian Curriculum and the restricted experiences of music that many of his teaching staff had experienced. Luke said that “[t]he breadth of the course [in schools] is a problem in music. You’ve got to be able to analyse lots of different things. In the classroom you’ve got to have an understanding that is broader than just one element of music. And that is an issue for some people” (P6.0619:8). Later, Luke provided further comment on the teaching of music literacy by stating:

> At the same time, I think this is the case for many instrumental teachers, that their view of their job is to teach the musical instrument. But I would submit that you can’t teach the musical instrument without the elements of music literacy that go along side that. But what I find though, is that those teachers will say to me, “I don’t have time to teach the theory”. I don’t have time to unpack the background of these works or to analyse the detail [...] and therefore I will just teach the dots and I’ll tell them how to play and that’s about it. [...] I think it is a product of what they experienced as a musician growing up. And therefore, that is how they teach. Because that’s what they do. Is it because they are not trained educators? Most of these people are musicians, high calibre, highly trained musicians. (P6.0619:4)

Craig, also a Head of Faculty, expressed similar concerns relating to teachers moving from the instrumental program to the classroom via the Master of teaching program, stating:

> The teachers that have come into the classroom from a music degree or from being instrumental teachers seem to be more inclined to believe in talent and teach to it. They don't teach from a musicianship approach and don't do any aural element. And what you find is that those kids learn for other reasons, they might be learning outside of the school but they are not learning in the classroom. But they do well and the teachers think they are doing it. Some of the teachers from an instrumental background say that they only teach the good ones [musically advanced students] and are actually trying to drive the other ones out. They lack the understanding and the skills to teach those kids. (P7.0919:7)

Participants expressed a desire to learn more from their education degrees additionally, Margaret explained that "a lot of music teachers don't know this stuff [classroom curriculum], they only know their bit of it [music]" (P3.0119:6) because a performance degree is narrowly focussed on performing repertoire of that instrument. Margaret had already been teaching instrumental music in schools when she returned to tertiary education to continue her teaching career by completing the Graduate Diploma of Education. She stated: "I expected when I went from instrumental to classroom that I would have some sort of preparation so that I would know what I was doing, how to formulate lessons how to do assessments, but nothing" (P3.0119:9). She added:

> I did a BMus, then I did Honours and then I did a Dip Ed, then I did a Master's in music and when I started teaching, I did a Master's in Arts Management. The Dip Ed was one year. It was so boring and horrible. I was hoping to get examples of teaching, I wanted to go through curriculum but there was no one to do that and I wanted someone to look at the way I would teach or the way to formulate lessons. But there was no one to do that either. (P3.0119:6)

Margaret's comment relating to curriculum and pedagogy were member checked for clarification. Her explanation referred to the generic nature of the course and that no-one delivering the Graduate Diploma of Education was from the music faculty and therefore, could not provide music specific assistance (P3.0619:FN).
Margaret continued:

> I was expected to go out and watch other people. So, that is what I did to learn what I needed to learn. But I found that even when I went out to watch others, they didn't have much of an idea either. And so, when I sat in a theory group and I was explaining to someone how to help kids memorise scales and things in theory, I said "you just have to count to five". And I taught them the circle of fifths when the main music teacher said "Wow! How did you know that? How did you learn that? How did you figure that out?". So, I found that there was a real discrepancy with the quality of the teachers [that I observed]. The other lesson I watched was a guitar player, singing songs with the kids. There was no discussion, they just sat around singing songs. No music learning. (P3.0119:6)

Additionally, the participant provided further clarification on the content of the Graduate Diploma in Education, further expressing concerns that the course was generic and that there was an assumption that candidates with an undergraduate degree had enough knowledge to teach and assess in their chosen field. Margaret added:

> The content of the Dip Ed? We wrote essays about learning styles, theories of learning but it wasn't related to anything in particular and not related to music. We did one on the history of education and sociology. It was really unhelpful and there was nothing about assessment. (P3.0119:6)

Once again, the participant expressed a desire to improve their pedagogical practice and build skills in assessment but felt disempowered in their pursuit.

Two participants who undertook Bachelor of Education as their undergraduate studies commented that they learnt nothing about music education in their undergraduate degrees but felt that their learning was enhanced in their second teaching area. Luke undertook and Bachelor of Education in Music and ICT, but stated:

> In fact, the first two years of my [education] degree had no music education stuff in it at all. I did exactly the same units as the [music] performance majors. My only education units were minors in computing, believe it or not. It was how to use word and excel to advanced levels, but it had nothing to do with music education. We had no teaching pedagogy training or anything like that it was all just music. We were assessed through ensemble and on principal instrumental studies. (P6.1118:4)

Likewise, Harriet claims to have had no Music Education components in her Bachelor of Education, in which English was her second teaching area. Harriet identified manifest difference in the type and quality of ITE in the two curriculum areas. The following interview extract from Harriet elaborates on the sub-theme.

> I did an English minor, I learnt more pedagogically from doing the English minor than I did from my major in music. The examples that they gave and the way that they structured things was a lot clearer and it gave you a better understanding of how to assess students and how to structure a programme [...] I think mainly like examples of texts and how to analyse them and that sort of thing. Like concrete examples of materials and how to incorporate them into the classroom setting. I don’t really feel there was enough of that in the music education programme. [In English] [t]hey gave us the examples and then showed us how to apply it in the classroom and how to teach it. And then they showed you how to set up a unit based around that set of materials and then also how to assess that, the whole range, from woe to go. [...]. (P4.0419:2)

During member checking from the interview, the researcher sought clarification regarding what the Bachelor of Education (Music) did cover, Harriet responded, “At uni, they focused on our music not on teaching; we already knew this” (P4.0619:FN).

5.2.11 Provision of Relevant Ongoing Professional Learning.

All participating teachers in this study attend regular professional learning opportunities and all are members of multiple professional organisations. Additionally, seven participants have post-graduate qualifications and five of those participants are undertaking further studies. Helen is the only participant without post graduate qualifications. This would indicate that the participants in the research are not averse to furthering their own learning and have a desire to improve their practice. All participants expressed a personal need and desire to learn about assessment and data use in music education, however, they claimed that assessment is rarely addressed in professional learning and on the occasion that it is, the focus is on performance.

Throughout the interview process, participants expressed positive responses to using their student data to guide their own professional learning as conveyed in the following statements.

> Helen: That would be the ultimate wouldn't it and then teachers would be really committed to doing that because they want to do the right thing by the children in their classrooms and they want to give them the best of themselves. And that goes right across the board with individual learning. (P5.0619:9)

> Luke: I think it could be a significant step forward. For developing teachers and practicing teachers. (P6.1118:7)

> Kelly: That would be significant, I think hugely. If we as educators know where the strengths and weaknesses are in our own practice and we can revisit them with some coaching. Like one-to-one coaching with a mentor that is ongoing, like even for teachers that have perhaps been teaching for a long time to check in with someone every so often to say, look I'm getting a bit rusty with this or how can I use technology to improve my understanding in this area. I think sometimes there is a lot that is assumed about teachers that have been teaching for a long time and there's possibly a certain pressure as well on not to divulge your weaknesses. (P1.1018:6)

It is clear that participant teachers believe that using the data from their own classes could help them determine their own learning needs and guide their professional learning, however, Kelly raised a concern, which was echoed by others about being willing to expose weaknesses in their teaching and knowledge. These high levels of anxiety are also an inhibiting factor for teachers who feel they have low levels of assessment literacy and limited pedagogical approaches for the teaching of music literacy. Other participants made similar comment as expressed below.

> Helen: But also, teachers don't like to admit though, they are very reluctant to admit something that they don't know in their area of specialty so it would be a very brave teacher who would be putting their hand up and going, yep, I really need help in this area because clearly my students aren't doing well and that is because potentially, I am not teaching it very well. (P5.0619:9)
>
> Kelly: I think it is certainly difficult in education as a teacher, to admit your weaknesses. In high-achieving schools where the jargon and marketing often include statements such as "we hire the best teachers", there is definitely pressure to keep up and perhaps highlight your strengths rather than your weaknesses, save for perhaps, your closest colleagues and those who you engage with in professional development. (P1.0419:4)
>
> Harriet: There is that pride element and the fear factor. Like you are always thinking, oh someone is going to find out that I don't know this. (P4.0419:8)
>
> Bronwyn: I have also found it easier to ask questions of people on PDs, I am comfortable asking for help. Asking the right people. (P2.0119:7)

The only participant to be engaging with data to guide the professional learning of teachers was Craig. He stated:

> So, we [question] what are the needs of the students and what are the deficiencies overall? and also identify which teachers are getting secure outcomes on assessments and tests and then, what can we learn from watching that teacher or how are they doing certain things, that work better than others. We have things for composition, theory tests, aural and the practical things and then we are able to compare data sets. (P7.0919:7)

To restate, Craig's school provides select entry to music and has a prerequisite that all students are learning instrumental music with a qualified private instructor. However, Craig expressed that classroom music outcomes and pedagogy have improved since employing student assessment data to guide teacher professional learning.

5.2.12 Summary Part 2.

There are high levels of commitment to improving pedagogical practice within the participant cohort but also an acknowledgement of high levels of anxiety about revealing weaknesses in knowledge. This maybe a topic for further research in the future. Research participants also identified a paucity of available professional learning in the area of music literacy, assessment and data.

Through a thorough interrogation of interview data, this chapter has presented the perspectives of participant music teachers regarding their engagement with assessment data generated from classroom music literacy tests. The findings reported in this chapter provided analysis of responses from the qualitative survey questions and semi-structured interviews and addressed the central research question: *What are the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education?*

To date, the findings of the study have been presented as six dilemmas that permeated the work of music teachers in the first year of secondary schooling. These include the following:

- Dilemma 1. Teachers are strongly committed to authentic assessment and DBDM but are constrained by a time poor environment in which teaching and learning takes place

- Dilemma 2. Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary school constrain the delivery of a full curriculum
- Dilemma 3. Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy.
- Dilemma 4. Teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning, resulting in the detriment of assessment for DBDM
- Dilemma 5. Teachers' perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs
- Dilemma 6. On the one hand teachers value the professional knowledge they have acquired through professional learning but on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

The final chapter of the thesis will bring the research to its conclusion and provide a further analysis of the findings and present a set of recommendations that address the research question. Moreover, the concluding chapter will make clear the significant contribution that this research makes to professional knowledge in the area of assessment in music education.

Chapter 6: Conclusions

Introduction

This chapter, as the culminating chapter of the thesis is designed to bring the research to a close by theorising the findings and articulating how this study makes a significant contribution to professional knowledge in the field of music education. As an interpretative study it is important to address the key research question and portray the perspectives of teachers on the utilisation of data in the assessment of music literacy. This will be presented in section one of this chapter and as such will complete the research cycle and portray in general terms how each of the sub-questions was significant in generating new insights into this contemporary educational challenge, specifically in the field of music education. In doing so, a summary of the research findings will be recapitulated.

In Section Two of this chapter, the findings of the study will be juxtaposed within the landscape of the empirical research outlined at the outset of this thesis through the literature review. In this section, it will be demonstrated that this study has generated new ways of thinking about concepts that may have already been identified in the existing literature. New findings will also be identified. These new concepts will form the basis of the substantive theorising that constitutes the significant section of this closing chapter.

In Section Three, a narrative is presented, articulating the evolution of a new model of how teachers work with dilemmas in new times, particularly in relation to assessment in music education. The final interpretation, representing the complex dilemmas reported by the participating teachers will be presented, and represents the substantive theory of teachers' practices when engaging in assessment data in the first year of music education in sample secondary schools in Australia.

Finally, in Section Four, a set of recommendations for practice, policy and further research will be argued based on the evidence generated in this study.

Section One: Teachers' Perspectives on Using Assessment Data in Music Education

This research set out to ascertain the perspectives of teachers on using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education. Having explored the literature, it was evident that the extent of research into music education was considerable, however, little was known about Australian music teacher perspectives on assessment, engaging with assessment data or the use of formative assessment relating specifically to music literacy. In keeping with the interpretive framework adopted for the study (O'Donoghue, 2019) and the focus on participants perspectives, the key research sub-questions included:

1. What are the aims of music teachers when assessing music? What are their aims for assessing music literacy and engaging with the formative data they generate? What reasons do they give for these assessment aims?

2. What strategies do music teachers use to achieve their aims in relation to the assessment of music and using formative data from music literacy assessments? What reasons do they give for using those strategies?

3. What significance do music teachers say they attach to their aims or intentions and their strategies and what reasons can they give for this?

4. What outcomes do music teachers expect from pursuing their aims or intentions? And what reasons can they give for this?

5. Are there any inhibiting factors that prevent teachers from actively using formative assessment data?

6. To what extent, if any, does professional learning have? What impact would individually designed professional learning have on music education praxis?

Teacher Perspectives: A Snapshot

At the outset of the study, and in principle, teachers indicated a strong commitment to the theory of assessment for DBDM. Aspirationally, teachers were able to make connections with national and jurisdiction-based curriculum documents in terms of their professional goals, aims, and ambitions (RQ1) but were insistent that the performance in music education was a preferred assessment strategy that they relied upon for a number of operational reasons that varied across contexts. This was in contrast to teachers' initial perspectives affirming the focus on music literacy as the key priority for assessment in music education. The data show that the reasons for prioritising performance rather than literacy as the assessment focus were extensive and very much based upon the personal experiences of each teacher as a learner, musician, and performer. Some also reported that they assessed the students in the same way that they were assessed as a student (RQ2). Whilst the depth of knowledge about how to assess using data varied across the group, many teachers questioned the veracity of past and current teacher preparation programmes in regard to assessment theory and practice, particularly music teacher preparation programs. Teachers agreed that their teacher preparation programs were not comprehensive enough to displace many years of personal experience as instrumentalists and performers. Participant teachers identified low levels of self-efficacy in pedagogical content knowledge (PCK), assessment literacy and data literacy. Additionally, teachers coming through the Master of Teaching programs also identified low levels of content knowledge suitable for teaching in the secondary school.

The perspectives of participant teachers highlighted a desire to learn and grow professionally regarding new and innovative forms of assessment (RQ6). All participants believed that an ongoing program of learning to develop assessment techniques and data analysis would benefit their pedagogy and subsequently the learning outcomes of their students (RQ6). Teachers specifically identified PCK as an influence on their ability to engage with a variety of strategies to teach music literacy in the instance where high levels of differentiation were required because of differences in primary school music education and individual student experiences of instrumental music. In admission of their inability to teach music literacy to a highly diverse cohort, teachers also identified that they lack the skills to assess students adequately.

The focus on student learning outcomes (RQ3) was always the driving reason underpinning the teachers' perspectives regarding their aims and intentions with assessment. They reported that they were desirous of students experiencing success in their music education, and perhaps continuing with a career in music or simply enjoying the music experiences that they were presented within classroom settings. The teachers reported that they did not want assessment and DBDM to have a negative impact on student learning in music and thus shaped assessment practices in particular ways that may not be educationally in line with evidence-based reporting or even congruent with practices in other curriculum areas such as English.

While such optimism and professionalism embedded in music teacher aspirations regarding assessment were positive findings at the early stages of the study, over time, the participants identified a complex, interconnected web of influences that currently prevent them from achieving these professional aspirations (RQ5). Firstly, teachers claimed not to have enough time to engage in the thorough assessment that was required for reporting purposes and they were unwilling to give up any additional teaching time for formative assessment. Overwhelmingly, teachers identified assessment as an imposition that further reduced their teaching time, rather than being an important and integral part of the learning and teaching cycle. Secondly, teachers reported inequitable expectations of music teachers in secondary schools by the school administration as a barrier to their work in the music classroom. Extra-curricular music requirements were noted as barriers to fulfilling their aims and intentions for music students in the classroom, and all teachers reported these as unsustainable, if they were to be required to assess in a more thorough and evidence-based manner. The extra-curricular expectations directly affected teachers' capacities to improve both assessment and data literacy skills. Thirdly, the timetabling of music within the sample schools was reported as incongruent with government regulation, directly inhibiting teachers' ability and willingness to meet their professional expectations regarding assessment practices. These impositions on teachers' classroom work and time have resulted in teachers being unavailable for meetings and professional learning (RQ6), despite a professional desire towards building professional capacities in assessment through ongoing learning. Finally, the dilemma inhibiting teachers from using data to enhance both the quality of teaching and student learning outcomes in the context of music literacy in classroom music education is identified as the reporting process. Teachers expressed strong emotional concerns about the reporting process for music students in the initial year of secondary school because of their perspective that the students are impacted by prior opportunities and experiences that are not in their control. Of greatest concern was teachers being forced to report on student progress against the Australian Curriculum standards rather than on the progress that the individual student had made, which was sometimes significant. This was one of the triggers for implementing less objective assessment approaches, implementing idiosyncratic assessment methods, and having a preference for some elements of the music curriculum over others in both allocation of class time, in assessment and for the purposes of reporting.

While teachers reported, as a whole, a strong theoretical commitment to data-based teaching and reporting of student progressions in learning within the music classroom, their lived practices were not in keeping with their aspirations for a number of reasons.

For example, the Professional Expectation Dilemma 1, commitment to assessment versus working in a time-poor environment intersected other Professional Expectation Dilemmas and was also affected by Personal Belief Dilemmas. When trying to articulate the influences of being time poor, other influences on time itself became evident. Although statements were generalised to *not enough time,* the analysis of participant interview data identifies six areas where a lack of time influences music teacher perspectives on engaging with formative assessment data including the following

(i) An incongruence between curriculum time and the expectations of music in the Australian Curriculum
(ii) Restrictive content decisions
(iii) An unwillingness to devote the limited curriculum time to assessment, which leads to invalid and subjective assessment practices,
(iv) Demanding reporting requirements of schools
(v) Not being available for school-based professional learning
(vi) Having a greater assessment load than teachers in other curriculum areas.

Further, through examining the interview responses in relation to Professional Expectation Dilemma 3, Assessment Expectation Versus Teacher Assessment Literacy, it became clear that teachers believed they did not have the capacity, skills, knowledge or time to develop these assessment tools.

These findings have been comprehensively analysed in Chapter 5 as sets of personal and professional dilemmas that teachers faced as they struggled with the contestations that emerged as their professional expectations, professional work practices and personal values conflicted with curriculum and school policies regarding teaching learning and assessment, namely:

- Dilemma 1. Teachers are strongly committed to authentic assessment and DBDM but are constrained by a time poor environment in which teaching and learning takes place
- Dilemma 2. Teachers are fully aware of the curriculum expectations outlined in the Australian Curriculum but the diversified prior learning of the students entering the first year of secondary school constrain the delivery of a full curriculum
- Dilemma 3. Teachers report that they are aware of the school-based expectations regarding assessment data, reporting and timelines but these expectations are not comprehensively achieved due to many constraints including teacher knowledge, capabilities and expertise in assessment literacy
- Dilemma 4. Teachers' personal perspectives on music education prioritise fun in the music classroom rather than rigour to ensure learning, resulting in the detriment of assessment for DBDM
- Dilemma 5. Teachers' perspectives regarding music education value holistic assessment and they report that they are unable to engage in discrete assessment methods due to time, workload and personal beliefs
- Dilemma 6. On the one hand, teachers value the professional knowledge they have acquired through professional learning but on the other hand they value personal experience in the delivery and assessment of music education in the diverse settings of first year secondary music programs.

As was demonstrated, these multiple incongruences and the dilemmas outlined in Chapter 5 led to practices in teaching and learning that were contradictory to the aspirations of most participants. While some of these challenges have already been recorded in recent empirical literature (Dixon & Hawe, 2018; McFerran, et al., 2017; McFerran, et al., 2019) on further analysis it is argued that these six dilemmas outlined in Chapter 5 form the basis of a set of insightful conclusions that bring new thinking regarding how music teachers deal with the complex demands of evidence-based assessment in their field of teaching. It is important in this closing chapter to juxtapose these perspectives with the empirical literature that formed the platform of the study at the outset.

Section Two: Further Analysis of the Findings

In Chapter 2, it was noted that teachers in current educational settings in Australia work in a context that is highly regulated, where a national curriculum mandates learning outcomes and content, and where policy dictates a need to enhance the profile of Australian students in the competitive educational environment of international testing. The intensification of teachers' work has been described and critiqued elsewhere (see Chapter 5.2). While the literature is generic across the profession of teaching, describing teaching as "crowded, busy, and diverse" with regulation, "education policy and programs" continually adding to expectations of teachers (Cohen, et al., 2017, p. 206) and it emphasises the challenges outlined at the outset in this dissertation, and how it pertains to the participants in this study, secondary school music teachers. In Chapter 3 of this dissertation the key issues for teachers regarding the place of assessment in contemporary teachers' work were presented and analysed. Three bodies of knowledge were recognised as significant issues in this field. These are revisited below:

- **Formative Assessment:** The empirical literature review acknowledged irregularities in the implementation of formative assessment and confusion amongst teachers in establishing a complete definition. The following definition was adopted to provide focus for the study being discussed.

  > Assessment for Learning is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go and how best to get there (ARG, 2002).

  The findings of this thesis show that music teachers understand the fundamentals of formative assessment strategies, however, they struggle to implement any assessment that is not required for summative purposes. Teachers also confirmed a limited understanding of how to develop discrete assessment methods conducive to providing data for this purpose.
- **Data Use in Music Education:** A number of elements including teacher beliefs, confidence, capacity and understanding of data literacy (Mandinach & Gummer, 2016; Wayman et al., 2012) were identified as influencing factors in shaping teachers' ability to use data to improve pedagogy and instruction. Research also revealed beliefs around engaging with data to be role related, with teachers in more senior positions holding

differing beliefs to general classroom teachers (Datnow & Hubbard, 2015a) indicating that teacher's beliefs about data are informed by their professional communities and their self-efficacy in using data to improve instruction (Datnow & Hubbard, 2015). Research by Datnow and Hubbard (2015) reports that teachers' pre-existing beliefs, can be rigid and constrain the adoption of different ideas. This was evident in the current findings, as music teachers position themselves in a safe and stable space in which to act (Cumming, et al., 2018) by replicating assessment strategies from their own music education. As a meta-collective, music educators form their identities over extended periods (Ballantyne, et al., 2012; Randles, 2013) and as such, as was witnessed in this study, the profession is made up of individuals who bring their musical history and experiences of music pedagogy and assessment to contemporary teachers' work related to assessment. This research has demonstrated that current and past initial teacher preparation courses may develop student's personal skill as a musician rather than pedagogies and assessment repertoires required as a teacher. It will be argued forthwith that, considering the length of time teachers have already spent as students of music, ITE courses do not provide sufficient exposure to contemporary approaches to assessment that will lead to a fundamental shift in the beliefs of teachers in relation to assessment (Looney, et al., 2017; Xu & Brown, 2016). Participants' perspectives that are reported in this thesis further identified their Master of Teaching courses to be problematic in music education despite the recommendation (Pascoe et al., 2005) that tertiary institutions specifically address music pedagogy in all music courses as many musicians move into teaching and instruction. Participants in this current study claim to have been underprepared for teaching and assessing in a music classroom. Notwithstanding the introduction of the mandatory Teacher Performance Assessment (TPA) (AISTL, 2017), recent research (Kennedy-Clark et al., 2020) indicates that still more professional learning is required for the purpose of adjusting learning and teaching decisions, and that ongoing educational change relating to engaging with data continues to be difficult (Adie & Wyatt-Smith, 2019) as literature indicates "the unique impacts of what teacher candidates learn in their teacher preparation programs washes out after two years because of the strength of cultures in schools" (Mandinach & Jimerson, 2016, p. 454).

- **Music Education and Assessment:** Lack of curriculum-based knowledge is an influential factor in music teacher attitudes to assessment (Asmus, 1999; Shuler, 2012) which was supported by findings in this small-scale study. Levels of teacher anxiety identified in this thesis extended previous research which indicated music teachers' apprehension in relation to developing "fair and equitable assessments for all students including students with disability" (Looney et al., 2017, p. 12). New knowledge developed in this thesis found levels of anxiety in relation to PCK and an apprehension concerning admitting weaknesses in their understanding of assessment strategies and data literacy. Findings from Russell and Austin (2010) describe music teachers as using a "combination" or "hodgepodge" of achievement and non-achievement criteria to determine student grades" (p. 43). A major concern with a focus on the area of music performance is that of equity, inclusivity and opportunity for all (Ministerial Council on Education, Employment, Training and Youth Affairs [MCEETYA], 2008) as prior learning experiences in the form of private music lessons and even the access to an instrument can create high levels of inequity in a classroom. Teachers lacking a strong sense of curriculum-based knowledge are ill-equipped to guide student progress as subject knowledge is the base for decision-making in the classroom and allow a teacher to respond to student needs and align assessment strategies to suit the desired outcomes (Jones & Moreland, 2005).

Section Three: Assessment and Data Based Decision Making in Music Education - The Dilemmas Model

In this section, a narrative is presented, articulating the evolution of a new model of how teachers work with dilemmas in new times, particularly in relation to assessment in music education. The final interpretation, representing the complex dilemmas reported by the participating teachers will be presented and represents the substantive theory of teachers' practices when engaging in assessment for DBDM in the first year of music education in sample secondary schools in Australia.

The acts of teaching based on the teachers' perspectives that are central to this study, particularly in relation to assessment and DBDM in music education reported, reflect the perplexities that Dewey referred to many years ago in 1933 and from which we have learned that teacher thinking is constantly in a state of perplexity "searching, hunting, inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity" (Dewey, 1933, p. 12). On reviewing Chapter 5, the discourse of perplexity is evident and challenges the very usefulness of educational and school policy that is searching for certainty, fixedness and finite solutions. The six dilemmas and the interplay of each with the other as presented in Chapter 5 demonstrate this point. More often than not, the evidence presented in Chapter 5 confirms that music teachers are confronted with many dilemmas and inconsistencies in their assessment work and few solutions are found in policy. In fact, the dilemmas that emerge as policy and practice come together are rarely solved through policy recommendations. Rather, as the data analysis in this study demonstrates, one dilemma often leads to the creation of many more dilemmas which remain central to the teaching of music as it evolves, particularly in the diverse first year context of secondary school. The six dilemmas that are outlined in Chapter 5 are testimony to this proposition.

Significant to this study, the concept of dilemmas has been portrayed for some time as central to teachers' work in the empirical research. For example, as early as 1986, Shulman reported on the ambiguous nature of teaching, characterised teachers' work as a variety of dilemmas generating a series of contradictions for teachers regarding the interplay of curriculum design, delivery and assessment. There is a strong connection between Shulman's thinking and the findings of this research. For example, deep analysis of participant interviews identified a growing ambivalence as teachers struggled with conflicting personal and professional beliefs regarding the assessment of classroom music education. One the one hand, teachers expressed a firm belief that performance is what music is about, that the endgame of education in music is solely the performance, whilst at the same time identifying the subjective nature of this form of assessment. On the other hand, however, they report that they are unable to engage in discrete assessment methods due to time, the diverse needs of students and curriculum overload.

Authors (cf. Lampert, 1985; Ben Peretz & Kramer-Hayon, 1990) over the past four decades of educational research have tapped into the concept of dilemma-driven teachers' work but little seems to have changed from a policy perspective. The portrayal of the term dilemma in these works is best captured by Pareja Roblin and Margalef (2013) as "the conflicts and opposing tendencies within oneself (as teacher) that require a deliberation between multiple, equally viable and sometimes unattractive alternatives" (Pareja Roblin & Margalef, 2013, p. 19) such as was made evident by the teachers in this study when reporting student learning. In this study the reporting of data driven assessment was a practice to which all teachers aspired to achieve. However, in trying to implement this desire, teachers report opposing tendencies within their own professional expectations based on many reasons including low self-esteem, limited expertise, time availability and opposing views of reporting amongst leadership teams, teachers and parents. As a result, unattractive alternatives to authentic assessment and reporting were often the outcome.

As O'Donoghue, Booker and Aspland (2006) reiterated "the dilemmas to be found in teachers' conceptualisation of what is happening to their work [is] a result of major socio-political developments at any particular time…" (O'Donoghue, Booker & Aspland, 2006, p. 15). This study has validated such a claim some sixteen years later. The aforementioned authors point out however, that such dilemmas need not be viewed as negative, rather they can present opportunities to be embraced as points of professional growth. Such a sentiment can be evidenced in Chapter 5 through the teachers' perspectives as they call for the resources necessary to provide professional development for music teachers who aspire to grow in their expertise regarding assessment of music literacy.

The core of O'Donoghue et al.'s (2006) research was based on the earlier and seminal methodological work of Winter (1982). Winter captures the discourse of dilemmas that is central to the findings of this study when he stated:

> that social organisations at all levels (from the classroom to the State) are constellations of (actual or potential) conflicts of interest; that personality structures are split and convoluted; that the individual's conceptualisation is systematically ambivalent or dislocated; those motives are mixed, purposes are contradictory and relationships are ambiguous; and that the formulation of practical action is unendingly beset by dilemmas. (Winter, 1982, p. 168).

The notions of ambivalence, conflicts of interest, contradiction and ambiguity permeate the data in the previous chapter as teachers report their perspectives on using evidence-based data in music education. Their frustrations with the mandated yet vague curriculum, the contradiction of reporting for the sake of reporting rather than learning progression, the ambivalence underpinning their assessment strategies around performance, and the conflicts of interest the teacher reports when trying to balance student learning with extra-curricular demands are live examples of Winter's (1982) dilemmas and central to the dilemmas presented in Chapter 5 and are key findings of this study.

More recently the focus of the dilemmas research in relation to teaching has moved away from personal and professional dilemmas to intrapersonal dilemmas (Pareja Roblin & Margalef, 2013). Pareja Roblin and Margalef report that intrapersonal dilemmas refer to "the conflicts and tensions individual teachers experience in their daily practice" (p. 19), and are embedded within the interplay of curriculum, teaching, student learning, and management; Dilemmas that "challenge teachers to make decisions about possible courses of action" (p. 19). There are many incidents within the data in this study that reflect this concept of intrapersonal dilemmas particularly relevant to their work in assessment and reporting in music education. Whether teachers experience interpersonal dilemmas or intrapersonal dilemmas, Pareja Roblin and Margalef advocate that teachers should embrace the power of working through dilemmas as a positive response to the intensification of teachers' work that is central to this research. They advocate that such action be done through collaborative professional learning, a call from many of the teachers participating in this study. This research was not designed to bring teachers together in a collaborative manner but future research projects could focus more overtly on collaborative professional learning and the positioning of dilemmas as central to teacher's curriculum and assessment decision-making.

What is evident on reading Chapter 5 is that, based on the perspectives of the participants, teachers' work has intensified over the years due to regulatory intervention and as a result, their professional engagement with students has become more complex on a number of fronts. Teachers in this study have reported a series of dilemmas that capture the interplay of personal values and professional expectations with curriculum and school policies which result in at least six sets of contradictions that characterise their work in assessment and reporting of learning within the first year of music education in a secondary school. The work of researchers to date reflects the notions of contradiction, ambivalence, and conflict that are deeply infused in the daily professional work and curriculum decision-making of teachers of music, particularly in relation to assessment and DBDM practices in music education. This finding itself makes a significant contribution as to why assessment in music literacy in the first year of secondary schooling may not be as objective as required by employing authorities and why teachers report sustained frustration with their inadequacies and low self-esteem in the domain of assessment for DBDM. The insights gained as to the struggles that teachers face in coming to terms with the contradictions amongst their professional expectations, personal values and curriculum and teaching practices are enlightening and instructive for future professional learning for music teachers. However, from a theoretical perspective what has been demonstrated beyond practice is that the teacher participants in this study, based on the data presented in this research have been positioned or have positioned themselves in a Dilemmatic Assessment Space. This is worthy of further exploration at the close of the study and in anticipation of further research.

Dilemmatic Assessment Space

The concept of Dilemmatic Space stems from the work of Honig (1996) in fields other than education. Fransson and Grannäs (2013), in their search to make greater sense of the place of dilemmas in teachers' work called on the writings of Honig (1996) to conceptualise dilemmas in a more complex manner and in keeping with the purpose of this research, theorise the complexity of teachers' work, not as a string of dilemmas to be solved but to articulate the deep complexities that permeate teacher dilemmas as the confluence of expectations, values and practices; complexities that emerge in troubling ways particularly in relation to teaching and student outcomes and in meeting curriculum and school policy mandates. In this study many examples of such dilemmas have been provided in Chapter 5, but none so powerful as the example of assessment for reporting. It can be recalled that teachers in this study struggled with assessment and reporting timelines that were mandated by school policy and school leaders effectively demanding a grade for every child by a particular time in a particular format. As a result, teachers were called upon to resist their professional expectations and personal values regarding engaging and enjoyable learning that progressed the students along meaningful learning pathways. While most teachers in this study agreed that performance was a true indicator of student learning, the imposition of grading and the time required for testing exacerbated the problem even more. What resulted in most cases across the diverse cohorts in the first year of secondary schooling reflects what Valli and Buese (2007) have labelled as assessment practices that are at odds with teachers' "visions of best practice" (p. 520). As Fransson and Grannäs (2013) elaborate, this is an example of the compromises that teachers experience in their daily work through dilemmas like those that are central to the research and reported in this thesis. Fransson and Grannäs (2013) portray teachers in a similar way to the teachers in this research, as being positioned in situations "in which there is no right way of acting, but only acting for the best–where their professional judgement tells them one thing and the policy directives something else" (Fransson & Grannäs, 2013, p. 6).

What becomes evident throughout Chapter 5 and in the work of authors such as Fransson and Grannäs is that dilemmas do not arise every now and then to be perceived as problems that need to be solved before moving on. This dissertation clearly shows that contemporary forms of teachers' work related to the assessment of music in first year secondary school classes are immersed in ongoing dilemmas continuously, in a sustained and disruptive manner as curriculum policy and school leadership often collide with teachers' professional expectations, expertise, values and ethics. The data show that teachers position themselves in these contested spaces and simultaneously, are positioned by others in ways that are dynamic and relational generating conflict, contradiction, ambivalence and confusion as to how best to achieve meaningful learning assessment outcomes for all of their music students.

It is at this point of realisation that the concept of dilemmatic space is useful. Fransson and Grannäs (2013) critique this with conceptual clarity:

> Dilemmatic space offers perspectives of *how* these competing forces interplay and affect teachers' work, especially when the powers, positions, relations and boundaries of the educational contexts and the dilemmatic space change (p. 10). Dilemmas then not only become events that occur in situations but are also ever-present spaces for micro-political actions such as (potential) conflict, relationships and the negotiation and positioning of issues that are impossible to fully resolve…" (Fransson & Grannäs, 2013, p. 14).

This alternative way of thinking introduces an opportunity to theorise the dilemmas that the teachers experienced in this study in a manner that not only portrays the dilemmas that are experienced, but also captures the complexities of their work. Based on the perspectives reported by teachers in this study regarding data-based assessment of their music programs it is useful to reconceptualise their reported dilemmas not as influences that negate their professional work but rather as challenges that are to be embraced, repositioning the contestations as central to the relations dynamics of the complex interplay of teachers' expectations, values and practices with national and local curriculum mandates, policies and school leadership. To paraphrase Fransson and Grannäs (2013), this generates a new way of thinking for teachers that accepts the place of dilemmas as ever-present (Honig, 1996) in teachers' work acknowledging the spatial dimensions within such work and inviting the richness of negotiation, repositioning and the formation of new ways of thinking about, in this case, assessment in music education within the constructs of dilemmatic space (Honig 1996).

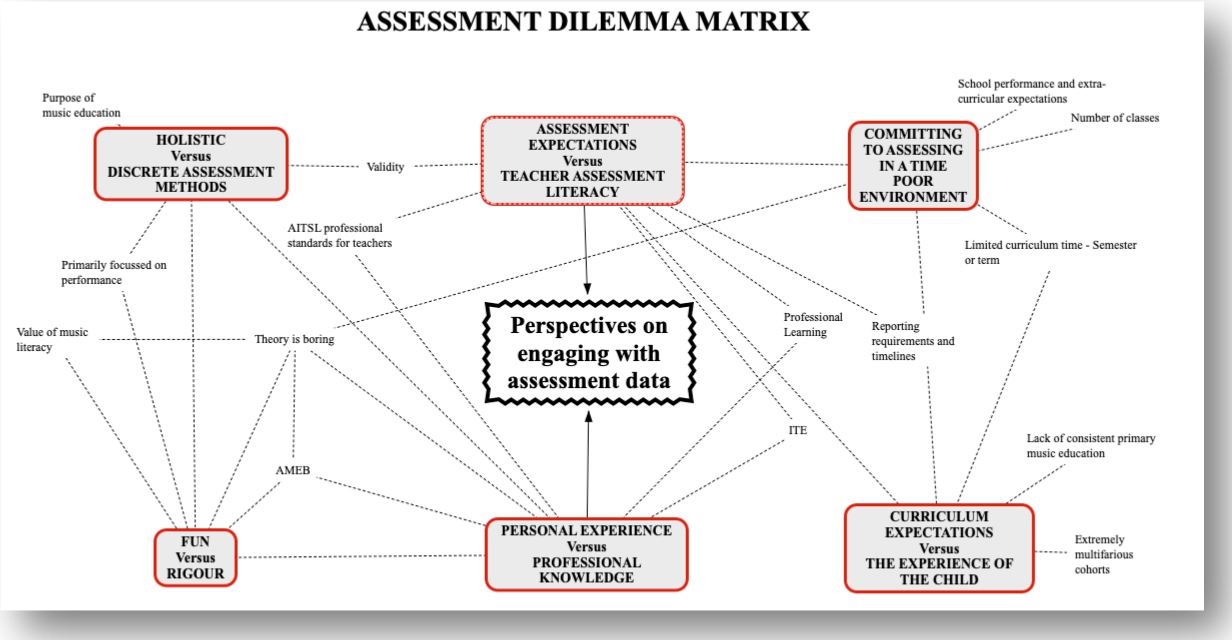
For the purposes of this study the earlier portrayal of the dilemmas and contradictions that directly affect the practices enacted by teachers' needs to be reconceptualised to take into consideration the contribution of Dilemmatic Space (Honig, 1996). While the dilemmas remain unchanged, the conception of the confluence of dilemmas, teachers' work and assessment in music education can be renewed from a simple portrayal of intersecting dilemmas that diminish the quality of teachers' work to one that embeds the dilemmas as omnipresent in the complexities of teachers' assessment work.

The Narrative: An Evolving Model

To this point the Professional Expectation Dilemmas and Personal Belief Dilemmas that have been experienced by participant teachers and derived from the confluence of (i) teacher's personal emotions or beliefs, (ii) professional expectations and (iii) curriculum and school-based demands have been illustrated below in the Assessment Dilemma Matrix (ADM). The ADM has evolved from the insights gained across the themes reported in Chapter 5; themes built upon the qualitative survey and interview data. The complexities of the dilemmas theorise the practices of teachers that have been reported and have been conveyed as inhibitors to a full engagement with intended and desired forms of assessment in the contemporary contexts of curriculum implementation and reporting in the sample schools. The ADM sought to visually map the complexities of the dilemmas faced by participant teachers (Figure 25).

Figure 25

The Exploration of Interconnectivity Through the Assessment Dilemma Matrix


ASSESSMENT DILEMMA MATRIX
Purpose of music education
HOLISTIC Versus DISCRETE ASSESSMENT METHODS
Validity
ASSESSMENT EXPECTATIONS Versus TEACHER ASSESSMENT LITERACY
School performance and extra-curricular expectations
Number of classes
COMMITTING TO ASSESSING IN A TIME POOR ENVIRONMENT
AITSL professional standards for teachers
Primarily focussed on performance
Limited curriculum time - Semester or term
Perspectives on engaging with assessment data
Professional Learning
Reporting requirements and timelines
Value of music literacy
Theory is boring
ITE
Lack of consistent primary music education
AMEB
FUN Versus RIGOUR
PERSONAL EXPERIENCE Versus PROFESSIONAL KNOWLEDGE
CURRICULUM EXPECTATIONS Versus THE EXPERIENCE OF THE CHILD
Extremely multifarious cohorts

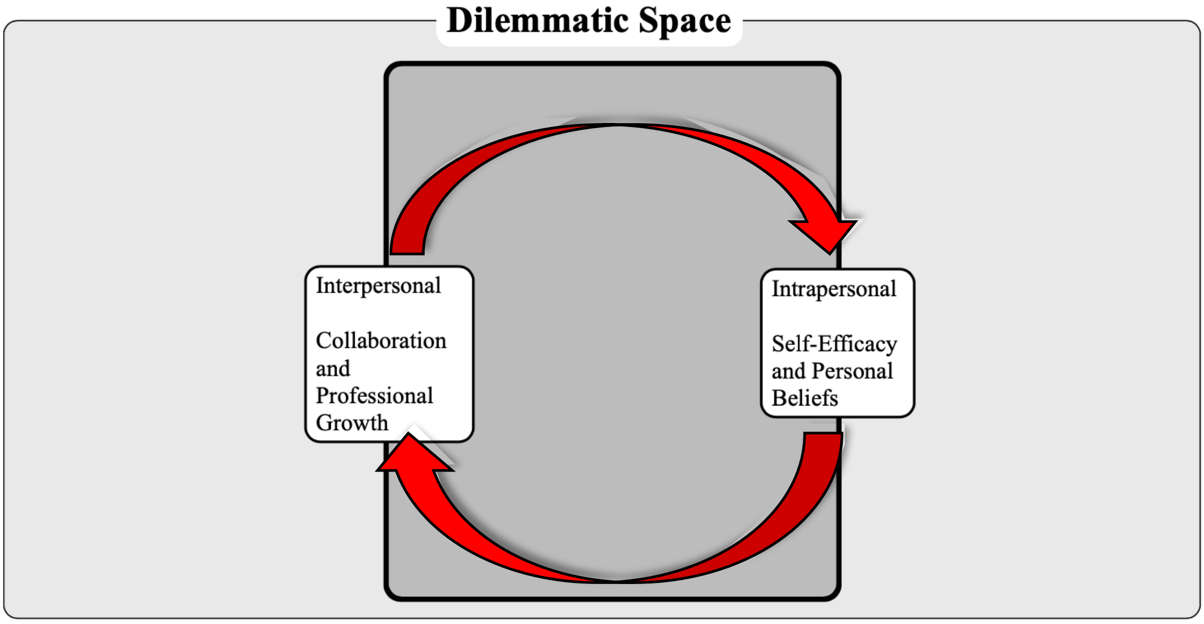
This original model builds a conceptual visualisation of the complex and overwhelming nature of the inhibiting factors identified by participant teachers as they relate to formative assessment of music literacy. In the model above, the two types of dilemmas that were reported separately in Chapter 5 are portrayed as inextricably linked. As the data analysis unfolded it became evident that each theme interconnected in some way with another, and as such, the complexity of understanding teacher perspectives became a further driving force in the study. Throughout the interviews, teachers were unable to separate the elements amongst the contradictions, ambivalences and conflicts they were experiencing with assessment for DBDM and expressed a helplessness to bring clarity or simplicity to these contestations. The intersections and connections, cumulatively contributed to the central formation of perspective and presented the complex picture of the intersections amongst participants long-standing personal beliefs and more recent professional expectations and the complexities of their assessment responsibilities.

Based on more complex thinking and further data analysis, this original portrayal and ADM is limiting and is silent on the complexities of teachers' work and the ever-present dilemmas

(Honig, 1996) that characterise such complexity. The construction of an alternative conception within the framework of the Dilemmatic Assessment Space offers new interpretations for moving a forward. In the first instance the ADM was reinterpreted as follows:

Figure 26

The Interaction of Intrapersonal and Interpersonal in Formation of a Dilemmatic Space


Dilemmatic Space
Interpersonal
Collaboration and Professional Growth
Intrapersonal
Self-Efficacy and Personal Beliefs

Based on the findings of this research, the dilemmatic space (see Figure 26) can be labelled as an all-pervading dilemmatic space, in which teachers operate every day. However, as identified by Ben-Peretz and Kremer-Hayon (1990) specific dilemmas, like those encountered by music teachers, are idiosyncratic to the specific educational situation of classroom music.

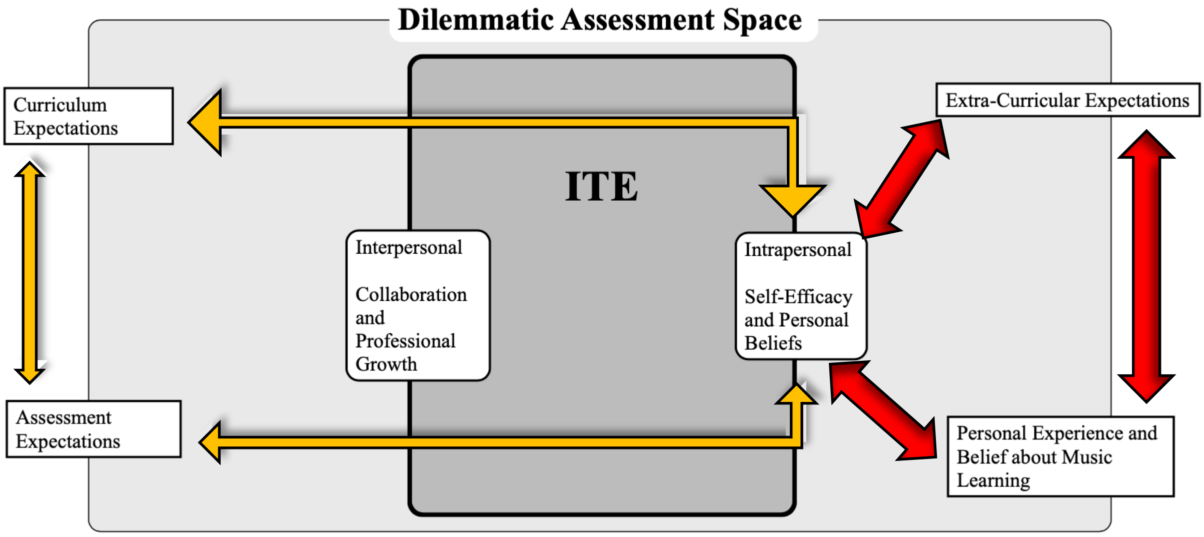
Specifically, the dilemmatic assessment space in which music teachers currently operate (see Figure 27) does not allow for professional growth in line with theories presented by Pareja Roblin and Margalef (2013) due to the six complicating dilemmas already identified in the Assessment Dilemma Matrix. Pareja Roblin and Margalef argue that this can only be addressed when teachers are challenged to interrogate their own pedagogical beliefs and transform their practice. Further, that this is achieved when the intrapersonal beliefs are confronted by the interpersonal work of collaboration. However, as participants in this study have reported, this interplay cannot occur in the current conditions in which they work. The introduction of the concept of the dilemmatic space requires that decisions need to be made regarding all actions, across all contexts, in a sustained professional manner. This implies that teachers must be released from the constraints of dilemmas to find a space where ambiguities and contestations can be processed collaboratively as central to contemporary teachers' work thus enabling

(i) Learning for all students in the first year of music education;
(ii) Authentic assessment for DBDM and reporting that is meaningful to all;
(iii) Professional learning for teachers to occur, not as a privilege but as integral to teachers' work;
(iv) The allocation of workload that is equitable and responsive to pedagogy and assessment rather than policy and leadership demands.

The data presented in Chapter 5 demonstrates that the dilemmatic space in which all teachers operate requires them to make choices on issues for which there is no fully correct response; however, it is also evident through the data that teachers are actively choosing to avoid possible interpersonal dilemmas which may cause conflicts and tensions as their autonomous motivation is replaced by a perceived form of controlled motivation (Hodgins et al., 2010) that challenges their "self-structures and fragile self-esteem" (Hodgins et al., 2010, p. 1102). Further, it became evident that collaborating with other teachers increases the possibility of exposing teachers' pedagogical limitations, as identified by the participants. Conversely, by avoidance, teachers are further restricting their professional growth and operating in the safe space where their self-efficacy in relation to PCK, curriculum, assessment strategies, assessment data and pedagogical practice is not challenged by others. This complex interplay of contestations is revisited once again and as further analysis occurred it became clear that this is captured in Figure 27.

Figure 27

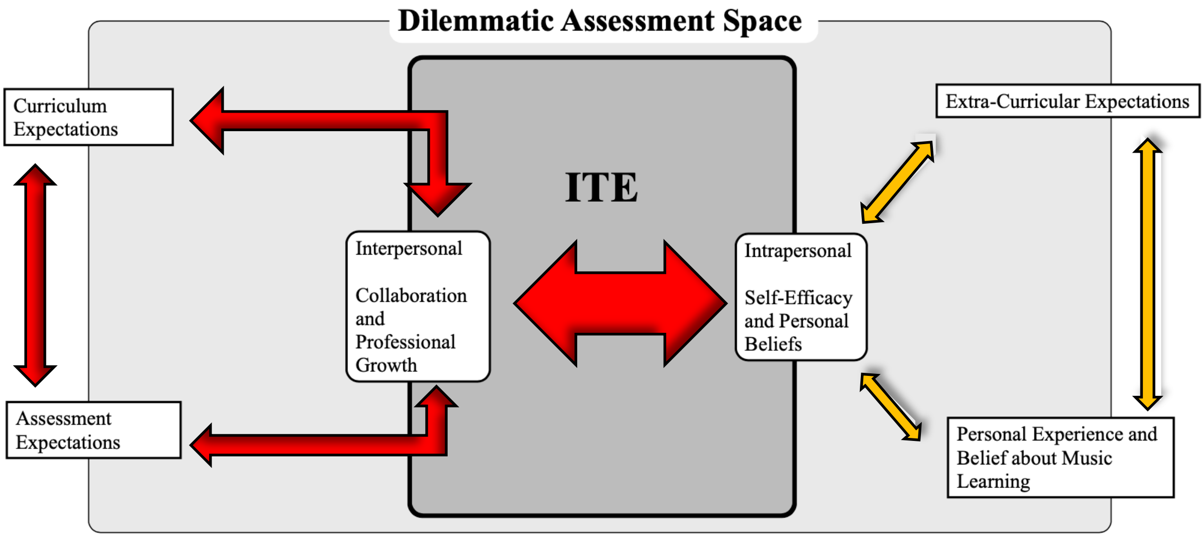
Current Insecurity and Low Levels of Self-Efficacy Lead to the Safety of the Intrapersonal


Dilemmatic Assessment Space
Curriculum Expectations
Assessment Expectations
ITE
Interpersonal
Collaboration and Professional Growth
Intrapersonal
Self-Efficacy and Personal Beliefs
Extra-Curricular Expectations
Personal Experience and Belief about Music Learning

Demonstrated in Figure 27, the portrayal of the teachers' dilemmatic assessment space shows that currently, based on the data collected from participants, that teachers are required to make choices between their obligations as classroom teachers and the other requirements of the role. Left to interpret curriculum, assessment, data and pedagogical practices in isolation, to some degree, music teachers develop assessment strategies that are idiosyncratic and ritualistic based on previous personal experiences, often at the expense of objective assessment data (Sadler-Smith, 2015; Thorpe & Lamb, 2019; Wong, 2013; Zandén & Ferm Thorgersen, 2014). It is argued here as a result of the data analysis that ITE has not provided a satisfactory base to displace years of music learning, performance and practice and subsequently, teachers rely on past experiences. In reviewing this graphic, it is evident that teacher educators are called upon to review their current practices and provide music teachers with a renewed approach to teacher preparation that counteracts the limitations of historical personal experience and to empower teachers to construct collaborative knowledge, connecting the interpersonal dilemmas and intrapersonal dilemmas, therefore creating a learning community that can build knowledge of pedagogical and assessment strategies for teaching music literacy and for using assessment data. The following diagram (Figure 28) represents a further interpretation of the findings.

Figure 28

Balancing the Intrapersonal and Interpersonal to Allow for Professional Growth


Dilemmatic Assessment Space
Curriculum Expectations
Assessment Expectations
ITE
Interpersonal
Collaboration and Professional Growth
Intrapersonal
Self-Efficacy and Personal Beliefs
Extra-Curricular Expectations
Personal Experience and Belief about Music Learning

This final model representing the space in which teachers work is inclusive of the following propositions and more accurately captures the deep complexities that permeate teachers' work in a dilemmatic assessment space.

The model documented in Figure 26 indicates the dilemmatic space in which *all* teachers operate as a part of the dynamic process of teaching. The interaction of the interpersonal dilemmatic space and the intrapersonal dilemmatic space is not seen as a negative dilemma to be solved, rather a dilemmatic space of growth through collaborative learning. The intrapersonal skills and experience of the individual interact with the interpersonal skills of the cohort and develop new understandings of curriculum, assessment, pedagogical practice and data literacy.

However, as expressed by the participants in the study, inadequate ITE particularly relating to assessment and data literacy manifest in insecurity and low levels of self-efficacy. Thus, when faced with the dilemma of fulfilling all requirements of the role, teachers are more committed to fulfilling those components of the role that fit within their comfort zone and avoid activities that might bring "to the surface differences in beliefs and expectations between teachers" (Pareja Roblin & Margalef, 2013, p. 29) and which result in a "sense of 'loss of control' in most teachers" (p. 27). As Fransson and Grannäs (2013) state, "people react to conflicting values, obligations or commitments" (p. 4) in situations where there is no right or wrong way to act, especially when they are expected to "fulfill their professional duties" (p. 4). One the one hand, fulfilling their extra-curricular expectations legitimise attendance avoidance for meetings and school based professional learning. However, on the other hand, these attendance avoidances limit growth in curriculum matters, assessment and data learning. As participants stated, they do not even have time to meet as a music department, so there is limited learning or sharing. Moreover, the commitment to extra-curricular requirement of the role leaves teachers with little time to mark assessments, engage with data and meet reporting requirements, leading to another dilemma; how to assess students in a way that is manageable in the given time constraints. Thus, creating a dilemmatic assessment space as shown in Figure 27.

The dilemma here is that to fulfill the role of music teacher, the dilemmatic assessment space requires teachers to make decisions, neither of which is wrong. However, Figure 27 demonstrates the dilemmatic assessment space occupied by many music teachers in which professional growth is limited by the intersections of other dilemmatic spaces, particularly the pressure on teacher time to fulfill all components of their roles. School administrations have normalised the unsustainable expectations and have supported the need to absent music staff to allow for the rehearsal of ensembles and school productions, however, there is a lack of balance between the requirements of the role and this is detrimental to personal and pedagogical growth. Enabling decisions that ultimately impact student and teacher learning by allowing the balance to tip to the safety of the already known rather than supporting the learning community.

Figure 28 demonstrates the need to balance the requirements of music teachers to allow for professional growth and improved student outcomes without diminishing the personal experiences or individual beliefs held by music teachers but allows them the share and learn from the intrapersonal experiences of all teachers and particularly other music teachers. The dilemmatic assessment space is not a problem to be solved but a learning opportunity for teachers to enhance their understanding of assessment and ways to manage the levels of diversity within their classrooms. Reimaging the expectations of secondary school music teachers and providing ongoing, professional learning relevant to the individual needs of music teachers, as a meta-collective will lead to professional growth as listed in the following four propositions.

1. Proposition 1. Teachers can more ably manage dilemmas within the dilemmatic assessment space as central to their work not as a set of oppositional forces that limit their professional practices
2. Proposition 2. Teachers can reposition their thinking away from guilt, blame and self-inadequacy to taking ownership of the dilemmatic assessment space, and recognising the contested nature of their assessment work
3. Proposition 3 In confronting future assessment challenges within the dilemmatic assessment space, teachers might begin with the relational context and the dynamics of the interplay of expectations, values and context with a view to addressing issues of policy and practice rather than focussing on short term problem solving
4. Proposition 4. When considering teacher professional development, "negotiations, constructions and deconstruction and reconstructions of identities" (Fransson & Grannäs, 2013, p. 8) should be the focus in relation to dilemmatic spaces not reductionist foci on content, pedagogy or assessment in isolation.

As stated earlier the dilemmatic space invites teachers' assessment work and their work more generally to be grounded in a space that offers an understanding not only of *how* these competing forces interplay and affect teachers' work, in a dynamic and fluid manner, but are also ever-present spaces for micro-political actions such as (potential) conflict, relationships and the negotiation and positioning of issues that are impossible to fully resolve…" (Fransson & Grannäs, 2013, p. 14).

This new model not only portrays the dilemmas that are experienced by music teachers, capturing the complexities of their work, but positions them as central to the complex interplay of teachers' expectations, values and practices with national and local curriculum mandates, policies and school leadership. To paraphrase Fransson and Grannäs (2013), this generates a new way of thinking for teachers that accepts the place of dilemmas as ever-present (Honig, 1996) in teachers' work acknowledging the spatial dimensions within such work and inviting the richness of negotiation, repositioning and the formation of new ways of thinking about, in this case, assessment in music education within the constructs of dilemmatic space (Honig 1996). There are many implications that rise up out of this new model: implications for policy, teacher preparation, teachers' work and the ongoing life cycle of learning for teachers. These are outlined briefly in Section four.

Section Four: Implications

Introduction

From the perspectives of practice, and as a result of this research and that reported in earlier studies, (Leong, 2014; Hennessy & Corr, 2021; Wesolowski, 2020; Zandén, & Ferm Thorgersen, 2014), it is clear that entrenched assessment methods in classroom music in the first year of secondary education, must be challenged as they no longer meet the assessment expectations of current research and practice. Further, alternative ways to report on student learning outcomes in music need to be investigated and presented to music teachers as integral to their work. This research has exposed the need for the delivery classroom music education in Australian primary schools to be consistent across all schools and educational settings to provide an equal opportunity for all students to engage with music as they progress into secondary education. This would reduce the extreme levels of differentiation currently being required in the initial years of secondary schooling and allow teachers to provide a more robust learning experience.

At the level of policy, particularly in reference to the conditions which shape contemporary teacher workloads, music teachers, must be assured of adequate time release to both build professional learning communities and to undertake relevant professional learning specifically in relation to assessment and reporting. This may involve a reduction in extra-curricular expectations and re-examining of timetable and reporting structures. There are industry-related as well as professional matters implicit in this situation including the place of the Australian Professional Standards for Teaching, which were not raised in this study but are instrumental in the shaping of teachers' work, their learning and their professional standing. This is also a matter worthy of further research.

Implications for Further Research

A number of themes have evolved from this study that warrant further investigation and research. One significant area for study that arose from the interview data would be to investigate further the professional identity of music teachers and their poor self-esteem in relation to assessment and reporting. Two issues could be central to this future research: (1) Why music teachers are so fearful of identifying weaknesses in their content knowledge and seeking assistance, and (2) Why music teachers sustain low levels of self-efficacy in relation to assessment. Further research into teachers' perspectives regarding the aims and purpose of assessment tools used in music education could also be undertaken.

Recommendations

Recommendations from this study address the purposes of the research (i) To understand how perspectives influence teachers' use of data to guide the teaching and learning process; (ii) to guide professional learning in relation to assessment and (iii) to build assessment capacity that supports learning with a view to enhancing pedagogy, student outcomes and improving participation rates in post-compulsory music education. Founded on the research implications identified as a significance of the findings of this study, the following recommendations are made to further inform research in this field.

The dilemmatic assessment space that music teachers occupy must be acknowledged as a learning space and repositioned as central to their professional growth and development. This generates new ways of working in teacher preparation and teacher professional learning as they move from graduation into proficient and advanced status as teachers.

The Australian music education curriculum is in need of urgent review. Music should be delivered at all primary schools, based on the standards set out in the Australian Curriculum. Every child in Australia should expect the same level of learning and have a right to be taught a sequential, rigorous music program, based on educational research and by qualified music educators. The existing Australian Curriculum as documented by ACARA must align with the reality of music education in the classroom. The achievement of all standards set out by the curriculum are unfeasible in the current time allocated to music learning in the initial years of most secondary schools, thereby creating a disjunct between the expectations of the curriculum and the reality in the classroom. The successful delivery of the music curriculum also needs to have mandated hours for the delivery of music in the initial years of secondary school to ensure equity for students in all school sectors.

In terms of teacher preparation and ongoing teacher professional learning three recommendations are relevant to providers because of this research. These include:

(i) Assessment and data training should be positioned in subject specific contexts rather than as a generic body of knowledge. The current generalist approach to learning assessment techniques and strategies and data analysis is not being transferred into discipline-specific practices leaving the authenticity of assessment practices in music as questionable.

(ii) To counterbalance the extended number of years of exposure to instrumental lessons and (in most cases) AMEB theory practices, a greater focus at the level of teacher preparation must be placed on music specific pedagogical content knowledge, content knowledge, assessment literacy and data literacy to provide graduating teachers with a selection of tools for teaching and assessing music literacy

Conclusion

Throughout this study, teachers reported a strong theoretical commitment to data-based reporting of student progressions in learning within the music classroom, however, their lived practices were not in keeping with their aspirations for a number of reasons. What is evident is that teachers' work in the first year of secondary school music education is fraught with contestations, ambiguity and dilemmas particularly in relation to assessment for DBDM and reporting and the place of music literacy. The findings of the research highlight a series of Professional Expectation Dilemmas and Personal Belief Dilemmas that have been experienced by participant teachers and derived from the confluence of (i) teachers' personal emotions or beliefs, (ii) professional expectations and (iii) curriculum and school-based demands. The meta-analysis in this final chapter identifies the importance of repositioning teachers' work into the dilemmatic space, an all-pervading dilemmatic space, in which teachers operate every day. Such repositioning challenges teachers to interrogate and embrace their own pedagogical and assessment beliefs and transform their practice, however this requires a reconstitution of the workplace to occur concurrently.

As stated above, the introduction of the concept of the dilemmatic space requires that decisions need to be made regarding all actions, across all contexts, in a sustained professional manner. This model suggests new ways of thinking and working for music teachers in the first year of secondary schooling in music education, acknowledging the spatial dimensions within such work and inviting the richness of negotiation, repositioning and the formation of new ways of thinking about, in this case, assessment in music education within the constructs of dilemmatic space.

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Appendix 1.

Reframing Music Education: Teacher perspectives on engaging with data

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Start of Block: Consent

Welcome to the research study!

TITLE OF PROJECT: Reframing Music Education: *Teacher perspectives on engaging with data*.
PRINCIPAL SUPERVISOR: Professor Tania Aspland
STUDENT RESEARCHER: Kathleen Plastow
I have read and understood the information provided in the email to Participants. Any questions I have asked, have been answered to my satisfaction. I agree to participate in this research project: including the completion of a three-part qualitative survey and participation in two hour-long interviews over the course of twelve months. I understand that my interviews will be digitally recorded. I realise that I can withdraw my consent at any time (without adverse consequences). I agree that research data collected for the study may be published or may be provided to other researchers in a form that does not identify me in any way.
By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Please note that this survey will be best displayed on a laptop or desktop computer. Some features may be less compatible for use on a mobile device.

○ I consent to both the survey and the interview stage.

○ I am happy to complete the survey, but I do not wish to be interviewed. Thank you.

End of Block: Consent

Start of Block: Demographic Information. For each question below, please select the option which

B

If you are happy to be interviewed for this research, please provide the following details: PLEASE NOTE: YOUR DETAILS WILL **NOT** BE SHARED WITH ANY OTHER PARTY

☐ Name ____

☐ Mobile number ____

☐ Email ____

C **What is your gender?**

○ Female

○ Male

○ Not specified

D **Which age group do you fall in to?**

- ○ 20-29 years
- ○ 30-39 years
- ○ 40-49 years
- ○ 50-59 years
- ○ Over 60

E **What is your current role at the school? (More than one may apply)**

- ☐ Head of Department
- ☐ Other position of responsibility
- ☐ Teacher of classroom music
- ☐ Teacher of classroom music and instrumental music
- ☐ Teacher of classroom music and another subject or general primary teaching (specify) ____
- ☐ Teacher of classroom music, instrumental music and another subject or general primary teaching (specify)____

F **How many years have you held the current role identified in Question 3?**

- ○ < 2 years
- ○ 3-5 years
- ○ 6-10 years
- ○ 11-15 years
- ○ > 15 years

G **For how many years have you been a teacher?**

- ○ < 2 years
- ○ 3-5 years
- ○ 6-10 years
- ○ 11-15 years
- ○ 16-19 years
- ○ > 20 years

H **What training in educational assessment have you had?** (*Tick all that apply)*

☐ None

☐ Some hours as part of pre-service training

☐ 1/2 to 1-day workshops or seminars

☐ Completed undergraduate paper

☐ Completed postgraduate paper

☐ Other (give details) ______________________________

I **Please select all levels of qualification you have obtained. Specify the title of each qualification and identify the institution.** ***e.g., BEd UNE Armidale. (****Tick all that apply)*

☐ Certificate ______________________________

☐ Diploma ______________________________

☐ Bachelor ______________________________

☐ Graduate Certificate______________________________

☐ Masters ______________________________

☐ Doctoral ______________________________

J **Are you currently studying?**

○ No

○ Yes. Type of study and institution.

____

K **Have you undertaken professional development/learning in the past 12 months?**

○ No

○ Yes. Please give details. ____

L **What year levels do you currently teach music to?** (*Tick all that apply)*

☐ ELC

☐ Year 1

☐ Year 2

☐ Year 3

☐ Year 4

☐ Year 5

☐ Year 6

☐ Year 7

☐ Year 8

☐ Year 9

☐ Year 10

☐ Year 11

☐ Year 12

☐ Year 11 VET Music

☐ Year 12 VET Music

☐ PYP Music

☐ MYP Music

☐ IB Music

M **How would you best describe your school?** (*Tick all that apply)*

☐ Rural

☐ Regional

☐ Suburban

☐ Urban

☐ ELC only

☐ Primary only

☐ Secondary only

☐ K-12

☐ Independent

☐ Catholic

☐ Government

☐ Other ______________________________

☐ Coeducational

☐ Single sex GIRLS

☐ Single sex BOYS

N **In which Australian State/Territory do you teach?**

○ ACT

○ NT

○ NSW

○ QLD

○ SA

○ TAS

○ VIC

○ WA

End of Block: Demographic Information. For each question below, please select the option which

---

Start of Block: Conceptions of Assessment Survey.

AA. Please indicate which of the following assessment PRACTICES you have in mind when you initially think about the word assessment. When I think about ASSESSMENT, these are the kinds of PRACTICES I have in mind *(you may choose more than one)*

☐ Solo Performance

☐ Unplanned Observation

☐ Oral Question & Answer

☐ Planned Observation (e.g., running record, checklist)

☐ Student Written Work (e.g., theory worksheets, score analysis or written responses to listening)

☐ Essay Test

☐ Group Performance

☐ Student Self or Peer Assessment

☐ Aural Analysis Written Response

☐ Portfolio / Scrapbook

☐ Teacher Made Written Test

☐ Standardised Test

☐ 1-3 Hour Examination

☐ Composition

End of Block: Conceptions of Assessment Survey.

Start of Block: Block 6

The next section asks you questions about your perceptions/conceptions of assessment. Remember that there are no right or wrong answers, we are interested in your personal beliefs.

Questions taken from Brown's (2006) Conceptions of Assessment (CoA111A) and are used with permission.

End of Block: Block 6

Start of Block: PART A: QUESTIONS ABOUT TEACHER CONCEPTIONS OF ASSESSMENT

A1 Teachers pay attention to assessment only when stakes are high

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A2 Assessment selects students for future education or employment opportunities

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A3 Assessment results can be depended on

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A4 Assessment is a positive force for improving social climate in a class

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A5 Assessment interferes with teaching

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A6 Assessment information is collected and used during teaching

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A7 Assessment allows different students to get different instruction

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A8 Teachers are over-assessing

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A9 Assessment makes students do their best

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A10 Assessment identifies how students think

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A11 Assessment is unfair to students

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A12 Assessment feeds back to students their learning needs

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A13 Assessment is objective

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A14 Assessment results are consistent

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A15 Assessment is an engaging and enjoyable experience for children

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A16 Assessment forces teachers to teach in a way against their beliefs

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A17 Assessment measures the worth or quality of schools

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A18 Assessment information modifies ongoing teaching of students

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A19 Assessment is comparing student work against set criteria

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A20 Assessment determines if students meet qualifications standards

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A21 Assessment provides feedback to students about their performance

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A22 Assessment identifies student strengths and weaknesses

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A23 Teachers ignore assessment information even if they collect it

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A24 Assessment results predict future student performance

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A25 Assessment is assigning a grade or level to student work

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A26 Assessment establishes what students have learned

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A27 Assessment places students into categories

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A28 Assessment is checking off progress against achievement objectives

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A29 Teachers should take into account the error and imprecision in all assessment

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A30 Assessment is an accurate indicator of a school’s quality

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A31 Assessment results are trustworthy

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A32 Assessment measures students’ higher order thinking skills

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A33 Assessment changes the way teachers teach

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A34 Assessment shows the value schools add to student learning

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A35 Assessment is integrated with teaching practice

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A36 Assessment is an imprecise process

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A37 Assessment is a good way to evaluate a school

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A38 Assessment is appropriate and beneficial for children

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A39 Answers to assessment show what goes on in the minds of students

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A40 Assessment has little impact on teaching

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A41 Assessment influences the way teachers think

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

A42 Assessment provides information on how well schools are doing

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A43 Teachers conduct assessments but make little use of the results

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A44 Assessment keeps schools honest and up-to-scratch

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A45 Assessment helps students improve their learning

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A46 Assessment is value-less

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A47 Assessment is completing checklists

○ Strongly disagree

○ Mostly disagree

○ Slightly agree

○ Moderately agree

○ Mostly agree

○ Strongly agree

A48 Assessment is a way to determine how much students have learned from teaching

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

A49 Assessment results should be treated cautiously because of measurement error

- ○ Strongly disagree
- ○ Mostly disagree
- ○ Slightly agree
- ○ Moderately agree
- ○ Mostly agree
- ○ Strongly agree

Q50 Assessment results are filed and ignored

○ Strongly disagree
○ Mostly disagree
○ Slightly agree
○ Moderately agree
○ Mostly agree
○ Strongly agree

End of Block: PART A: QUESTIONS ABOUT TEACHER CONCEPTIONS OF ASSESSMENT

Start of Block: Block 7

The next section has questions about your personal classroom assessment practices. Please self-assess your skill level in relation to the following assessment practices using the scale provided. Remember, there are no right or wrong responses.

Questions from DeLuca, LaPointe-McEwan & Luhanga (2016) Approaches to Classroom Assessment Inventory (ACAI) and are used with permission.

End of Block: Block 7

Start of Block: PART B: QUESTIONS ABOUT CLASSROOM ASSESSMENT PRACTICES AND PROFESSIONAL LEARNING

B1 My practices have a clear purpose (e.g., diagnostic, formative, summative) that supports teaching and learning toward curriculum expectations.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B2 My assessment practices align with established curriculum expectations.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B3 My methods and types of assessment allow students to demonstrate their learning in diverse ways.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B4 I continuously engage students in assessment processes.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B5 I use assessment evidence to enhance student learning.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B6 I provide adequate student preparation for assessment in terms of resources, time and learning opportunities.

○ Strongly disagree
○ Disagree
○ Mostly agree
○ Agree
○ Strongly agree

B7 I use deliberate and continuous strategy to communicate purpose and uses of assessment to students.

○ Strongly disagree
○ Disagree
○ Mostly agree
○ Agree
○ Strongly agree

B8 I communicate purpose and uses of assessment to parents/guardians when appropriate.

○ Strongly disagree
○ Disagree
○ Mostly agree
○ Agree
○ Strongly agree

B9 My assessments are responsive and respectful of the cultural and linguistic diversity of students.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B10 I differentiate my assessment practices to meet the specific educational needs of all students.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B11 My assessment decisions are only influenced by factors related to the intended purposes of the assessment or the curriculum expectation being measured.

- ○ Strongly disagree
- ○ Disagree
- ○ Mostly agree
- ○ Agree
- ○ Strongly agree

B12 I provide adequate and appropriate information so that students and parents understand the meaning of the feedback and grades I give.

- ○ Strongly disagree
- ○ Disagree
- ○ Mostly agree
- ○ Agree
- ○ Strongly agree

B13 For each student, I use multiple, well-designed assessments to measure learning so that I am confident in the grades I assign.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B14 I monitor and revise my assessment practice to improve the quality of my instruction.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B15 I monitor and revise my assessment practice to improve my students' learning.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B16 I am able to use a variety of strategies to analyse test and assessment results at both student and class level.

- ○ Strongly disagree
- ○ Disagree
- ○ Mostly agree
- ○ Agree
- ○ Strongly agree

B17 I ensure that my assessments are fair, reliable, and provide valid information on student learning.

- ○ Strongly disagree
- ○ Disagree
- ○ Mostly agree
- ○ Agree
- ○ Strongly agree

B18 I provide timely feedback to students to improve their learning.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B19 I provide useful feedback to students to improve their learning.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B20 I use student performance data to inform instructional planning and next steps for individual students and the class as a whole.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B21 My grades and comments are grounded in evidence I have collected about student achievement of learning expectations.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B22 My reports are based on a sufficient body of evidence and provide a summary of student learning toward meeting curriculum expectations.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B23 Throughout units of instruction, I regularly integrate various forms of formative and diagnostic assessment.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B24 I engage students in monitoring their own learning and using assessment information to develop their learning skills and personalized learning plans.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B25 I would use tests more effectively if I had sufficient time to construct them.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B26 It is impractical for me to do item analysis on the tests I give my classes.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B27 Creativity is negatively impacted by assessment.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

B28 I know how to do an item analysis of a test.

○ Strongly disagree

○ Disagree

○ Mostly agree

○ Agree

○ Strongly agree

End of Block: PART B: QUESTIONS ABOUT CLASSROOM ASSESSMENT PRACTICES AND PROFESSIONAL LEARNING

Start of Block: Block 8

Only one section to go. Please read the five scenarios and respond to all of the questions. This section focuses on individual assessment identities and once again, there are no right or wrong responses.

Scenarios from DeLuca, LaPointe-McEwan & Luhanga (2016) Approaches to Classroom Assessment Inventory (ACAI) and are used with permission.

End of Block: Block 8

Start of Block: PART C: QUESTIONS ABOUT ASSESSMENT IDENTITY

Scenario 1: “You give your class a paper–pencil summative unit test with accommodations and modifications for identified learners. Sixteen of the 24 students fail. As a teacher in this situation, your ideal priority would be to:”

C1-1 Record the test grade as each student's summative assessment for the unit but reduce its weight in the final grade.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly Likely

C1-2 Based on your analysis of the test, reteach parts of the unit focusing on items students struggled with, give students opportunities to apply their learning, and then re-test the material.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C1-3 Ask students to reflect on their test preparation, analyse their test responses, and make a personal learning plan for relearning the material. Then retest the material.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C1-4 Recognize that your test design may be flawed and design a revised unit test to give students.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C1-5 Remove test questions that most students failed and recalculate student scores without those questions.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C1-6 Schedule student conferences (individual or group) to discuss grades, areas of confusion, and next steps.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C1-7 Allow all students to retake a similar test and average the two grades.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C1-8 For student with exceptionalities, who failed the test, discuss a new assessment that would appropriately demonstrate his/her learning.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C1-9 Discuss with each student who failed the test a new assessment that would appropriately demonstrate his/her learning.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C1-10 Analyse test questions that the majority of students consistently answered incorrectly. Then provide students with new questions to test those concepts.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C1-11 Consider student test scores in light of previous, formative assessment information available for each student. Consider this information and adjust grades accordingly.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C1-12 Reflect on student performance, considering wording of test items and student circumstances that may have contributed to the failure in relation to previous assessment information. Then adjust grades accordingly.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

End of Block: PART C: QUESTIONS ABOUT ASSESSMENT IDENTITY

Start of Block: Block 12

Scenario 2: "You discover that one of your students has plagiarized some of his assignment (i.e., an essay). As a teacher in this situation, your ideal priority would be to:"

C2-1 Administer consequences in alignment with school policies on plagiarism.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C2-2 Have him highlight the plagiarized text and then rewrite the section in his own words. As a teacher, reflect on how this incident might inform your future teaching practice.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C2-3 Ask him to document how he obtained and used reference materials for the assignment and what he would do differently next time. Have him write a work plan for redoing the assignment.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-4 Reflect on how you as a teacher designed and presented the assignment. In the future ensure that you deliberately design opportunities for students to learn about plagiarism.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-5 Grade the aspects of student work that are original and deduct grades for the plagiarize sections.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-6 Talk with him about the severity of plagiarism and negotiate potential next steps for his learning.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-7 Explain to him the policy on plagiarism and how you could consistently apply the policy so that it is fair for all students.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-8 Consider his specific learning needs and exceptionalities before determining whether to apply the general plagiarism policy.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-9 Conference with him to review the implications of plagiarizing and agree upon an appropriate alternate assignment.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C2-10 Consult school policy on plagiarism and implement consequences consistent with the policy.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C2-11 Consider the original aspects of the assignment and the plagiarized text to determine what he knows and does not appear to know about the content expectations.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C2-12 Examine extenuating circumstances that led to the plagiarism and then develop an alternative assignment to assess the expectations relevant to the plagiarized sections of the assignment.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

End of Block: Block 12

Start of Block: Block 11

Scenario 3: "Out of 28 students in your class, you have four identified students on Individual Education Plans (who require accommodations but not modified curriculum) as well as several other unidentified students with differentiated learning needs. You must decide how to accurately measure their learning in your class. As a teacher in this situation, your ideal priority would be to:”

C3-1 Provide the four identified students with accommodations on all summative assessments.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-2 Implement scaffolded formative assessments with all of your students based on their individual learning needs, leading up to the final accommodated unit test.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-3 Allow each student to develop a personal learning plan based on his/her strengths, learning needs, and the learning goals.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-4 Design a variety of assessment tasks that allow students to choose how they will demonstrate their achievement of learning expectations.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-5 Accommodate your rubrics and scoring guides to reflect identified student's IEPs.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C3-6 Explain to students and parents the purpose of accommodations and how they will be implemented and communicated on students' report cards.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C3-7 Grade students based on the same assessments including homework, quizzes, and a unit test.

○ Not at all likely
○ Moderately unlikely
○ Unlikely
○ Moderately likely
○ Likely
○ Highly likely

C3-8 Ensure students with identified learning exceptionalities are provided with accommodations on all assessment tasks.

○ Not at all likely
○ Moderately unlikely
○ Unlikely
○ Moderately likely
○ Likely
○ Highly likely

C3-9 Provide a variety of assessment options for all students based on their individual learning needs.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-10 Use the same scoring rubric for all students.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C3-11 Develop different scoring rubrics for identified students.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C3-12 Use the same scoring rubric for all students but use professional judgment to apply criteria differently based on individual student ability.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

End of Block: Block 11

Start of Block: Block 10

Scenario 4**:** “You are planning a unit for your class. As a teacher in this situation, your ideal priority would be to:”

C4-1 Start by designing a summative evaluation and use backward planning to create your lesson plans.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-2 Design formative assessments to be used during instruction. Use information from these assessments to guide the design of subsequent lessons, learning activities, and summative assessment tasks.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-3 Start by reviewing the curriculum learning expectations with students and require each student to develop and negotiate a personal learning and assessment plan for the unit of study.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C4-4 Design a summative evaluation that covers all relevant curriculum expectations for the unit.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C4-5 Consult school policy to decide how homework, quizzes and the summative evaluation will be weighted in the overall grade for the unit.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C4-6 Co-construct learning goals and discuss assignments and grading criteria for the unit with your students.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C4-7 Plan class lessons and assessments that are the same for all students and encompass the curriculum expectations.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-8 Give all students a diagnostic assessment at the beginning of the unit to group students for differentiated learning and assessment activities.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-9 Give all students a diagnostic assessment at the beginning of the unit and have students use their results to select appropriate learning and assessment activities.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-10 Use externally generated quizzes and unit tests (i.e., professionally developed, online resources, peer teacher) to measure student learning.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C4-11 Develop assessments based on the content and activities of your enacted lessons.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C4-12 Develop assessments based on questions/activities that have worked well with other students like yours but adjust them to take into consideration the content and activities of your enacted lessons.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

End of Block: Block 10

Start of Block: Block 13

Just one scenario to go. Your time is appreciated.

End of Block: Block 13

Start of Block: Block 9

Scenario 5: “A parent of one of your identified students is concerned about an upcoming standardized test. As a teacher in this situation, your ideal priority would be to:”

C5-1 Tell the parent that a standardized test will provide important information on how the school system is working for all students and the results will allow the school to invest resources where improvement is needed.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-2 Tell the parent that the standardized test will provide feedback on the child's learning towards educational standards and help guide teaching and learning.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-3 Tell the parent that the standardized test will provide students an opportunity to develop learning strategies, test-preparation skills, and goals for their learning.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-4 Tell the parent that prior to the standardized test, all students will complete practice tests to prepare and become familiar with the standardized test format.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-5 Tell the parent how the standardized test will (or will not) be incorporated into the child's report card grade and how it will facilitate instructional decisions.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-6 Tell the parent that the purpose of standardized testing will be explained in detail to all students prior to taking the test and their test results will be explained to students and parents.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-7 Tell the parent that all eligible students in the class must complete the standardized test.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C5-8 Tell the parent that the child's IEP will be consulted prior to testing and appropriate accommodations will be provided.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C5-9 Tell the parent that standardized tests are required but classroom assessments can be fully accommodated for the student's individual learning needs.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C5-10 Tell the parent that standardized tests are designed to provide a measure of students' achievement across the school district.

- ○ Not at all likely
- ○ Moderately unlikely
- ○ Unlikely
- ○ Moderately likely
- ○ Likely
- ○ Highly likely

C5-11 Tell the parent that report card grades allow parents to draw more valid conclusions than standardized tests about the child's growth and achievement in relation to curriculum expectations.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

C5-12 Tell the parent that standardized tests, in conjunction with report card grades, allow parents to draw more informed conclusions about the child's growth and achievement than either source alone can provide.

○ Not at all likely

○ Moderately unlikely

○ Unlikely

○ Moderately likely

○ Likely

○ Highly likely

End of Block: Block 9

Start of Block: Block 14

You made it. Thank you.

Appendix 2

Pratigya Pozniak <Pratigya.Pozniak@acu.edu.au>
on behalf of
Res Ethics <Res.Ethics@acu.edu.au>
To: Tania Aspland <Tania.Aspland@acu.edu.au>
Cc: Res Ethics <Res.Ethics@acu.edu.au>; Kathleen Plastow
Thu 1/03/2018 10:22 AM

Dear Applicant,

Principal Investigator: Professor Tania Aspland
Student Researcher: Kathleen Plastow (Doctoral)
Ethics Register Number: 2018-20E
Project Title: Reframing Music Education: Teacher perspectives on engaging with data.
Date Approved: 01/03/2018
Ethics Clearance End Date: 31/12/2018

This is to certify that the above application has been reviewed by the Australian Catholic University Human Research Ethics Committee (ACU HREC). The application has been approved for the period given above.

Researchers are responsible for ensuring that all conditions of approval are adhered to, that they seek prior approval for any modifications and that they notify the HREC of any incidents or unexpected issues impacting on participants that arise in the course of their research. Researchers are also responsible for ensuring that they adhere to the requirements of the National Statement on Ethical Conduct in Human Research, the Australian Code for the Responsible Conduct of Research and the University's Code of Conduct.

Any queries relating to this application should be directed to the Ethics Secretariat (res.ethics@acu.edu.au). It is helpful if quote your ethics approval number in all communications with us.

If you require a formal approval certificate in addition to this email, please respond via reply email and one will be issued.

We wish you every success with your research.

Kind regards,

Kylie Pashley
on behalf of ACU HREC Chair, Assoc Prof. Michael Baker

Senior Research Ethics Officer | Office of the Deputy Vice Chancellor (Research) Australian Catholic University
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