

Learning centres in primary and early childhood music education

William J Baker, *Faculty of Education, University of Tasmania*

Abstract

This article reports findings arising from a research project addressing the development and implementation of eighteen learning centres in music education in a Tasmanian Department of Education (DoE) school in regional northern Tasmania in 2007. Learning centres in music education are separate spaces in the classroom in which students engage individually or in small groups in self-regulated musical learning. Literature related to learning centres are reviewed, an exemplar learning centre is presented, the methodology of the project is outlined, data from the project are discussed, and conclusions drawn. The paper offers an initial perspective to inform further research into this under-utilised strategy.

Introduction

Learning centres, sometimes also referred to as learning stations (Nakamura & Baptiste, 2006; Cheyney & Strichart, 1981) are separate spaces in the classroom set up to enable students to work independently of the teacher (individually or in small groups) in the completion of self regulated tasks. Learning centres may be constructed in any domain or across multiple domains and may be used at any level of education, but are most commonly used within the primary and early childhood context (Brown & Boehringer, 2007; Casey, 2005; Chessin, 2007; Copeland, 2005; Devaney, 2005; Hainen, 1977; Kenney, 1989; Martin, Stork & Sander, 1998; Myers & Maurer, 1987; Nakamura & Baptiste, 2006; Snowden & Christian, 1998; Strickland & Morrow, 1988; Turner, 1999; Vincent, Cassel & Milligan, 2008; Wood, 2005).

According to Barry and King (1994), learning centres were an outcome of a “reawakening of progressive education in the late 1960s and throughout the 1970s” when their use within classroom practice was commonplace (p. 506). Since this period however the level of their use has generally declined, with most literature relating to the current use of learning centres in the classroom being drawn principally from within the science domain. At a time when constructivist principles, individualised learning, and the student management of learning are embedded in most Australian curricula it is arguably useful to re-evaluate the potential outcomes that may flow from the use of learning centres, and specifically explore their prospective application in the domain of music. In the context of music, learning centre tasks most commonly comprise composition activities, performance activities or critical listening activities, or a combination of these. They may be utilised in both the general and music specialist classroom environments.

This article explores the phenomenon of learning centres in music education through data collected using a questionnaire of primary and early childhood school students who participated in a trial of eighteen learning centres over a two week period in a regional northern Tasmanian Department of Education (DoE) school in 2007.

Literature related to learning centres are reviewed, an exemplar learning centre is presented, and the methodology of the project is outlined. The data from the project are discussed, and conclusions drawn for future research in this area. The paper offers an initial perspective to inform further research into this under-utilised strategy.

Literature

The majority of literature related to learning centres identified as a part of this study dates from the period between the 1970s and 1980s (Cheyney & Strichart, 1981; Cooper, 1981; Espiritu & Loughrey, 1985; Hainen, 1977; Kenny, 1989; Myers & Maurer, 1987; Strickland & Morrow, 1988) with the most recent literature being located principally within the science domain (Brown & Boehringer, 2007; Chessin, 2007; Nakamura & Baptiste, 2006; Vincent, Cassel & Milligan, 2008; Wood, 2005). Literature referred to learning centres in a gifted and talented context (Snowden & Christian, 1998), in the context of students with disabilities (Cheyney & Strichart, 1981), in Montessori education (Copeland, 2005), in physical education (Martin, Stork & Sander, 1998), in literacy (Strickland & Morrow, 1988), and in music education (Barrett, 1996; Beatty & Schnitger, 1977; Casey, 2005; Devaney, 2005; Turner, 1999).

Two significant Australian authored books on the subject of learning centres were identified (Barrett, 1996; English & Wison, 2004). Barrett (1996) is notable as it is the only substantial resource produced in the use of learning centres within the domain of music education. Barrett states that “despite the

recognition of learning centres as an effective learning/teaching strategy, and the use of such a strategy in many curriculum areas, learning centres are not commonly used in music education” (p. 8). The literature identified within this study supports this assertion, and further indicates that there appears to be a lack of explicit and ongoing research into the theoretical underpinning of learning centres and into students’ perceptions about them.

The literature identified as a part of this study reveal several common themes in relation to learning centres: (i) they are most commonly applied within an early childhood and primary context; (ii) they may be categorised according to the type of learning featured or by the degree of student autonomy enabled; and, (iii) many learning centres share common characteristics including – individualised, active, student-centred student learning, varying levels of student responsibility for learning, and they often frame learning as problem solving.

Age Groups for Learning Centres

Most literature referred to learning centres within an early childhood or primary context, and many may be characterised as ‘how-to’ guides that presented practical suggestions for using learning centres (Beatty & Schnitger, 1977; Cheyney & Strichart, 1981; Cooper, 1981; Copeland, 2005; Espiritu & Loughrey, 1985; Hainen, 1977; Kenny, 1989; Martin, Stork & Sander, 1998; Strickland & Morrow, 1988; Turner, 1999). Others foregrounded examples of the development of successful learning centres (Brown & Boehringer, 2007; Casey, 2005; Chessin, 2007; Nakamura & Baptiste, 2006; Vincent, Cassel & Milligan, 2008; Wood, 2005).

Types of Learning Centre

Some literature refers to different ‘types’ of learning centre. English and Wilson (2004) identify four different types “those that involve independent contract work, those that use rotational tasks, those that use multiple choice tasks and those that feature point system tasks” (p. 5). A different mode of categorisation has been presented by Myers and Maurer (1987) who classify learning centres according to a continuum of student responsibility, comprising (i) self-directing/self-correcting, (ii) self-directing/open-ended, and (iii) teacher instructed/exploratory (p.23). The continuum referred to moves from those centres in which all material is provided by the teacher (including answers to tasks), through those which allow for multiple outcomes (open-ended centres), to those which allow students to explore a concept through a learning centre following a teacher demonstration of the learning embedded in the centre. This continuum highlights the shift in responsibility for learning from those which are teacher-dependent to those which depend on the application of demonstrated skills and understandings by the student.

A further classification has been presented by Snowden and Christian (1998) in reflecting upon the application of learning centres within a gifted program. As they categorise centres according to the degree of student independence embedded in the task design. They refer to four levels from level one which they describe as teacher-planned/teacher-directed through to student-planned/student-directed learning centres (p. 36).

In the music domain Barrett (1996) groups learning centres according to the musical processes they feature, describing composition, critical listening, performance practice, repertoire development and score reading learning centres (p. 9). It is this typology that is most applicable to the learning centres featured in this paper.

Characteristics of Learning Centres

English and Wilson (2004) locate learning centres within the constructivist paradigm, highlighting the active role of the learner and the importance of student self management of learning. In their view:

Using learning centres means that students are positioned at the centre of the learning. The student is not a passive recipient of information, but takes a very active role in the learning process. Students are most likely to be working with other class members on tasks away from the direct instruction of the teacher. For this to work effectively, the student needs to take responsibility for their own learning needs. They need to be able to access other students or resources to solve problems and complete their work. Learning centres are based on the constructivist theory of learning, in which students use their skills to link new information to existing knowledge (p. 5).

For Day (1983, cited in Myers & Maurer, 1987) the student is foregrounded as an active participant in the individualised learning process, such that “a learning centre approach for young children provides an intentional strategy for the active involvement of children, experience-based learning, and individualisation in relation to children’s developmental abilities, interests, and learning styles” (p. 21). In a similar vein Barry and King (1994) highlight the independent learning possible through participation in a learning centre.

Their emphasis is that a learning centre is a “carefully constructed learning component of the classroom in which materials and resources are arranged to allow students to learn knowledge, understandings and skills in an independent mode of learning” (p. 514). They also highlight that the value of learning centre tasks undertaken extends beyond the academic knowledge and skills learned by the student, stating that students “develop better understanding of self, and do develop decision-making capabilities in a way which normally is not available to them in the typical organisation and teaching/learning of classrooms without learning centres” (p. 514).

Barrett (1996) also highlights the independent, student-centred and self regulated aspects of learning centres stating that they:

Consist of designated areas in the classroom where children explore a range of ideas and materials in arriving independently at a solution to a problem... children are able to exercise choice, take responsibility for their decision-making and work at their own pace... learning centres are effective in promoting a child-centred rather than a teacher-centred learning environment (p. 6).

Barrett further highlights the flexible student-centred nature of learning centres stating that “in planning learning centres teachers may take account of children’s particular interests, their individual learning styles, and their developmental needs” (p. 6).

In defining learning centres Groundwater-Smith, Ewing and Le Cornu (2006) also make this connection to problem solving, stating that learning centres involve “a range of open-ended, multi-level, problem-solving activities”. They also state that through learning centres the curriculum “can be adjusted to meet the needs of learners at whatever point they are so they can maximise their learning outcomes” (p. 94).

More recently Russell-Bowie (2006) discusses learning centres with reference to problem solving and the active role of the learner stating that learning centres “encourage independent and cooperative learning, and are activity-based and child-centred. They can include problem-solving tasks that are open-ended to allow all children to succeed and create a unique artwork, while working at their own pace” (p. 37). Russell-Bowie also highlights the independent and self managed learning necessary to complete learning centres, stating that “to use learning centres effectively children need to be self-directed and able to work by themselves or in a small group without constant supervision” (p. 38).

The Learning Centres Developed in this Project

During the planning for this project pre-service teachers were asked to design their learning centres around the teaching for musical understanding (TMU) approach (Wiggins, 2001), and to ensure that they included an authentic use of musical processes. TMU reflects a teaching for understanding (Blythe & Associates, 1998) approach to the music domain. Wiggins (2001) writes that “the only ways of experiencing music are through performing, listening and creating. These are the processes of music” (p. 26). Much time was spent with pre-service teachers during this stage developing their understandings of these processes and relating these processes to the Tasmanian Curriculum in order that they may develop activities that were both age and skill appropriate.

TMU foregrounds the active role of the learner through engagement with the processes of music and therefore seemed an appropriate framework for pre-service teachers to work within. In outlining the approach Wiggins writes that:

In order for musical understanding to grow, an individual must interact directly with music through performing, listening, creating or some combination of these processes. As learners participate in these processes their schemas of understanding of musical ideas become richer, denser, and more interconnected. They develop a rich network of musical schemas that hold factual, procedural, and contextual information that enable the individual to become more proficient at listening, performing, and creating. (pp. 26-27)

The music component of the Tasmanian Curriculum (Tasmanian Department of Education, 2007) highlights the processes foregrounded by Wiggins, and also declares a constructivist approach to music education, stating that “Music education involves active engagement with the expressiveness of sound, allowing students to explore and discover a deeper awareness of music’s nature, vitality, evocative power and range of expressive qualities” (p. 119). Notably the curriculum uses the language of teaching for understanding referring to understanding goals, throughlines and performances of understanding (Blythe & Associates, 1998).

Constructing a Learning Centre in Music Education

The following outline of one of the learning centres is designed to provide some understanding of the ways in which centres were constructed. 'John and his Mouse' was designed for middle primary students by a third year Bachelor of Education pre-service teacher and sought to integrate literacy with composition, notation and performance. The poem upon which this centre was constructed follows.

John and his Mouse

Dwayne Kerrison (used with permission).

My uncle John just bought a new house
But he never knew it came with a mouse
The mouse had lived there for many years
And had two very big soft mousey ears

One evening while John watched his TV
The mouse ran out squeaking "hey follow me"
John jumped up with a broom in his hand
As the mouse ran under the clock so grand

He could run much faster than uncle you see
Under the window and curtains with glee
John tried for hours to catch the mouse
Setting little mouse traps all around his house

But this mouse had escaped from many before
And he watched every trap be placed on the floor
Outside was where the mouse wanted to run
His plan was set and looked like great fun

With the broom John tried to shoo him away
But the mouse was only beginning to play
He ran through the kitchen and past the stairs
With wind rushing through his little mouse hairs

John wasn't as young as he once used to be
And couldn't keep up with this mouse you see
As the mouse ran outside John thought he'd won
But the mouse was just having a little fun

After some years they learnt to be friends
And this is the way our little mouse tale ends
Now every night if you walk past his house
On the deck you'll see Uncle John and his mouse

Students were asked to read the original poem aloud and from their reading to create and manipulate sounds for each of the two main characters. In order to complete the task students must experiment with sound and select the most appropriate sound for their composition, this process highlights the role of the learner as an active experimenter common to many centres. Students were also engaged in creating representations of characters through manipulating musical elements such as instrumentation, sound sources, pitch, dynamics, structure and tempo. Following the creation and refinement of their character sounds students notated them in either graphic or traditional forms - whichever they selected as the most appropriate. This highlights the emphasis placed on student responsibility and decision making within many learning centres, the decision about this aspect of the task lay with the students.

Following the notation activity students were asked to alter the sounds according to the action or activity in which that character was engaged at the time, thus representing action and emotion musically and manipulating musical elements to an artistic end. Students finally completed the centre by reading the

poem aloud with the accompanying sounds performed each time the character was referred to in the text. This example illustrates the embedding of authentic processes and the foregrounding of the learner as an active participant that was evident in most centres.

Methodology

This project was the result of a University of Tasmania Teaching Development Grant, the aims of which were to: engage pre-service teachers in the construction of a series of learning centres that would constitute a performance of understanding of their music education studies (Blythe & Associates, 1998); trial these learning centres in a DoE school; and, place these learning centres into a digital format and make them available to educators online. The digital version of the learning centres was located on the Australian Society for Music Education (ASME) Tasmanian Chapter website and on the DoE online Arts Sharepoint.

The DoE school was a 'district' school catering for students from Prep to Year 10, located in a regional community northeast of Launceston. Pre-service teachers set up their learning centres in three general classrooms: one Prep/Year One class, one Year Two/Three class and one Year Five/Six class. Over a two week period the student participants engaged with the learning centres under the supervision of their general classroom teachers and within their regularly scheduled classroom time. Eighteen learning centres were trialled in the DoE school and all of these were included in the final online resource. After the two week trial the learning centres were removed from the school.

The eighteen learning centres developed for this project were spread evenly between three age ranges: six early childhood (P/2), six middle primary (3/4) and six upper primary (5/6). Many of the learning centres that were constructed utilised composition as their starting point, however almost all of the centres concluded with some form of performance. The focus on the creative process was considered important as it was intended that students would benefit from engagement with creative rather than re-creative activities, and that creative activities would enable students to complete learning centre tasks regardless of the level of their traditional note reading skills. In this sense students were to 'be' composers rather than to learn 'about' composition or composers, and were to therefore engage authentically in the process of musical creation. The performance component of many of the learning centres, which was often merely the process of performing a finished piece for a partner or friend, was also considered important to the integrity of the centres and was in many cases incorporated into centres as an authentic performance of understanding (Blythe & Associates, 1998).

It was also considered important during the planning stage to encourage the development of learning centres that provided a context for student learning. As the pre-service teachers were classroom generalists rather than music specialists this resulted in some centres that were not merely themed but that were authentically interdisciplinary, with literacy through story-telling being most commonly featured. Many were themed and titled according to a generative topic selected for the learning centre.

Each of the eighteen learning centres included: directions for the teacher to set up the learning centre; a task card with clear directions for students regarding the completion of the learning centre; suggestions for providing feedback on student achievement through the learning centre, often including rubrics for student self assessment; and, ideas for possible extension activities building upon the learning centre. The final online resource also included a photograph of the completed learning centre to assist the teacher in the set up process, and where it was appropriate suggested solutions or answers to tasks.

Data were collected during the site trial by means of a questionnaire that students were asked to complete following each learning centre activity with which they engaged. The questionnaire had five questions around the areas of: musical learning, problem solving, working independently and levels of personal enjoyment. Students responded using a three level Likert scale response format ranging from 'not so much', to 'a little' up to 'a lot'. The five statements for response were as follows:

The learning centre helped me to learn about music...

The learning centre helped me to learn about problem-solving...

The learning centre helped me to learn about working without the help of the teacher (working independently)...

I enjoyed doing this learning centre..., and

The learning centre made me want to learn more about music...

For each of these statements students were also provided with space to expand upon their initial response.

The construction of the data collection instrument was challenging due to the ages and hence literacy skills of some of the participants. To address this concern the students in the P/1 class and students in the 2/3 class were provided with an audio player and an audio recorded script of the questions asking them

to complete their questionnaires by colouring in different shaped faces (sad, neutral and smiling) that corresponded most accurately to their response. It was anticipated however that despite this facility many of the younger participants would need some assistance in completing their feedback. In the case of these students a teacher aide or the class teacher sometimes assisted in the completion of the questionnaire. Data were analysed by means of thematic analysis and coding of these themes.

Data

P/1 and 2/3 Student Data

Caution is needed in interpreting some of the data collected in this project as a result of some of the responses provided by the younger (P/1 and 2/3) participants. During analysis it became clear that some data collected with these participants was not reliable - an average of 5.7% of data from these respondents were deemed to be unusable. This decision was taken due to the intentions of the respondent being unclear, most commonly through their selection of multiple responses to the same question. For this age group it is also notable that a high number of positive responses (73.7%) were recorded in proportion to neutral (9.3%) and negative responses (11.3%). Were the participants responding to something other than the question being asked, perhaps to the pictorial response irrespective of what that picture represented? Table 1 presents the responses of the youngest students to the five statements.

Statement	Not so much	A Little	A lot	Unusable	Total
The learning centre helped me to learn about music...	17 (15.7%)	9 (8.3%)	71 (65.7%)	11 (10.2%)	108 (100%)
The learning centre helped me to learn about solving problems...	16 (14.8%)	14 (13.0%)	71 (65.7%)	7 (6.5%)	108 (100%)
The learning centre helped me to learn about working without the help of the teacher...	7 (6.5%)	8 (7.4%)	85 (78.7%)	8 (7.4%)	108 (100%)
I enjoyed doing this learning centre...	9 (8.3%)	9 (8.3%)	87 (80.6%)	3 (2.8%)	108 (100%)
The learning centre made me want to learn more about music...	12 (11.1%)	10 (9.2%)	84 (77.8%)	2 (1.9%)	108 (100%)

Table 1. Data collected from pictorial response sheet (P/1 and 2/3)

Year 5/6 Student Data

Responses from the older participant group produced less numerous responses but far more detailed data, particularly in the open ended sections, and are explored separately by individual question below. There were a total of 39 response sheets completed by this participant group. The following data are grouped according to the questions asked and the themes that arose during the analysis of responses. Four sections are included: musical learning, learning about problem solving, independent learning, and interest and enjoyment.

Musical Learning

Response to the statement 'the learning centre helped me to learn about music...' from the 39 Year 5/6 respondents were neutral with just 9 respondents (23.1%) responding 'a lot', just 6 respondents (15.4%) responding 'not so much' and the majority of 24 (61.5%) responding 'a little'. Comments from these participants regarding their response to this question contained some very interesting observations about the learning embedded in the centres. For three respondents their 'learning about music' was to do with the representative and descriptive qualities of music, stating that they learned about 'how to make scary music without talking', 'how to make sounds for a haunted house' and 'an ox cart can make any sound'. These responses demonstrate an engagement with the process of creating music for a purpose that was a feature of many of the centres and also suggest that these respondents had engaged authentically 'as' musical creators.

Other respondents indicated an awareness of the improvisatory skills embedded in many of the centre activities referring to their development of improvisation skills through such responses as 'I learned how to improvise' and 'how to improvise'. There were thirteen responses that referred to participant engagement with the various elements of music and their manipulation of these. Such responses included 'I learnt the beat and the high and low', 'it helped me with rhythm', 'about pitch and tempo', and 'that you can make a lot of sounds with not so much [Sic.] instruments'. These responses further suggest the value of centre tasks that enabled students to experiment with music authentically as active and participatory learners.

Several respondents referred to the affective qualities of music and the learning they achieved 'through' the musical experiences in the centres. These responses included 'how music can influence our lives with joy', 'that music is fun and enjoyable' and that 'it (music) can change the mood'. These responses suggest that some participants had made quite sophisticated responses to their own learning, relating their musical experiences with emotive responses. One participant responded to this statement with 'I learned that music is not just a sound out of a speaker'. When compared to some of the more sophisticated responses this statement of such a fundamental learning outcome suggests the usefulness of these tasks in allowing students to participate in musical learning at their individual yet often disparate levels.

Learning about Problem Solving

Response to the statement 'the learning centre helped me to learn about problem-solving...' from the 39 Year 5/6 respondents were less positive with just 6 respondents (15.4%) responding 'a lot', 15 respondents (38.5%) responding 'a little' and 18 respondents (46.2%) responding 'not so much', hence 84.7% of participants responded either 'not so much' or 'a little'. In the open-ended aspect of this question there were some ten responses that stated they had learned 'nothing' about problem solving through the centre task. This finding confirms research in the area of problem solving in music education with senior primary students in Tasmania (Elliott, 2007) in which students' perceptions of a problem solving task in music education were explored. This study found that student perceptions of the term 'problem solving' were mostly linked to the mathematics domain and that many students were unsure of how the notion of problem solving translated into a musical context.

The majority of responses to this statement focused on the notions of working together or collaborative learning, suggesting that students viewed problem solving as a collaborative process. Participants responded that the centre tasks had 'helped me work with other people', that 'it helped me with cooperation', and that 'when you work as a group it is not so hard'. One response contrasted significantly with these collaborative perceptions, stating that 'you can do it independently'. This response is perhaps indicative of the diversity of learning centres completed – some were completed by individuals and others were completed in small groups, and it is not possible to know which task this participant was responding to. Some of the responses to this statement did actually refer to aspects of musical problem solving with particular emphasis on the increased instrumental and sound source possibilities available when more than one participant is involved in a centre. These statements included 'to hear sound more', and that 'to make sound you need a team'. However the open-ended responses indicate a lack of understanding or clarity about problem solving, in particular in and through music, and the notable association of many respondents of the concept of problem solving with notions of collaborative learning.

Independent Learning

Response to the statement 'the learning centre helped me to learn about working without the help of the teacher (working independently)...' from the 39 Year 5/6 respondents were very positive with 17 respondents (43.6%) responding 'a lot', 13 respondents (33.3%) responding 'a little' and just 9 respondents (23.1%) responding 'not so much'. This confirms the observations of the class teacher working with this participant group who indicated that the students found working independently of the teacher challenging and that the centres may enable them to learn about this aspect of the management of their own learning (Year 5/6 Class Teacher, personal correspondence October 2007). Seven responses referred explicitly to the notion of working without the assistance of the teacher in the completion of the centres. These responses included 'it helped me realise that I won't need a teacher helping me "all" the time', 'I don't have to go to the teacher every 2 seconds' and 'we could go away and do it without the teachers help'. Other participants referred to independent learning without specific reference to the teacher, including 'that I can work independently', 'you can work by yourself' and 'I have learnt that you figer [Sic.] it out yourself'. One response was particularly insightful when reflecting on independent learning stating that 'we chose our own path for learning', also suggesting that this respondent had engaged positively in the management of their own learning in completing the task.

Interest and Enjoyment

Responses to the two satisfaction statements indicated that there was a significant level of interest and enjoyment in the use of the learning centres in the year 5/6 classroom. Response to the statement 'I enjoyed completing this learning centre...' were extremely positive with 24 respondents (61.5%) responding 'a lot', 10 respondents (25.6%) responding 'a little' and just 5 respondents (12.8%) responding 'not so much'. Response to the statement 'learning centres are an interesting way to learn...' were also very positive with 26 respondents (66.7%) responding 'agree', 12 respondents (30.8%) responding with 'no opinion' and just 1 respondent (2.6%) responding with 'disagree'. This sense of satisfaction and enjoyment gained through the centre tasks confirms the research of Elliott (2007) in respect of problem solving who stated that "enjoyment of the task was clearly very important to many student participants" (pp. 58-59).

Conclusion

The project reported in this paper may be viewed as an initial exploration of aspects of the learning centre approach within a relatively small sample. Those data collected and analysed within this project have provided an initial view of one example of the current usage of learning centres in Australian music education. The analysis of these data have indicated that participants overwhelmingly enjoyed the process of completing learning centres, that learning about learning through the centres was strongly reported, that some musical learning was evident and that problem-solving in this context was understood variously by participants. These findings require further research in order to expand the depth of our understanding of the ways in which students learn through learning centres and this may best be undertaken through a less prescriptive data collection tool – perhaps utilising interviews and focus groups.

This project has briefly discussed some of the theoretical underpinnings used in learning centres and further research in this area may be directed towards better understanding how these underpinnings impact upon student learning. Of particular significance in this study has been the response of participants to the management of their own learning, and the levels of enjoyment and satisfaction reported by participants, and the investigation of these outcomes may provide further insight into the phenomenon of learning centres.

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Dr Bill Baker is Lecturer in Music Education in the Faculty of Education in the University of Tasmania. He teaches in the Bachelor of Education degree in the preparation of pre-service primary generalist teachers in music education and in the Bachelor of Teaching degree in the preparation of pre-service primary and secondary music specialist teachers. His research interests include: arts curricula and assessment, learning centres in music and arts education, the scholarship of teaching, the role of journaling in pre-service teacher education and the role of professional performing arts organisations in education. Dr Baker is the current Chair of the Tasmanian Chapter of ASME, and is a member of the Assistance to Organisations Panel of the Tasmanian Arts Advisory Board.