Generalists To Specialists: Transformative Evidences and Impediments to Student-centered Practices of Primary Music and Art Teachers in Singapore

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Abstract
This article fills in the knowledge gap in the student-centered practices of generalist music and art teachers to prepare 21st century learners. The study shows that generalists, after completing a specialist professional development program, struggle the most in connecting subject matter knowledge to pedagogical knowledge, specifically student-centered classroom pedagogy. The study confirms previous literature on the shortfall of professional development training in adequately preparing generalists in the arts and supports the recommendations that advisory teachers and continuous professional development support are needed to increase the self-efficacy of generalists.
Introduction

Recent studies in both music and art focus more on understanding what goes on in the classrooms, whether the teacher is a generalist or a specialist. Instead of dwelling on the subject of ‘who shall teach the arts’ scholarship has moved on to ‘how the arts are being taught’, and therefore a focus on pedagogical practices. However, despite the increasing advocacy for student-centered practices in art and music, limited studies in the extant literature have focused on the comparison of generalists and specialists in relation to this approach. The present study fills in this knowledge gap by addressing the lack in the research in arts education on pedagogical content and examining how an intensive professional development programme, which aimed to provide specialized training to primary school generalist teachers, served as an impetus for innovative improvements in music and art pedagogical practices. In particular, we aimed to answer the following research questions:

1. Is there a significant difference in the teaching practices of teachers when they were generalists and when they have become specialists?
2. Is there a significant difference in the actual classroom practices of generalist teachers and specialist teachers?
3. How do the teachers perceive the alignment of the intensive professional development to the student-centered learning that has increasingly been the emphasis in arts education practices in the 21st century?

The results of this study can identify areas of strengths and areas of needs for generalist and specialist teachers. These results can help in the assessment and development of music and art in-service training and professional development programmes.

**Singapore Specialist Professional Development Programme for Generalists**

The specialist professional development programme referred to in this study is an intensive four-month Advanced Diploma initiated by the Ministry of Education (MOE) and the National Institute of Education (NIE) to address the problem in music and art classes in Singapore being delivered by teachers with zero to minimal music/art qualifications. It is regarded as an immediate solution to the problem and the graduates of the programme are given the chance for admission to the Bachelor of Arts in Education (Music or Art specialization) offered by the institute. The Advanced Diploma is meant to upgrade the knowledge base and skills of in-service generalist teachers as they work towards becoming full-fledged specialists in music and art. The first intake was in 2011. It started being offered twice a year and was reduced to once a year in 2014.

The objectives of both music and art Advanced Diploma programmes are similar:
– To provide teachers with a framework of knowledge and skills in music/art that will be useful in their roles as classroom teachers as well as practitioners.
– To apprise music teachers of current thinking and practice in Music and Music Education that will provide opportunities for teachers to reflect on and re-examine their classroom practices/To provide perspectives on the change and development of theories and trends in art and art education for teachers to reflect, re-examine and to draw inferences about their classroom practices.
– To enable teachers to develop competencies in the evaluation and planning of effective music/art curricula and programmes in their own schools.

**Student-Centered Practices in Art and Music**

The literature in music and art education reviewed for this study mostly distinguishes between traditional and student-centered practices of which the latter has increasingly been emphasized. While the term ‘student-centered’ practices in the arts have been widely used, it does not have a straightforward definition. We find the principle framed within multiple theories such as action/active learning (Regelski, 2004; Scott, 2011), constructivism (Scott, 2009, 2006), higher order approach (Kowalchuk, 1999), holistic education (Campbell, 2011), informal learning (Green, 2008), and inquiry-based learning (Sang, 2009; Scott, 2008), to name a few. The common ground is placing the students at the heart of their music and art learning experiences whether focusing on their overall well-being, structuring lessons so that they learn life-skills, cultivating lifelong learning, turning classrooms into laboratories for thoughtful experimentations and creative explorations, or developing minds that adopt critical questioning and problem solving. There is an agreement that the role of the teacher becomes a facilitator or guide, instructing only when necessary.

**Music**

Student-centered learning and instruction is understood in music to be a type of ‘active learning’ which finds students engaged and involved in what they are studying and where the ‘planning, teaching, and assessment revolve around the needs and abilities of the students’ (Brown, 2008, p.30). A student-centered music education is also believed to nurture the 21st century skills needed for the future success of students (Scott S.C., 2011). There appears to be a consensus among leading music education scholars that a lifelong learning for music requires students who are able to make musical decisions, who possess the ability to assess their own weaknesses and who are able to develop strategies for improvement. It is only through a student-centered approach that lifelong engagement with music and the nurturance of 21st century competences such as creativity, collaboration, communication and critical thinking are possible (Brown, 2008; Green, 2008; Regelski, 2004; Scott, S., 2011, 2009, 2008, 2006; Scott, S. C., 2011).
Active Learning is defined in the following ways: (1) within constructivist notion in which ‘learners explore ideas related to their own insights’ (Scott, 2011, p. 192); (2) within a holistic approach to learning that takes into consideration the social, physical, emotional and educational needs of students (Regelski, 2004); and (3) within collaborative hands-on learning where problem solving is a valued tool in curriculum design (Blair, 2009). The constructivist active learning envisions a classroom where students become actively involved in their music-making by asking questions, making musical decisions and analysing the results. Holistic approach sees the students as principal actors in their education who are able to transfer what they learned in school to their lives outside of the school in order to cultivate lifelong learning in music. In the collaborative hands-on learning ‘informed doing’ and ‘uninformed doing’ are differentiated through personal engagement and musical understanding.

Art

Student-centered art classrooms will find a reluctant student learner shift to being an engaged learner where students think creatively and make choices regarding their projects, including medium, and direction of art study (Andrews, 2010). Yenawine (1998) believed student-centered learning takes place in an open-ended, facilitated discussion on art objects where individual expressions and productive group interactions are encouraged; in this setting, ‘the teachers are facilitators of the student process, never the experts’ (p. 320). This can also be achieved when an art curriculum pushes for higher order thinking, which is also synonymous with critical thinking. In this environment, students learn to connect what they learn inside the art room to their lives outside as it is believed that ‘when curriculum relates to what students can see and experience outside the classroom, connections are more evident and students are more intellectually engaged’ (Kowalchuk, 1999, p. 17). This line of thinking also connects to inquiry-based learning where students are allowed to explore content and in the process nurtures their curiosity and critical thinking, develops student ownership of their education, creates active learning environments, helps students formulate good questions and present results systematically, and teaches students to evaluate the value of their conclusions (Sang, 2009, p. 220–221).

As in music, holistic learning is also considered a student-centered approach in art. Here curriculum and pedagogy must align in the following manner.

A curriculum planner needs to change from outdated models of teaching, such as transmission, where there is a one-way flow of knowledge and skills from the teacher to the student, and transaction, which is more interactive but is mainly cognitive. By contrast, the transformation model recognizes the wholeness of the student, wherein the curriculum and the student are not separate but connected. Additionally, holistic curricula that focus on connections are most effective when the themes or issues to be discussed are negotiated between the teacher and the students (Campbell, 2011, p. 20).
Sharing of interests, experiences and knowledge between teachers and students is believed to create students who are enthusiastic about learning and making art. Chang, Lim and Kim (2012) developed three student-centered approaches to an art methods class for elementary pre-service teachers: child art, visual culture, and issues-based. Child Art pedagogy offers students to explore their own art work and that of others focusing on the unique experiences of children; Visual Cultures provide opportunities ‘to observe, question, and reflect upon concepts of the contemporary visual cultures’; and the Issues-Based approach ‘advocates students becoming empowered, expanding cultural and social awareness, and developing critical thinking and problem-solving skills as citizens of the 21st century’ (p. 24).

**Instructional Practices of Generalists and Specialists in Art Education**

**Music**

In the area of music education research, studies pushed for focusing more on the nature and quality of music teaching, the nature of teacher knowledge, and the way teacher training has impacted classroom teaching (Alter, Hays & O’Hara, 2009; Bresler, 1993; de Vries, 2011; Power & Klopper, 2011; Wiggins & Wiggins, 2008). Two studies were found most useful for this research and therefore worthy of a more detailed discussion: The study of Wiggins and Wiggins (2008) is significant in the way it recorded the nature of generalist teaching and the study of de Vries (2011) is relevant in its direct examination of the impact of teacher training courses to first year teaching practices.

Wiggins and Wiggins (2008) found that generalist teachers spend a lot of time in performing (singing) and listening but not on creating. They also noted that generalist teachers tended to view singing as equivalent to practicing for school assemblies and becomes ‘the sum total of the music education experience’; while listening is often associated in sharing CDs of personal interest to the teacher without any regard for informed listening on the students’ parts. These observations are not very different from that of Bresler (1993) where she found singing is simply learning a tune, listening as background to other activities, and music functions to spice up school programmes; this put a double bind in music by the school and educational policies where it is delegated to the role of school entertainment thereby failing to teach the higher cognitive aspects required of a core curriculum.

It was also reported in Wiggins and Wiggins (2008) that generalist teachers did not demonstrate ability to engage student in musical thinking and did not know how to contextualize music theory. Generalists also tended to teach from a commercially developed music kits designed to help teachers with limited music background and skills to teach in a planned, sequential manner. Likewise, those with some studio experience were found to focus more on drilling students such
as note reading and those who were observed to teach democratically in their other classes tended to change to a drill master in the music classroom who chastises students who make mistakes. Finally, generalist teachers were found to be excellent classroom managers although they seem to have inadequate skills to engage students musically other than by having them mimic singing and follow motions. Nevertheless, they also found that some generalists who were self-taught musicians demonstrated a more informal, student-centered approach to teaching: They provided opportunities for students to perform tasks, such as playing musical pieces, both individually and in small groups. This unexpected outcome is an interesting contrast to those who claim to be specialists because of their limited music studio backgrounds. This practice also brings in unintentionally authentic music learning practices in the classrooms. However, these generalist teachers show limited abilities when the situation calls for scaffolding and assessment. The challenge in applying a student-centered approach in the music classroom of the generalists lies primarily on the lack of competence in and knowledge of music.

de Vries (2011) noted that generalists, because of their limited musical knowledge and skills, tended to want to teach lower primary students; there is the impression that the materials for lower primary are easier. The results of the study also showed that singing and listening were the most frequent activities enacted by generalist teachers with minimal music background. In the same study, there is also a concern among the generalists regarding the time devoted in training to music studies and that they would prefer to have classes focused on developing resources that they can use in the classrooms and more hands-on training. A follow-up study with the teacher in their third year showed that several factors affect teacher practices: musical background, current engagement in music making, access to music professional development, access to resources, and music courses in pre-service teacher education (de Vries, 2013). He agrees with the recommendations of Russell-Bowie (2011) and Hallam et al (2009) in the provision of a specialist advisory teacher and long-term professional development in order to increase the self-efficacy of generalists in teaching music.

Art

The most useful literature in the Art on the subject of generalist and specialist during the last ten years is scant but has more consistent concerns. Studies consider questions largely about the profiles of the teachers, carefully studying experiences and perspectives, with the aim of creating an effective teacher preparation or professional development programme. Point of inquiry includes knowing more about the teachers’ expertise and knowledge about the subject matter of art to use as basis for re-designing the in-service training programmes being offered to assist them (Buldu & Shaban 2010; Pavlou, 2004). Kowalchuk (1999) raised a question about the lack of research on the patterns of successes and difficulties encountered by the pre-service teachers in their transitions from student to teacher. While literature in this area points mainly to the belief that the more we understand the students and their concerns the better training programmes will
be, the analyses also provide us with information on the practices of art teachers.

Pavlou (2004) in looking at the profiles of primary art teachers have identified specialist teachers (non-artists) as the most effective in teaching and motivating students. She attributed this to the way specialist teachers are able to balance subject matter knowledge and pedagogical knowledge. Specialist teachers in this study are more attuned to student preferences and also have the ability to engage them into critical thinking, resulting in a more enjoyable art class. The study also shows that while enthusiastic non-specialists can also exhibit student-centered pedagogy they fail to move beyond art production in their lack of abilities to help students respond to art. This study demonstrates how a content-centered/student-initiated art class that facilitates growth by engaging students in both art production and other aesthetic activities (art talk, criticism, history) is considered to be the most successful.

In looking at students’ works to determine the practices of specialists and generalists, Buldu and Shaban (2010) determined that generalists are more likely to integrate art classes to other subjects but the activities in art are very limited to certain medium. Specialists, on the other hand, with their minimal art qualifications, demonstrated ability to provide more activities for students and are more likely to adapt teaching strategies that are student-centered. Furthermore, Kowalchuk’s (2009) study showed how preservice teachers when they first applied their knowledge in the classrooms find ‘teaching strategies, art content, classroom management, and student learning and characteristics’ to be challenging. This study is useful for this research because of the similar situation where the participants find themselves translating the knowledge gained from a professional development for the first time in art classrooms.

**Expected Outcomes**

Based on the literature, the following are the expected outcomes after a generalist completes the specialist training:

1. The teachers would increase their use of student-centered practices and reduce the use of teacher-directed practices after attending the Advanced Diploma. They would become more confident in their teaching and more competent in implementing student-centered strategies.
2. There would be a significant change in teachers’ “views” about connecting to artists in the community and extending student learning to their daily lives and connection to the real world.
3. The teachers would have acquired the necessary skills to lead student-centered activities related to creativity, collaboration, and critical thinking that are crucial in learning in these subject areas.
Methodology

Sample
The participants of the study were 30 Music and Visual Arts teachers from Singapore primary schools. These teachers were considered as generalists before attending a professional development and then became specialists upon completion of the Advanced Diploma (90% female and 10% male). Thus, the specialists referred to in this study are the same generalists who responded to the pre-survey. At the time of the study, about 43% of the teachers had five years or less of teaching experience in music and art; about 25% had 6 to 10 years of experience and the rest with more than 10 years. Prior to the Advanced Diploma, the teachers had minimal training (from none to a few classes) in music and art and only about 3% had music or art education as their main areas of specialization.

Measures

Teaching Practices Questionnaire for Art and Music Teachers (TPQAM). The items in the TPQAM (see Appendix A) were developed based on our theoretical framework. The questionnaire includes 12 items: two items reflect the content of the lessons that are specific to teaching Music and Arts (e.g., “collaborate with or invite local artists”, “incorporate world music/art in classes or activities”); four items reflect teacher-centred pedagogical approaches; and six items represent student-centered approaches. Sources of the questions were the literature on specialist teaching practices in music (and TIMSS (Trends in International Mathematics and Science Study) questionnaire. The items are shown in Table 1.

<table>
<thead>
<tr>
<th>TPQAM Items</th>
<th>Item Type (student-centered/teacher-directed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>In teaching music/art, how often do you do the following?</td>
<td></td>
</tr>
<tr>
<td>1. Present the fundamental elements and concepts in lecture format</td>
<td>teacher-directed</td>
</tr>
<tr>
<td>2. Introduce principles by creating visual representations and having students mimic the examples</td>
<td>teacher-directed</td>
</tr>
<tr>
<td>3. Choose the types of projects for students to work on</td>
<td>teacher-directed</td>
</tr>
<tr>
<td>4. Provide step-by-step guidelines for students to follow in their projects</td>
<td>teacher-directed</td>
</tr>
<tr>
<td>5. Have students decide the themes and materials for their projects</td>
<td>teacher-directed</td>
</tr>
<tr>
<td>6. Have students learn from other students collaboratively</td>
<td>student-centered</td>
</tr>
<tr>
<td>7. Identify musical/artistic problems with the students and encourage solving them on their own or with peers</td>
<td>student-centered</td>
</tr>
</tbody>
</table>
8. Encourage students to search independently the fundamental concepts needed to create or compose their projects
9. Use music/art examples familiar to the students
10. Change the lessons based on students’ needs
11. Connect the lessons to everyday life

Two distinct items were analyzed separately from the rest of the items in Table 1. These items were included in line with two specific objectives of the Advanced Diploma: promoting the use of world music or art activities and collaboration of teachers with local artists.

The teachers indicated their responses to each item using a four-point Likert scale that was also used in the TIMSS questionnaire: 1 (“never”), 2 (“some lessons”), 3 (“about half of the lessons”), and 4 (“every or almost every lesson”). The teachers may indicate if an item is not applicable to them. The internal consistency of the four teacher-directed items (Cronbach alpha=.65 for pretest and .47 for posttest) and six student-centered items (Cronbach alpha=.63 for pretest and .74 for posttest) were satisfactory. Item 11 in Table 1 was excluded in the calculation of internal consistency because all of the teachers selected the “not applicable” response in the pretest.

*ArtsErie Observation Protocol.* To determine and compare the quality of the pedagogical practices of four generalist and four specialist teachers, we used the *ArtsErie Observation Protocol* (AOP, 2008). This protocol has three dimensions: engagement, enactment of lesson plans and instructional approach. This observation form was developed and used in the Arts Council Erie grant programme and its evaluation: The Effects of Artist Residencies on Teachers’ Instructional Practices and Student Learning, September 2006 to August 2008. It was an initiative by a Pennsylvania-based arts council for their Art in Action Programme for primary schools. For the purposes of this study, we will focus on the instructional approach dimension of the AOP. This dimension comprises eight behavioral indicators of student-centered pedagogy:

O1. Involved all students by requesting and inviting equal participation
O2. Used active, experiential instructional approaches
O3. Created an emotionally safe learning environment where taking risks and making mistakes is okay
O4. Provided opportunities for students, artist, and/or teacher to collaborate and work together (all combinations)
O5. Demonstrated respect for all learners by encouraging individual expression, responsibility, and decision making
O6. Connected the current lesson to students' previous learning experiences or to own personal experiences
O7. Used multiple ways to convey the lesson, including but not limited to questioning, illustration, demonstration, and modeling
O8. Provided one-on-one instruction or attention as well as group instruction

In observing teachers’ practices, the observer used the rubric provided, scored the instructor on each of the indicators and entered the total score. The scoring is as follows: “not at all during the lesson” (1 point), “seldom during the lesson” (2 points), “occasionally during the lesson” (3 points), and “frequently during the lesson” (4 points).

Data collection

This study utilized a sequential-explanatory mixed-methods research design (Creswell & Plano Clark, 2008), wherein the qualitative data is used to explain the results of the quantitative data and the quantitative data is used to plan the qualitative phase (Morse, 1991). There were two phases to the study, Phase 1 is the quantitative pre-post-survey phase and Phase 2 is the qualitative observation phase where individuals were conveniently sampled to follow-up and explain the quantitative results in-depth. The process of this design is summarized below:

A researcher first collects and analyzes the quantitative (numeric) data. The qualitative (text) data are collected and analyzed second in the sequence and help explain, or elaborate on, the quantitative results obtained in the first phase. The second, qualitative, phase builds on the first, quantitative, phase, and the two phases are connected in the intermediate stage in the study. (Ivankova, Creswell, & Stick, 2006, p. 5)

There were multiple data sources: (1) questionnaire, (2) classroom observations, (3) teacher reflections, and (4) focus group discussions. To ascertain the patterns and changes in the typical classroom practices of music and art teachers before and after taking part in the Advanced Diploma, the teachers responded to the TPQAM. To generate a deeper perspective of the differences in the classroom practices of generalists and specialists, classroom observations were conducted with four generalists and four specialists (equally divided into music and art teachers). The specialists who were invited for the classroom observations either reported no change or a significant change in their classroom practices in the TPQAM. Since we were not able to observe the classroom lessons of the specialist teachers when they were still generalists, we observed the lessons of current four generalist teachers to document their actual classroom practices and used these for comparison with specialists. The classroom lessons were videotaped by a member of the research team. The lessons observed ranged from 0.5 to 3.5 hours of lessons per teacher. Overall, about 10 hours of lessons were videotaped for the specialists and 8 hours for generalists. During the videotaping, the observer also took down some field notes on incidental information that could not be captured in the observation protocol.
To further enrich our data, one of the authors conducted focus group discussions (FGD) with 11 teachers. The main objective of the FGD was to extract details of participant experiences in applying the knowledge gained from the Advanced Diploma for the first time in the classrooms. There were four focus group discussions with the teacher-participants, two after the class observations and two after six months of completing the Advanced Diploma. The FGDs concentrated on the challenges of student-centered pedagogy, connection of the Advanced Diploma to actual practice, and the enablers and impediments to innovative changes in their practices.

After every lesson that was observed, the teachers were also requested to submit reflections of their practices, using some guide questions (e.g. “describe one challenge faced in the past week,” “describe something that went well,” “describe something learned about teaching art/music,” etc.) set by the research team. The teacher reflections were meant to extract the same objectives as the FGD and the survey in order to use for triangulation of data. The teachers also used their responses to reflect on their practices for improvement in subsequent lessons.

**Data analysis**

*Questionnaire data.* The teachers’ mean scores were calculated for student-centered and teacher-directed items. Afterwards, paired t-test was used to examine the changes in the teachers’ practices after experiencing each dimension.

*Class observations.* The class lessons were divided into five-minute segments. Each segment was coded using the ArtsErie observation protocol. To calculate intercoder reliability, the protocol was applied by two independent raters in 20% of the videotaped lessons. The value of the intercoder reliability was found satisfactory. Differences that were incurred in the coding were addressed and discussed until the coders reached a consensus. Each of the remaining classroom lessons were coded by one trained team member.

The number of segments in which each indicator was observed in the classroom lessons for the generalists and specialists were calculated. The proportion of classroom segments in which the generalist teachers and specialist teachers applied each of the eight student-centered indicators were calculated and compared using chi-squared test of proportions from independent samples.

*Focus group discussions.* All data were transcribed and entered in the nVivo software and analyzed in five levels of coding (Saldaña, 2009): process, descriptive, structural, in vivo, and values. Process coding enables to see how lessons unfold from beginning to end; descriptive coding provides vital information about the participants; structural coding tracks habits in
implementation of lessons; in vivo codes allows to record useful terminologies used by participants; and values coding records the beliefs and perceptions of the teachers. Intensive memos accompanied the codes and served to link their connections. The emerging themes were correlated to the quantitative survey results to determine which aspects of change were complementary and which needed attention for further recommendations. The research team met after observations and the other data collected and completed to compare and discuss the analysis. Each teacher was given a within-case analysis and the results were cross-synthesized for an overall analysis.

To generate an integrative perspective of the teaching practices of generalist and specialist music and art teachers, we carried out data triangulation and researcher triangulation (Yin, 2014). For the data triangulation, we compared the results of quantitative and qualitative data collected. Researcher triangulation was done by three investigators, all of whom were experts in music and art education.

**Results**

In presenting the results of this study, we will first focus on the survey to present the changes in the teachers’ practices as they turned from generalists to specialists. We then zoomed in on the results of the classroom observations to describe and compare the actual classroom practices of four generalists (those who did not attend the Advanced Diploma) and four specialist (those who completed the Advanced Diploma) teachers.

**Quantitative Results**

*Changes in the Teaching Practices of Teacher Generalists who turned Specialists*

The mean frequency of the participants’ teacher-directed and student-centered practices before and after their participation in the Advanced Diploma is shown in Table 2. Teacher-directed practices did not change after the teachers participated in the programme. However, the teachers were found to significantly increase their use of student-centered practices as they turned from generalists to specialists.

<table>
<thead>
<tr>
<th>Test</th>
<th>Teacher-directed Practices ($n=30$)</th>
<th>Student-centered Practices ($n=29$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>2.48 (0.72)</td>
<td>2.20 (0.51)</td>
</tr>
<tr>
<td>Posttest</td>
<td>2.23 (0.52)</td>
<td>2.65 (0.53)</td>
</tr>
<tr>
<td>$T$</td>
<td>-1.90</td>
<td>3.93</td>
</tr>
<tr>
<td>$P$</td>
<td>.067</td>
<td>.001</td>
</tr>
</tbody>
</table>

*Note. Response scale: 1 (“never”), 2 (“some lessons”), 3 (“about half of the lessons”), and 4 (“every or almost every lesson”)*
When the teachers were still generalists, they indicated that the following practices were not applicable to them: linking of classroom lessons with everyday life, use of world music/art in classes and activities, and collaboration with local artists. However, after they turned into specialists, about 40% of the teachers have done the linking of their lessons with real-life experiences or used activities based on world music or art at least in some lessons. About 13% of the teachers reported the same in relation to collaborating with local artists in teaching.

### Table 3. Distinct Classroom Practices of Specialists

<table>
<thead>
<tr>
<th>Response</th>
<th>Count</th>
<th>%</th>
<th>Count</th>
<th>%</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>Some lessons</td>
<td>4</td>
<td>13</td>
<td>7</td>
<td>23</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>About half of the lessons</td>
<td>2</td>
<td>7</td>
<td>3</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Every or almost every lesson</td>
<td>6</td>
<td>20</td>
<td>2</td>
<td>7</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Not applicable</td>
<td>13</td>
<td>57</td>
<td>18</td>
<td>60</td>
<td>19</td>
<td>63</td>
</tr>
</tbody>
</table>

The actual classroom lessons of specialist teachers, however, did not show significant percentages of student-centered approaches. The reason was not because teachers did not believe in allowing students to explore and be creative but they find that they are bounded by several constraints, which will be discussed further later on in the article: (1) the teachers believe that a grounded foundation is necessary before students are allowed to explore on their own; (2) the teachers believe that student-centered approaches work better for upper primary students who have a grasp of the basics; (3) there is a lack of space and media resources in the schools; (4) this is not feasible in Singapore schools because of teacher-student ratio (1:40); (5) there is not enough class time and no continuity that would allow students to create and explore; (6) the teachers are inhibited by the MOE curriculum they need to meet; and (7) culturally, students are not ready.

### Comparison of Actual Classroom Practices: Generalist and Specialist

The actual classroom practices of generalist and specialist teachers were observed and compared (Table 4) in relation to seven instructional indicators (I1, I2, I3, I4, I6, and I7). The proportion of classroom segments that generalists and specialists allotted in relation to most of the indicators considered were not statistically different. When compared to the generalists’ classes, a greater percentage of the class periods observed among the specialists featured the use of active and experiential instructional approaches (I2).
Qualitative Results

Pre-service art teacher beliefs can shift according to Paek (2006) if training programmes would provide the conditions to challenge them. He advocated the use of reflection in order for teachers to self-analyze previous practices and evaluate them. Following evidences from the literature, he believes that reflection can improve art student teacher performance. In this study, there were two venues from which the participants could reflect on their practices: the Focus Group Discussion (FGD) and written reflections. The FGD were held upon completion of the observations, while the written reflections were required after each lesson. The questions in the FGD in part were follow-up to the written reflections so the participants could think more about their responses and share experiences with others. It is in the written reflections that the dilemma of control inside the classroom first surfaced.

I need to try to refrain from too much teacher talk and give the pupils more opportunity to express their thoughts. At the same time, I dwell in the dilemma that if I do not provide them with sufficient scaffolding will the whole lesson be chaotic? Will they understand? Will the lesson flow well? Yet, when I am giving too much teacher talk, am I dominating their thread of thoughts or stifling them in a way? This is something I struggled within myself in almost every music lesson and being a classroom teacher, I guess there is some sort of ‘inner control freak’ essence in us (music teacher participant1, reflection, 25 Sep 2013).

1While this study observed both generalists and specialists, the FGDs were conducted only with the specialists or those who completed the Advanced Diploma.
Table 4. Actual Classroom Approaches Used by Specialist and Generalist Teachers

<table>
<thead>
<tr>
<th>Teacher Group</th>
<th>Total Periods Observed</th>
<th>I1: “Involved all students by requesting and inviting equal participation.”</th>
<th>I2: “Used active, experiential instructional approaches.”</th>
<th>I3: “Created an emotionally safe learning environment where taking risks and making mistakes are okay.”</th>
<th>I4: “Provided opportunities for students, artist, and/or teacher to collaborate and work together.”</th>
<th>I5: “Demonstrated respect for all learners by encouraging individual expression, responsibility, and decision making.”</th>
<th>I6: “Used multiple ways to convey the lesson, including but not limited to questioning, illustration, demonstration, modelling.”</th>
<th>I7: “Provided one-on-one instruction or attention as well as group instruction.”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialists</td>
<td>253</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
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<tr>
<td>Generalists</td>
<td>98</td>
<td>100</td>
<td>40</td>
<td>98</td>
<td>10</td>
<td>101</td>
<td>42</td>
<td>94</td>
</tr>
<tr>
<td>χ^2(1)</td>
<td>0.05</td>
<td>26.99***</td>
<td>0.25</td>
<td>0.40</td>
<td>0.09</td>
<td>2.79</td>
<td>2.62</td>
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<tr>
<td>p</td>
<td>.82</td>
<td>&lt;.001</td>
<td>.61</td>
<td>.53</td>
<td>.92</td>
<td>.11</td>
<td>.10</td>
<td></td>
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</tbody>
</table>
At this juncture [in lesson 5], where there is little class-based instructions to be given, at times I wonder if I have missed out on any further instruction (e.g. art elements, design principles) that is needed as a pre-activity class-based instruction. I presume this is a habit of a teacher wanting to provide frontal teaching at the beginning of each lesson (art teacher participant, reflection, March 2014).

There are a number of factors that surfaced in the FGDs that explain the challenge of a more student-centered approach to teaching music and visual art. There are two factors that can be considered unique to the Singapore classrooms. One of them is the belief that the lack of background of the students in these art forms necessitates careful instructions.

I feel that I am teaching directed… very little student-directed. I will say that that is dependent on the class and in the school. I would say that 35% of my kids come in with zero, really zero education… you know kindergarten. They come in to their first school lessons and I have to really make sure that even sometimes, to some of them, I must really make sure that I explain everything (art teacher participant, FGD, 21 November 2013).

The second unique factor is ‘culture’. The participants in this study expressed that they believe their students are not culturally ready for a more independent approach.

I think to be student-centered, the students have to be ready to take the step. Yeah. Sometimes they are not ready; they would rather be told what to do. So that is the other dilemma. It’s the culture you see: In school, I must listen to teacher; whatever they say I will do; whatever they say I can do. You know when you give them choices they go – huh, really? Must ah? Must choose? I think it takes a lot to slowly breed that kind of importance (music teacher participant, FGD, 21 November 2013).

Knowing the characteristics of the pupils, I’m not sure I will be able to teach student-centered because it’s going to be a long drawn process. Because I think it will take time for these children to understand what it means to be independent. (art teacher participant, FGD, June 2014)

I tried with painting. So they were supposed to upload a photo of their processes and all that. It is very frustrating getting them to upload; it’s very frustrating getting them to do research. And then, your deadlines kept postponing. It’s not that we do not want them to explore, but they still want teachers to, umm, dictate. Then to me, it takes out the joy of the art lesson, because I have to come in and remind and scold
them, ‘why you never submit?’ ‘where is your research?’ ‘where is this?’ ‘where is that?’ Because children do not find it important to come in and bring the research with them, why don’t you just tell them what to do? (art teacher participant, FGD, June 2014)

Similar to other studies, inadequate teacher preparation (Alter et al., 2009; Duncum, 1999), the crowded curriculum (Alter et al., 2009; Espeland, 2007; Hudson & Hudson, 2007; McDonald, 2010; Russell-Bowie, 1993), lack of school support (Alter et al., 2009; Leung, 2007; McDonald, 2010; Russell-Bowie, 1993, 2009; Zen Eddine, 2005), lack of training of the teachers in student-centered approaches (Andrews, 2010; Blair, 2009; Brown, 2008; Campbell, 2011; Scott, 2011; Wiggins & Wiggins, 2008; Yenawine, 1998), and lack of knowledge and skills in music/art (de Vries, 2011; Pavlou, 2004; Wiggins & Wiggins, 2008) are also major impediments to change in the teacher’s practices. The latter two confirm that insufficient training translates into poor teaching in the arts. The following are the major challenges expressed by the participants in support of this:

1. The teachers do not really have sufficient training in delivering student-centered lessons and activities.

   The only time I tried was for aesthetics: give them the cupboard, give them the materials, ask them to improvise something. But I wasn’t there, and all the teachers [who were there] were surprised (laughs) because they were not trained. They explore, the kids go crazy doing things that teachers don’t understand. (music teacher participant, FGD, November 2013)

   To me it’s very contradictory in a sense that you want your children to be 21st century learners [but] then you don’t allow your teachers to be 21st CC. It is a frustration for me (art teacher participant, June 2014).

2. The prescribed objectives and expectations either of the school administration or the Ministry of Education (MOE) syllabus are considered difficulties. The participants feel that the objectives and expectations are not reflective of actual classroom situations.

   There is a curriculum that I have to follow, the music book, so with our music coordinator there are certain requirements we have to fulfill for the assessment. It’s like for primary 1, one of the competencies is the children need to sing the school song in pulse and in tune. Also the Majulah Singapura, it’s one of the competencies, so they need to sing it in pulse and in tune. (music teacher participant, FGD, June 2014)
I went for ‘GMP Implementation 2’ last week, I asked the [speaker], ‘so do we need to teach them music literacy?’, ‘do the kids need to know all those stuff [like] how to write, how to notate, how to read, how to sight read?’. Actually her reply to me was, to a certain extent, by P3 and P4 they should have certain mastery of it so that they are able to read and play. Because the aim is, in the new GMP syllabus, they are to play one melodic instrument by the time they complete the GMP programme at Secondary 2. (music teacher participant, FGD, June 2014).

They always like to compare us with Finland right, because it’s always the best education and da da da, but we have a class of 42 to 1 teacher; Finland, what’s their class size? Sometimes we share [professional development] videos [from other countries]; you find such interesting art lessons and all that. But then again we wanted to emulate such things but they have a class of 10, at most 20. Compared to us with a class of 42 and the [class] time is [only] 45minutes (art teacher participant, FGD, June 2014).

3. These prescribed requirements although reviewed yearly are difficult to change because of the general mindset of the school system. An example is changing the content of music lessons to be more diverse and reflective of the presence of ethnicities beyond the Chinese, Malay, Indian, Others (CMIO) framework and the lack of influence the teachers have in revising the school curriculum.

Because some of the music teachers in the committee, they are not very favorable of world music; so they say, ‘why do you need to learn about [other] music?’ ‘why do you need to learn about Poland music?’ They are not [as receptive]. They feel that we should know our own culture first, like Chinese, Indian, Malay (music teacher participant, FGD, June 2014).

The challenge is to get [the teachers] to follow you and you don’t get to see many results from these teachers. Only a few of us, maybe 2 teachers, take [just] 1 [core subject], versus [others who] have 2 or 3 other core subjects to [teach]; you kind of [attend to] your priority first [art teacher participant, FGD, June 2014].

4. There is also the difficulty of bridging the new knowledge with the old practices such as reliance on textbooks for the art and accommodation of General Music Programme (GMP) syllabus.

They’re able to learn the notation, the rhythms, and tried a little bit of rhythmic improvisation, because it’s scaled down to their [P1] level. But if I have to have
that in mind all the time, then I cannot bring them to a higher level experientially, like I cannot introduce Latino; how am I going to translate it into theory, you know, music theory? They don’t learn the Latino beats, I mean this is quite high level, you know. Exponentially probably they are able to catch it, but to translate it into notation is a different ball game (music teacher participant, FGD, June 2014).

It’s a little bit challenging in the sense because this [new] programme is not easy; it’s a lot of preparation. Whatever materials that are [needed] are already parked in the folders. We provide everything, even the artist background, videos and all that, but I guess it is different from the previous time lessons where the teacher can just come in and look at the textbook and say okay today let’s do this, you know. So it is a lot of leg work before the lesson itself. So that transition for some teachers is quite a lot because it’s no longer a filler lesson (art teacher participant, FGD, June 2014).

5. The course load also affects intentions to change existing practices. This surfaced as two forms of concerns: either they are given back-to-back classes or their generalist status, teaching academic subjects besides music/art, remained the same after the training.

One of the struggles I face is, because I am the only trained music teacher, they really pack my lessons. On average per day I get 8 periods, that’s 4 hours, and it’s very tiring because I fully engage the children for [each] hour and I have 4 periods straight, non-stop. Yeah so at the end of the day right, I’m so exhausted, because the [administration] really tell you, I have no marking, so they really stretch me to the limit (music teacher participant, FGD, June 2014).

The reason why [the changes are] not implemented is because we don’t have the resources to do it. I tend to do a lot more that’s why I scale down in a sense [to] 1 medium [in teaching my art classes]. Because I’ve got other [core subject] areas to cover it’s just not logistically right for me. [If we can be] provided that strong, small team of [art] teachers, instead of [just] 1 [specialist] that will make us really [innovative]. We are going nowhere (art teacher participant, FGD, June 2014).

6. The misunderstanding of the school administration that one intensive professional development such as the Advanced Diploma is enough to teach the arts effectively.

This is the same problem I face in school. They think that Advanced Diploma is the graduation programme already. You don’t need [further training] (music teacher participant FGD, June 2014).
They don’t see you know, they don’t understand that in music there are different genres, [that] different genres have different things and different instruments; and when you have different instruments [it] means that there are different psychomotor skills and different muscle memory that need practice. They don’t understand that, they just think ‘oh you are music trained, you pick it up’… you can just do wonders. But they don’t understand we need time to practice, and they don’t give us time to practice you know, it’s like they peg all the afternoons with all the meetings, so when am I going to have the time [to practice]? (Music teacher participant, FGD, June 2014).

7. The lack of certain pedagogical elements in their Advanced Diploma training also contributes to the difficulty of implementing changes in practice. Examples include lack of domain-specific classroom management and student engagement, skills development in music and classroom pedagogy translation in art.

Classroom management strategies pertaining to music, yes. I think it should be different from other normal classroom strategies, because we’re music teachers we should use music… you know (music teacher participant, FGD, June 2014).

Skill advancement [is the most helpful from the course]. I mean there are things that I’ve never tried before [like] technical skills and [that’s] something that our children need to learn as well. But I find the part that you can take back to the classroom is pretty minimal. Like pedagogy part is very minimal (art teacher participant, FGD, June 2014).

Summary and Conclusion
As the quantitative analysis has shown, the practices of generalist music and art teachers after attending the four months intensive professional development programme did not significantly change. However, there are signs that the teachers are moving toward a more student-centered approach in their teaching. This is significantly true in the areas of linking lessons to real-world experiences, infusing diversity in the content of the lessons, and awareness of connecting to local artists. These changes are evident in the classroom observations. For example, several music teachers consciously changed their lesson plans to include world music cultures. This is brought about by the emphasis in the Advanced Diploma on multicultural curriculum: Music Theory for a Multicultural Music Curriculum, Teaching and Learning of World Musics, and Performance Studies (includes Asian ensembles). In art, although the emphasis is on the development of skills and children art, the Visual Literacy
course introduces the participants to wide-ranging historical periods and geographical locations. Although this change in lesson content may not necessarily be reflective of student-centered practices, it is an important step for the reason that multicultural education entails including diverse perspectives, experiences, and contributions in the curriculum where students are encouraged to analyze these perspectives on their own. Multicultural education approach to teaching is student-centered where teachers facilitate cooperative learning, link and utilize student experiences in the lessons, teach complex thinking, and engage students in dialogue where they do much of the talking (Sleeter, 2007, p. 167).

In the analysis of actual classroom practices, we also see that the specialists demonstrate the targeted indicators that are student-centered more frequently than the generalists; although, as in the survey, there are still no significant changes. The results bear implications to the awareness of student-centered practices and the difficulty of implementation during the transition of identities from generalists to specialists. For even though the participants are experienced teachers, their knowledge and skills of music and art education categorize them as novices in these subject areas. According to Kowalchuk (1999, p.73-74) there are three stages to teacher professional development: 1) technical-development perspective (focus on classroom management and instructional routines); 2) subject-matter orientation to professional growth (focus on link between content knowledge to pedagogical practice); and 3) ecological model (focus on link of previous experiences/beliefs to teaching decisions). The experienced teacher participants of this study are solid in the technical-development perspective but struggles with the second stage. It is actually because of the third point on previous orientations to classroom management and experiences/beliefs that innovative student centered approaches are encountered with difficulty.

The qualitative analysis has shown that the primary impediment to student-centered teaching is that specialist teachers in this study struggle the most in connecting subject matter knowledge to pedagogical knowledge, a characteristic that most specialists are able to demonstrate on the contrary (Pavlou, 2004). These results suggest that, for courses or programmes designed to train generalists to become specialists, it is important not only to emphasize the development of the teacher’s subject matter knowledge in arts and music but also their pedagogical content knowledge (PCK, Shulman, 1986)—that is, the knowledge of how to teach arts or music. One of the key components of PCK that programme developers can focus on is the knowledge of representations of strategies (Magnusson, Krajcik, and Borko, 1999), such as student-centred teaching, and how such strategies can be applied in the teaching of particular topics in arts or music.

Amidst all the new challenges and similar ones from past studies that are confirmed in this study, reiterating the vicious cycle of unprepared teachers and poor quality teaching after
undergoing teacher training in the arts (Power & Klopper, 2011), we would like to cite the recommendations of de Vries (2013) that advisory teachers and continuous professional development support are needed to increase the self-efficacy of generalists, or in the cases in this study, novice specialists. This study supports this where the participants expressed the same post-course needs in order to reconcile previous teacher training practices to new knowledge and eventually on to implementing innovative classroom practices. Providing platforms to develop skills, both musical/artistic and pedagogical, will also increase confidence in being considered a specialist in these art forms.

How specialist am I? Actually I feel that the continued support is very important, because as I am teaching, I have a lot of questions, and I think that’s how it should be, because if you’re stagnant and contented we’re not learning, yeah? So I still have a lot of questions and I still want to upgrade myself and, uh, fine tune some of the things I have in my mind (music teacher participant, FGD, June 2014).

Question: What do you still need?
Answer: I think the continual support. Yeah, a platform for sharing of sources, strategies, ideas; to hone our skills so that we can be truly specialists (music teacher participant, FGD, June 2014).

In Singapore, the Singapore Teacher’s Academy for the aRts (STAR) and the National Institute of Education (NIE) are main institutions that these teachers are advocating to provide such continual support. The participants are hopeful that through participation in research studies such as this they can have their voices heard and receive the much-needed guidance and continuous professional development from local training institutions. As it is, the Advanced Diploma is just the first step for these teachers. We do not only recommend more research on actual practices of generalist and specialist art/music teachers but that research on practices should be accompanied or quickly followed by further professional development or improvements in current professional development programmes. We also recommend that researchers should advocate for participant needs in their respective institutions and go beyond publication of results in order to achieve a more meaningful impact of academic research in the schools.

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