Connecting Findings, Reflections and Insights: 
*Student-centricity Musically, Creatively*

**INTRODUCTION**

The piloting of the informal and non-formal approaches to music learning and teaching in Singapore secondary schools has been to find out how the pedagogic innovations by Green (2008) and *Musical Futures* (D’Amore, n.d.) can add value to music education in Singapore. The study has been designed to address the following three questions:

- How do teachers contextualise informal music learning and non-formal music teaching pedagogies?
- To what extent do these pedagogies impact on students’ music learning experiences?
- To what extent is there a perception and demonstration of 21st century competencies and behaviours amongst students (self-directed learning, collaborative learning and confidence building)

Chapter 9 has presented the background and rationale for the project, the literature review, the research design and method for the study. Chapters 10 to 14 have presented case studies of teachers and their classes to illustrate how the informal and non-formal approaches were adapted in the context of Singapore schools. The vignettes and discussions in these chapters have served to provide an in-depth account of how five teachers contextualised these approaches for their students and the impact of these approaches on students’ learning. Findings have been drawn from lesson observations, interviews with the teachers, focus group discussions with students and pre- and post-trial questionnaires administered to students.

This chapter examines the data across the cases. It will compare evidence from the pre-and post-pilot questionnaire responses across schools, the teachers’ reflections at the end of the trial, and the key findings discussed in each of the case studies. These will be discussed in three sections: a) impact on students; b) reflections on pedagogic adaptations; and c) insights from the pilot. Finally, we draw conclusions on how the informal and non-formal approaches can add value to music education in Singapore.
**FINDINGS: IMPACT ON STUDENTS**

A total of 492 students from five different schools responded to a 23-item survey questionnaire which was designed to find out about their enjoyment of music lessons, music self-efficacy, music autonomy and motivation in music. An additional set of questions were given to students at the end of the pilot to find out more about their post-pilot experiences.

The responses from the 492 valid pre- and post-pilot questionnaires were analysed using the SPSS to measure the reliability of the instrument, to compare the means and predict variables for student engagement. The reliability of the student questionnaire surveys was measured with Cronbach’s alpha, taking into account both the pre- and post-pilot questionnaire responses (N=984). The results indicated a reliability greater than .70 for all categories: enjoyment of music lessons (four items; $\alpha = .84$); music self-efficacy (five items; $\alpha = .77$); music autonomy (four items; $\alpha = .72$); motivation in music (six items; $\alpha = .75$); post-pilot experiences (six items; $\alpha = .84$). The overall reliability of the survey instrument is .94 for all 29 items.

The intraclass correlation was measured to determine how much of the variation of students’ post-pilot perception of their music experiences (based on students’ responses to the additional set of questions at the end of the trial) is between and within schools. Using HLM, with Level 1 consisting of 488 students (after excluding missing data) and Level 2 consisting of five schools, the outcome variables selected are the additional questions in the second set of survey:

- Students learning to work better in a group during music lessons during semester
- Students listening to music differently now
- Music lessons in the semester had inspired students to continue with music outside of school
- The activities students did in the semester have helped students become better musicians
- Students can talk about music using music terms
- Students have achieved a lot in their music lessons in the semester

The final estimation of fixed effects and variance components are given in Appendix B. The intraclass correlation coefficient result ($\rho = .03$, $p = .002$) indicated that 3% of variance in students’ post-pilot perception of their music experiences is between schools, and 97% of variance in students’ post-pilot perception of their music experiences is within school. This means that the school the students belong to has very little effect on their post-pilot perception of their music experiences.

**Comparing Students’ Experiences Pre- and Post-Pilot**

To what extent do students’ enjoyment of music lessons, music self-efficacy, music autonomy and motivation in music differ before and after the project?

From the questionnaire data, the homogeneity of variance was tested using Levene’s test. Using one-way ANOVA, the means for pre- and post-
pedagogic interventions for each variable were compared. The results indicated that there was a statistically significant positive effect of the pedagogic intervention on the items below. The other variables either did not yield statistically significant results, or did not meet the assumption for homogeneity of variance to be used in the one-way ANOVA.

- Students’ enjoyment of music lessons in schools,
  \( F (1, 981) = 7.52, p = .006, r = .09 \)
- Students’ perception of their ability to create their own music,
  \( F (1, 977) = 65.88, p = .000, r = .25 \)
- Students knowing how to contribute to the group,
  \( F (1, 978) = 22.90, p = .000, r = .15 \)
- Students wanting to do well in music lessons,
  \( F (1, 979) = 4.79, p = .03, r = .07 \)
- Students’ perception that music lessons in school help with music activities outside of school,
  \( F (1, 972) = 15.55, p = .000, r = .13 \)
- Students’ perception that music activities outside of school helping in music lessons in school,
  \( F (1, 978) = 9.71, p = .002, r = .10 \)
- Students’ intent to take music as an examination subject at Upper Secondary level, \( F (1, 980) = 5.39, p = .02, r = .07 \)

In what ways do students perceive lessons they went through in the Semester different from their past music lessons?

Students’ free responses to the question was coded and examined. Out of 335 students’ who responded with qualitative comments, 324 (96.7%) responses were positive. Only 10 of them (3.0%) felt that there was no difference in their experiences with music lessons, and only 1 of them (0.3%) did not enjoy the experience. The main areas students perceived that were different from past music lessons were the opportunity to create music (27.2%), to play an instrument (19.4%), and the social-collaborative learning with friends (14.9%). Other responses included that they were able to learn independently, and there were opportunities to perform and to make music.

Investigating Student Engagement

Factors predicting students’ enjoyment of music in school

Using Linear Regression, students’ enjoyment of music lessons in school is selected as the dependent variable. All other items in the first set of questionnaire survey were selected as independent variables. Results are statistically significant, \( F (22, 895) = 42.02, p = .000 \) and there is no multi-collinearity. The details are in Appendix C.

Results indicate that the following variables are statistically significantly positively associated with students’ enjoyment of music lessons:

- Students finding the tasks in music lessons interesting (\( \beta = .29, p = .000 \))
- Students’ choice of things to learn during music lessons (\( \beta = .15, p = .000 \))
- Students’ feeling confident in music lessons (\( \beta = .11, p = .001 \))
• Students’ wanting to do well in music lessons ($\beta = .06, p = .032$)
• Students’ enjoyment of listening to music ($\beta = .13, p = .000$)
• Students liking the music styles they learn during music lessons ($\beta = .20, p = .000$)
• Students’ friends and themselves helping one another ($\beta = .07, p = .027$)

However, students knowing where to get help with music making is statistically significantly negatively associated with their enjoyment of music lessons ($\beta = -.06, p = .035$). Other variables do not yield statistically significant results.

In other words, students tend to enjoy music lessons in schools if they found their tasks interesting, liked the musical styles they were learning and that they were given a choice over what they learnt. Their confidence level and the social support afforded through peer collaboration was also important factors predicting their enjoyment of music lessons in schools.

What aspects of the semester’s music lessons did students enjoy and not enjoy?

Students’ free responses to the question were coded and examined. Out of 320 student responses, 314 (98.1%) responses were positive. Only 2 of them (0.6%) indicated that they did not enjoy any aspects of the semester’s music lessons. Only 4 of them (1.3%) responded that they did not know. Of the aspects that students’ enjoyed, the four areas – collaborative learning with friends (23.8%), instrumental playing (20.6%), creating (14.7%) and performing (10.3%) stood out most prominently. These were congruent with teachers’ observations and the case studies we observed in the previous chapters.

When students were asked what aspects of the lessons they did not enjoy, out of 214 student responses, 55 students (25.7%) indicated that there was nothing they did not enjoy. 35 students gave feedback that it was the lack of time (35 students, 10.9%), especially for students in Schools A, B, and C. These were the schools which experimented with the informal learning approaches. The other areas that were raised were problems with group work (8.4%) and inability to follow the activities (7.9%).

As a round-up to the student-interviews, they were asked to use one word to describe how they felt about the module. “Awesome”, “fun”, “enjoyable” and “interesting” came up most often. Appendix D shows a collection of their experiences, expressed in a wordsplash.

Impact of pedagogies on students’ engagement

In the post-pilot final conversation, four of the teachers (Mr Lim, Ms J, Ms Yeo and Ms Sim) cited that giving students autonomy to make their own decisions stepped up their engagement significantly. This was also a key finding in many of the cases described in Chapters 10 to 14. For example, with Mr Lim’s informal learning, students experienced greater engagement as they experienced greater autonomy and a sense of accomplishment from pursuing these challenges. Ms J’s STOMP-inspired music lessons conducted through the informal and non-formal approaches were able to turn around even the most disengaged students. Ms Yeo was “very surprised
by the motivation that students show” when the difference she made to the song-writing task in this module was the choices given to students to select their own friendship groups, and to select their own instrumental accompaniment. “I thought my kids were motivated last year, this year is even more!”

The project also motivated students with disabilities and special needs. Ms Yeo cited that her students who had certain disabilities were “very very motivated” and “really tried” in the project. Ms Sim also shared that one of her students who had thyroid syndrome was able to suppress the involuntary hiccups and high pitch sounds due to his engagement with his work. She said, “during the music trial, he will (be) engrossed with whatever he was doing. And he did not make much sounds (hiccups), which is quite an improvement …. When he is engaged, he actually stops.”

All five teachers experienced having students voluntarily staying back after lessons to meet with them for more music practice. And for some of these students, they decided to pursue more music learning experiences beyond their school music lessons. Ms Yeo shared that many parents came to see her during her school’s “meet-parents session”, and they expressed appreciation for her work and told stories of their children requesting for instruments and music lessons.

**REFLECTIONS: TEACHERS ON THEIR PEDAGOGIC ADAPTATIONS**

The five teachers were brought back for a closing conversation to reflect on their trials. This section details some of the key reflections on their pedagogic adaptations.

**Scaffolding and Structuring Informal Learning**

It seems an oxymoron that informal learning needs to be “scaffolded” or “structured”. But this was seen in all three teachers who were conducting informal learning. Mr Lim, for example, had started with informal learning where he got students to learn songs through aural copying in their friendship groups. After a few lessons, he noticed that most students had problems with strumming patterns on the guitar, and he decided to address this issue at the class level. He “scaffolded” their learning by injecting moments of non-formal teaching so that students could learn chords on the guitar by copying him aurally as a class. Ms Yeo provided “consultation” to her students where she would help them by providing the chords as they engaged in song-writing so that the task was less daunting for the students. Ms J structured her teachings such that her classes began with non-formal teaching routines before students began their informal learning in groups. They then got back to perform their “trial runs” to the rest of the class for a peer feedback session. Ms J highlighted the importance of routines in her final reflections as it made her lessons more efficient. This echoed what Rodriguez (2009, p. 12) pointed out that although in informal learning, the teacher relinquishes this control of learning and enters into a more flexible and dynamic relationship with the learner, “a plan for instruction must still be negotiated between teachers and students”.

It was interesting that teachers did not think of the “stages” in Green’s informal learning pedagogy as these did not come out in any of their reflections, but it was the undergirding principles such as oral-aural copying and student autonomy that mattered to teachers by the end of the pilot. These choices to use the undergirding principles suggest that there can be many possibilities of adaptation with the informal approach.

Teachers also preferred the flexibility to weave between informal, non-formal and formal approaches to respond to students’ needs. For example, Ms Sim had started with stage 2 (Green, 2008) where students had to figure out the different parts through an aural package. She said,

I think the hierarchy of stages is not important. I wouldn't adopt the whole entire approach. I would adapt approaches based on whatever that is given at the point in time. I will not be sticky about “am I an informal learner?” or “am I going to do non-formal teaching”. I am going to do it as it fits. Because if I plan for a lesson in the day, and the class is not in the mood to do that, I would have to change it. I will not insist that “Oh, you must do informal learning today”. If they are so disorientated on that day, non-formal teaching might come into play in a better way. Then, I will adapt and adopt that approach…

(focus group discussion, 2 November 2012).

Deeper Grasp of Student-Centricity

For the teachers who participated in the trial, we saw a transformation in their teaching practices: moving towards student centricity. They also developed a certain respect for their students and learned to believe in their capabilities. Their thoughts clearly reflect that students are at the heart of teaching-learning, and they recognised that teachers were no longer knowledge providers as students had access to information elsewhere such as YouTube and CDs. Here are some strands that surfaced and their reflections at the final conversations on 2 November 2012 with the group.

Motivating students, personalising learning and differentiating instruction

...motivation and engagement are the most important aspects. If students don’t have motivation, nothing gets done…. I was observing how certain people are able to be self-motivated, and certain people need a little bit of hand-holding and encouragement. Certain people need a bit of structure in place, to help them to reach a level of being able to be motivated. Some of them, they like music. So, you just put them in a group, they just fly even if they have no experience before, they really love the song, they really love the people they are with, they just go. That is the biggest advantage of this informal process.

(Mr Lim)

Learning is always deeper when it is experienced personally by the students themselves rather than being taught by the teacher. So, when the student is able to articulate, express what were the AFI's (Areas for Improvement) of their group performances. I tried to use probing questions to draw it out of them. So, I won’t tell them what’s wrong. I will just ask them more and
more questions until they expressed it themselves. I realised that really helps you know your student whether they understand it or not. And when they express it, you feel so happy even though you were so tempted to spoon feed them and to make it easy for them, and just give them the answer.

(Mr Lim)

**Believing in students, giving autonomy**

My biggest learning is (about) myself as a teacher, about my personal beliefs. I always think that students should be able to get it just there and then when you teach them. Halfway through the trialling, I was questioning myself whether I was on the right track or not … but towards the end, I found the results really really very surprising and is of much higher quality I will say than what I will expect… Students take a longer time to reach the eureka moment but whatever they do, the experience they have, they actually have much much deeper learning than what formal teaching actually can offer.

(Ms J)

I also strongly believe that student autonomy is very important and this belief will affect me for the rest of the curriculum that I will plan.

(Ms J)

Giving them (the students) the autonomy to make their own decisions really makes a difference. For me to not hand-hold them so much, to take a back seat in teaching, takes a lot from me. Many a times, I really jump in and want to tell them, want to help them. Really have to leave them there, providing them space for discussion and time for exploration. I just have to leave them alone for them to explore on their own and they come back to me just for reference. They have to learn to make their own decisions as a group, handle the different issues that surface….I also learn to adapt to students’ ideas. Coz [sic] I have my idea of what a composition should be- the chord progressions. But students come in with different different chord progressions, may be so much better than my own. So, students are my teachers in this entire process.

(Ms Yeo)

**Attending to learning orientation, facilitate**

I have been teaching pop music in a more formal way….It’s very much like a – this is a historical background, a little bit of aural, a little bit of practical, it’s just more traditional…. “are you teaching the way you actually learn?”... so, that is opening my eyes as well because I have been teaching quite formally.

(Mr Mark)

I have to very consciously tell myself, “I cannot teach, I have to facilitate”. So, when they (students) ask me questions, I have to tell myself “don’t teach”… I introduced the instruments to them. I said “pick your own instruments, listen…, go and follow, find your own group”…. One interesting thing was that when someone was out of beat, out of rhythm, we didn’t have to say anything, we didn’t have to say much, they managed to find it (the rhythm) back themselves. Students began to rise to the occasion and they
were starting to take lead. They were coming up with ideas ... In the past, I would probably have scolded them because they were wasting my time. But allowing them that freedom to find their own musical meaning, even after the post-exam... when they came in, they wanted to play their song. Even during the exam period, they wanted to play their song.

(Ms Sim)

Learning alongside students

These two approaches are actually very humbling for the teacher because it breaks the norm where the teacher is greater than the students – where we are information and knowledge providers.... it is very humbling for me because it is really putting aside my own comfort zone and saying, “now I am willing to learn from you”....because of the way we have taught music, we have certain model in our head. They (the students) break the mental models we are already believing in, we were trained in, which is very humbling for me.

(Ms Sim)

Stronger Conviction of the Unique Position of Music Education

“I am a much happier music teacher now... more sold to the music religion”, declared Mr Lim in the final conversations. More than before, teachers appreciated the unique position of music education in developing the holistic child.

Because our (music) grades don't count (towards students' promotion), we have the flexibility to tailor our programme so that we don't just drill-and-practice our students. We don't just use the same old formal teaching approach and just train the students to pass the test, or pass the exam or pass the assessment. So, the point now is no longer passing the assessment. The point is, are we preparing our students for life. I think that's where music... I think we are in the unique position of having a very big ability to impact the students.

(Mr Lim)

Mr Lim recounted how by providing an authentic assessment, which he required students to put up their items for a ticketed performance for their parents, it engaged students physically, cognitively and emotionally. “This whole journey had been a roller coaster for me, for the students....” He felt that the process of students overcoming their emotions as they worked towards a performance for their parents was an important aspect of their holistic development.

Similar sentiments were expressed by Ms Yeo. She recounted how one group of students was in tears when one of their members was not cooperative and she had to play the role of a counsellor. Through the music lessons, she related that students also learnt “life skills” such as relationship management, self-awareness, social-awareness and communication skills.

INSIGHTS: VALUE AND IMPLICATIONS

From these findings, we are able to formulate insights into the critical and
distinctive value these informal and non-formal approaches provide for music education, as well as the implications for the teacher.

**Critical and Distinctive Value of Informal and Non-formal Approaches**

*Authenticity*

First, the informal and non-formal approaches are able to provide authentic musical experiences to engage students. They lend themselves well to providing “musical encounters” (Swanwick, 1999/2012) as students typically engage in direct experiences with music. And the affordances of these approaches sit well with the subject nature of music, where learning could be specified in terms of “expressive objectives” (Popham, 1969, p. 33) which identify the type of encounter the student is to have, as opposed to “instructional objectives” which specify a particular knowledge or skill that the student is to acquire. Expressive objectives are evocative rather than prescriptive, and invite both teacher and students to explore and focus on areas that are of peculiar interest, hence providing a meaningful student-centric musical experience. In this respect, these approaches provide the means for the teacher to achieve expressive objectives and create musical encounters to enrich the learning of students.

*Music Learning Socially*

Second, informal and non-formal approaches are social in nature, typically involving collaborative learning in the music classroom, and are characterised by modeling and observational learning. As Green (2008) aptly pointed out, these are based on real-life practices of musicians and, much of music transmissions across many cultures, have music caught and taught in social settings that provide the much needed enculturation.

Statistical analysis revealed that students’ learning with their peers is a predicting factor for their enjoyment of music lessons. We have also found through the free responses in the questionnaire that students learning with their peers became the main reason why students enjoyed the experience. Our field observations have also shown students tapping on their peers for learning. In the case of informal learning, peer-directed learning naturally emerged. In non-formal teaching, music making with peers became an exciting and enjoyable experience once the group arrived at their “eureka” moment.

These approaches are able to provide a social environment for learning to take place and this is supported by social learning theories and social perspectives of learning (Wenger, 2009).

*Student Voice and Motivation*

Third, the informal and non-formal approaches allow the students greater control of their learning. Students make decisions about their learning goals - who to work with, how to work, and even the success criteria. At this level of decision making, students are allowed to exercise the sense of "self-rule" (Ryan & Connell, 1989; cited in Ryan and Powelson, 1991, p.52) and hence the opportunity to develop “self-management” skills and the ability to self-direct their learning - competencies of the 21st century student (MOE, 2008).
At another level of decision making, students made choices with respect to the musical ideas scoped within a creative task (e.g. STOMP-inspired composition, songs). That increased a stronger sense of ownership in the tasks at hand, and created stronger motivation to work on the tasks.

As a result of adapting these approaches, there have been positive cases of increased motivation of students as seen in the evidence of prolonged attention by students as they worked on their tasks, and students were also able to sustain their performances. As these approaches provide for student autonomy, a sense of accomplishment derived from pursuing challenges, and a sense of community with others, they are able to better engage students. This resonates with self-determination theory and studies on human motivation (Niemiec & Ryan, 2009; Reeve, 2006; Reeve et al., 2004).

Implications for the Teacher

**Pedagogy**

Fourth, the role of the teacher as a facilitator is critical. As illustrated in the various cases, although informal learning appears to be largely student-directed, the teacher needs to be acutely aware of his/her students’ profile and levels of attainment to motivate them in their learning. This includes providing sufficient challenges pegged at the right level, guiding students to experience small successes throughout their work, asking probing questions to help them reflect, and providing encouragement and affirmation so as to give students confidence. These cognitive autonomy support teaching behaviours are crucial to help bring students from one level of competence to the next, and thus instrumental in building up their confidence. Although non-formal learning tends to be teacher-led, the teacher still needs to also play the role of a facilitator, to draw out ideas from students. This empowers them to make musical decisions, so that the music making experience is more meaningful.

This study highlighted the importance of understanding pedagogies as situated within a broad continuum of repertoire. In achieving curricular outcomes, the teachers need to have a set of pedagogies to engage and motivate students in their music learning, and bring about music learning in a more authentic and meaningful way. Therefore, non-formal and informal approaches helped broaden that repertoire for the teachers. As shown especially in the cases of Mr Mark and Ms J, the interweaving and negotiation of moves from one node of the continuum to another requires skills and an understanding of the affordances of what each pedagogy has to offer.

**Perspective**

Fifth, a distinction has to be made between pedagogical principles and pedagogical orientations. We came to a better understanding that principles refer to propositions or rules that shape the characteristics of the pedagogy. Orientations refer to the outlook, the directions and positioning of the person implementing the principles. We have seen that the teachers’ belief and understanding of student-centricity will determine the way the approaches are used. For example, we saw how Ms J negotiated between teacher- and
student-centricity. In the case of Ms Sim, she experienced dissonances between the boundaries within the pedagogic continuum, and had to undergo the “excavation” process to make it a “lived” experience for her.

In addition, teachers might have different formal/informal orientations even as they implemented the formal/informal approaches. While the pedagogical repertoire of the teacher could be expanded through practising the principles, an understanding of the different pedagogical orientations would emancipate the teacher and empower the teacher to adapt pedagogies for his/her contexts. This was seen in Ms Yeo’s case where her orientation impacted how she “lived out” those principles.

Practice
Sixth, these approaches were used in music teaching on the assumption that teachers are musicians as well as pedagogues. Not only do the teacher require sufficient music skills as a musician to guide their students to think in music and respond musically, they need the pedagogic skills, repertoire and fluency to skillfully weave between informal, formal and non-formal approaches and orientations. The teacher has to model musical behaviours and the music learning process as a musician to encourage and inspire students. For example, Ms Yeo is a pianist, but as her students learn other instruments to accompany their song-writing task, she learned these instruments alongside with her students, implicitly modeling how music learning is a life-long learning process. Mr Mark and Mr Lim all took on musicking roles while they taught and facilitated their student learning.

CONCLUSION: STUDENT-CENTRICITY MUSICALLY, CREATIVITY
In conclusion, we found that the affordances of the informal and non-formal approaches fostered a learning environment that engaged students musically and developed their musical behaviours and musical understandings. At the end of the day, if students had personal encounters with music and developed a positive relationship with music, these experiences would stay with them for a very long time, and they would develop a life-long love for music, which is the aim of our General Music programme.

Student-centricity is the heart of the music learning process. Such a focus does not lose sight on nurturing the holistic child, the development of skills, knowledge and values. Framed by expressive objectives and characterised by authentic learning experiences, informal and non-formal approaches have much to offer for a creative, student-centric curriculum. They develop students holistically, and nurture them to become self-directed and confident individuals who work collaboratively. Indeed, these approaches will complement formal approaches to develop in our students, the 21st century competencies to prepare them for their life’s journey.

REFERENCES


