Affective and musical understanding in piano chamber music pedagogy at the fundamental level

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Contents

Abstract

Individual piano lessons have limitations for peer interaction and cooperation, which leads to insufficient stimulation for children to achieve affective and musical understanding. This paper attempts to set up a piano chamber music program at the fundamental level (in the first four years of learning piano, corresponding to children around five to nine years old) to close this gap. The program is a supplementary measure to solve problems deriving from a model of only individual lessons. It assists children in strengthening their existing knowledge as well as developing their abilities. The program is based on Piaget's theory regarding cognitive development, and it combines theories of musical embodiment and music pedagogy. It promotes a rich musical environment and multiple opportunities for peer interaction so that children can make up for deficiencies arising from a single-lesson model, using moderate stimulation from a suitable environment.

Preface

My journey begins with three stories....

- Student A was a beginner who started lessons at around 5 years of age. He was an extroverted child with passion and excitement, and he actively engaged in the instructional process during the early stages of learning the piano. He enjoyed learning new pieces of music, but refused to practise or do any repetition tasks, particularly when asked to focus on the same piece of music, or practise technique skills. If he did carry out such tasks, he frequently ended up crying. He would stamp his feet heavily or show his irritation by wringing his hands. He continued to react in this way in most lessons for around 3 years, and finally gave up the piano.

- Student B had studied for 2 years before he began lessons with me. He was a passive learner, rarely communicating in the lesson. Due to some unhappy prior learning experiences, he was unpleasant and uninterested in playing piano in the lesson. Thus, the learning process during instruction was unsatisfying and ineffective to some extent. It was difficult to push forward with sequentially instructional segments because he did not show any willingness to cooperate. He gave up his piano lessons.

- Student C started her first lesson around 5 years old. She made good progress in each lesson, particularly in the skill of reading music. She finished homework pieces quickly and she didn't need more time to practice after lessons. She also showed evidence of other talents, such as good affective and musical understanding. However, she had less time for practising because she was a weekly boarder and could only practise once a week. With the level increasing constantly, she could not manage the practicing load and pressure of learning. As a consequence, she lost interest in playing the piano. Finally, she had to give up.

Three brief stories from my teaching career are typical exemplifications that reflect some common phenomena during the instructional process. To be honest, these are sad stories, not only for students who had this difficult experience, but also for educators who are unable to help. Comparing all three students, they all enjoyed engaging in the lesson with positive participation. They come into the room with a smile, and often laughed in the lesson. However, all these passions diminished, mostly unconsciously. We cannot help but ask what has gone wrong with their piano learning. This is an important question that requires further, more intense study, for the benefit of both young children and their educators.

Chapter 1: Introduction

The motivation for this program is to assist educators in solving problems arising from individual piano lessons. We should first clarify what individual lessons tend to focus on at the fundamental level (in the first 4 years of learning piano, corresponding to children around five to nine years old). From my perspective, learning an instrument, particularly the piano, at the fundamental level involves three elements---inspiration, understanding and practice. As an educator, the first step is to install a positive attitude in the learning process, to arouse interest, and to establish a positive learning attitude. This serves as the fuel to power students forward. The second step is to utilize various strategies to help children accept new knowledge, to extend their musical capabilities and to be an independent learner. The third step is concerned with practice and focuses on how effectively children can achieve the sounds they desire. The second step is essential for children at the fundamental level, but the individual lesson fails to adequately address this step.

First, aural perception is not easily achieved in individual piano lessons at the fundamental level. Aural perception is a foundational element for supporting children to understand and express music. How do children respond to musical sounds, and identify the quality of sounds and the emotion of sounds they play? Fostering aural perception requires an appropriate musical environment. The conditions of the musical environment and the time learners spend in that environment will influence the development of aural ability. At this point, individual piano lessons provide musical environment with only one player and a single timbre (the piano). Moreover, the time of the individual lesson is not much in the context of a child's week. Another important element impacting on aural perception is the context of piano music pieces at the fundamental level: they focus less on multiple voices because of the limited technical aspect of the learner. Thus, children learning in a single-melody context rarely obtain the development of aural perception they need. Although there are more accompanying parts adapted into some music pieces to create more layers of sound, it is far from fulfilling the requirement of multiple and rich voices.

Second, individual piano lessons at the fundamental level might be insufficient for children to develop musical identities. Musical identity plays a significant role in the process of learning music. Alexandra Lamont suggests that children should be able to appreciate their own or another child's identity at an age when they can master the idea of a 'differentiated' identity (David, 2012). Lamont's idea means that musical identity supports children to engage in musical learning, and it is an incentive for children to keep being musicians throughout their lives.

Another study claimed that the development of identity will be crucially shaped by the circumstances that children grow up in (cf. Ellemers et al., 1999). Bronfenbrenner's ecological model further presents how external circumstances influence the shaping of a child's specific identity. During development, between the ages of four or five years and seven years, there are significant changes taking place because of the development of social comparative features, self and self-other understanding (David, 2013). For instance, the increase in comparative judgement in peer activity will lead children to shape their unique identity. However, in the

one-to-one piano lesson, this opportunity seems to be relatively limited. A typical child's piano lesson consists of a teacher and perhaps the father or the mother. All adults are likely more competent than the student, and they might not be able to provide appropriate information or experiences to match a child's musical identity. Thus, social comparison, such as peer activities, is insufficiently achieved under these circumstances. Compared with those children who learn other instruments, and who have more opportunities to interact with peers in ensemble and chamber forms, piano students are thus at a disadvantage. What is more, orchestral instrumentalists also have more chances than piano learners to imitate others' good points, ask peers for advice, learn knowledge from others, and listen to others' performances. Therefore, to some extent, piano students miss opportunities to shape their musical identity at a significant stage of their development.

Third, piano students might not strike a balance between formal and informal learning in individual lessons. From my perspective, the balance between both are important because formal and informal learning are ways of fostering a child's self-learning ability. Goran Folkestad mentions that the distinction between formal and informal learning comes down to who initiates the process of instruction (Folkestad, 2006).

> Formal learning can be characterized as the intentional predetermined sequencing of learning activities by 'a person who takes on the task of organizing and leading the learning activity'. Informal learning can be characterized as being 'not sequenced beforehand and occurs during 'self-chosen and voluntary activity'.
>
> (Folkestad, 2006, p.141).
>
> What is more, their relationship is a continuum, and what characterizes most learning situations is the instant switch between these styles and the dialectic interaction between them.
>
> (Folkestad, 2006, p.142).

Moreover, he proposes the following distinction:

(Chris Philpott , Gary Spruce, 2012, p.164).

Although this framework is based on playing and making music conditions, the ways of building up children's thinking through cooperation in a group is a valuable strategy. Taking the individual piano lesson as an example, the teacher is often seen as the main director in the lesson, and children passively accept knowledge most of the time. Thus, under this circumstance, children cannot think positively; it is difficult for them to become involved in the self-learning process. What is more, children in the individual lesson process have fewer opportunities to interact with others, particularly peers. As a consequence, children might not gain any directing from others, which would be motivation for their development.

From the discussion above, one can conclude that individual piano lessons lack an abundant musical environment to strengthen a child's musicianship further. It might not arouse a child's aural perception based on simple melodies and single timber played by the piano at the early stage. It misses comparative judgment in peer activity to confirm a child's unique identity, which is a positive motivational influence for a child during the learning process. It may not be enough for a mutual assessment among others to assist a child in the development of the self-learning ability. Thus, this paper will try to set up a supplemental activity or a productive music environment to address these deficiencies of individual piano lessons.

Chapter 2: Reflecting on Jean Piaget's theory

In this chapter, I will state how Jean Piaget's theory can make a connection with a child's musical development at his or her early learning period. Piaget's theory emphasizes how the relationship is between the individual's intellectual development and the environment. In his argument, he says that the essential trait of intellectual functioning can keep the same in people's life except for the moment when it is an exchange, among others. Thus, his theory is a valuable source for this paper to find some rules of how the rich musical environment can help piano children to progress their piano learning at the beginning stage.

At the beginning of this chapter, I will briefly introduce some relevant contents of Piaget's theory, such as a child's development of cognitive structures and some essential elements of schema, adaption, equilibrium and stimulus. In the following part, I will provide some reflections based on these critical elements, particularly on the importance of the relationship between the environment and these essential elements in a child's development. In the last part, I will discuss other factors linked to Piaget's theory, which are also vital for children in their further development.

A general background to Piaget's theory

Initially, it is necessary to mention why Piaget's theory is a significant reference for this study. The topic of this paper focuses on those piano students who are learning at the fundamental level. For beginners (children), it is vital that educators be concerned about fostering children's abilities and their intellectual development. Certainly, Piaget's studies focus on these aspects of education. Piaget believes that individual intellectual development is based on the progress of personal intellectual structures (schemas), which accept various stimuli from the environment, constantly modifying and finally integrating them into the existing intellectual structure (McNally, 1975). Equally important, Piaget further asserts that the development of intellectual structure is a dynamic process for an organism (McNally, 1975). The process of the development of schema features constant accumulation and growth; in addition, it is

always changing and adjusting (McNally, 1975).

Thus, if schemas determine the way we learn and develop, the way we see and experience the world, then there is no doubt that Piaget's theory is worthy of study. Moreover, Piaget's theory stresses the significance of the universal interrelation and order of all things. His research shows the link between biological, social, psychological and logical factors, in particular emphasizing how the logical aspect provides direct links to the physical (McNally, 1975). This is vital in the context of the development of children's physical and logical abilities. Therefore, in my view, Piaget's theory is an essential reference for musical learning because piano playing is correlated with physical actions, thinking and cognition. Moreover, the effect of piano learning is influenced by the surroundings.

Piaget's studies seek to find common features of child development through his experiments, which are a useful resource for educators to plan and organize their lessons. Douglas William McNally states that Piaget sees intellectual evolution manifested in the progressive development of thought in those first 16 years as the child moves progressively through qualitatively different stages of thought (McNally, 1975). Piaget's research determines how children construct their cognitive schema and obtain knowledge in these 16 years. Moreover, this theory provides educators with information on why children of certain ages tend to behave the way they do. This paper focuses on children who are learning piano at the fundamental level. Piaget's studies on children's intellectual development covers this age range and is therefore valuable evidence for the current study. The key principles of development in his theory could make educators quickly master the common features of children's development, thereby assisting educators to appropriately utilize better strategies to tackle problems in instruction. It could help make instruction as effective as possible.

Equally important, Piaget's studies further explain the correlation between the individual (organism) and environment, in particular how the environment influences

the individual (Wadsworth, 1984). This aspect plays a vital role in the progressive development of cognition in children. From my perspective, this includes the types of environments that students engage in, the quality of the cognitive structure they might build given that environment, and then the effectiveness of the students' learning. Thus, the background of Piaget's theory provides evidence that the environment exerts a high degree of influence on individual learning in instruction.

As Lev Semenovic Vygotski claims in his sociocultural perspective, it is clear that children's development is shaped and guided by "more competent others" (Sloboda, Davidson, Howe, et al., 1996; McPherson & Davidson, 2002, 2006; Creech, 2009). And given that our external environment is multifaceted and complex, piano students deserve to gain more guidance beyond the individual lesson, this is why methods such as Suzuki focus on training parents to work with the child for practice. More opportunities for them to strengthen their musical knowledge as well as broad musicianship should be provided. In order to improve children's piano learning outcomes, we should pay more attention to studying the general principles of the development of children's intellectual progression, particularly focusing on the relationship between the individual and the external environment.

Reflections based on key points of Piaget's theory

Adaptation is a process occurring under a certain environment. Adaption is a fundamental biological principle and is as much concerned with intellectual as with physical development (McNally, 1975). Based on Piaget's theory, adaptation concerns assimilation and accommodation. James Jeremiah Wadsworth explains that "accommodation" is the cognitive process by which a person integrates new perceptual, motor, or conceptual matter into existing schemata or patterns of behavior (Wadsworth, 1984). It means that the change (growth) in children's schema results from their internalization of new information, since schemas are dynamic structures open to change. Moreover, Wadsworth further states that "assimilation" is when a child is confronted with a new stimulus, and he or she tries to assimilate it into

existing schema (Wadsworth, 1984). In other words, a child tries to modify the stimulus into the existing schemata in order to integrate it. It is the preparation stage for accommodation. However, Wadsworth asserts that both aspects do not have a particular order when a child meets a stimulus from the outside world. The individual cognitive structure (schema) will process information from the environment using these two steps simultaneously (Wadsworth, 1984).

Let us examine an example of adaption in the piano learning context. It can occur between the educator and a child when, for example, a piano student plays *The Trumpet Song* from *Piano Adventure* at the fundamental level, where the highlight of this piece of music is the feeling of connection among the notes. The traditional manner of instruction is that the educator describes some relevant information about what the trumpet is, how it produces sounds, and in particular the feeling of the physical action of blowing. What is more, the educator will analyse the staff notation with a demonstration. For instance, the educator will play the piece on the piano, and combine it with an analysis of the diverse durations and pitch heights to make a correlation with the sense of the performing trumpet. (The educator might explain to the student that playing "higher" notes on the stave requires more "puff", more muscle pressure in the lips, more air supply, and more support in the body). During this process, the educator utilizes the relevant context of the trumpet (as stimulus) to inspire the child to create the sense of distinguishing differences in the sounds between the child's performing and the requirements of the performance. When the child realizes these differences, he or she tries to adjust (assimilate) his or her performing, and attempts to correct (accommodate) it by practice. This learning process is a common process at the fundamental level that clearly involves assimilation and accommodation. However, sometimes this traditional approach might be inadequate because some children have no knowledge of trumpets or other wind instruments. (It would therefore be difficult, or even impossible, for them to understand or embody the idea that greater—"higher"—amounts of air, pressure, and effort are required to play wind instruments. And the demonstration of the embodied

aspect of “high” and “low” notes—an especially important concept on the piano, where the notes are in fact layed out from left to right—might be ineffective). As a result, this information may not be useful for children, and it would be difficult for them to establish a real sense of the trumpet. This would impact their learning outcomes.

Based on the analysis above, it is difficult for educators to predict and control the effect of information supplied in instruction. The information (stimulus) might not be absorbed (adapted) by children because it is beyond their existing cognitive and perceptive capacities. Therefore, I suggest that in instruction we create an environment that utilizes concrete information, such as a real trumpet or wind player, to demonstrate the piece. This not only makes up for the child’s insufficient perception of knowing the instrument, but also helps him or her gain a real embodied sense of the instrument. Through the interaction with real wind instrumental players, the piano student adapts the information in terms of the feeling of the wind sound while he or she is observing the action of performing with wind instruments. This new knowledge will improve performance.

Secondly, the dynamic state of equilibrium leads to constant learning motivations for children. Initially, it is necessary to explain terms with respect to equilibration and equilibrium. Piaget asserts that equilibration and equilibrium play into the ongoing development of schema. When an individual engages in the environment, a large amount of information is exchanged between environment and participant (MaNally, 1975). Piaget maintains that the process of equilibration leads to a state of equilibrium; here, equilibrium refers to a balanced state of affairs in the organism and can refer both to biological and psychological states (Piaget, 1968). Piaget notes that the individual might regularly accept interactions with external objects, and that this pushes the individual to adapt his or her schema: the schema is reshaped, enlarged, or adapted to make sense of a larger array of phenomena (McNally, 1975). Piaget also points out that the state of equilibrium is temporary, and that this balance will be

disrupted by following modifications in one's interaction with the environment (McNally, 1975). Thus, the individual development of cognitive structures can continuously progress .

Using Piaget's theory, we can reflect on a student who is learning the piano at the fundamental level. Most piano students have one lesson (around 50-60 minutes) each week. The rest of the days of the week, most of them need to practise or study by themselves without an educator. Undoubtedly, the lesson can be regarded as one of the main opportunities for an individual to develop their musical cognition structure because the individual lesson is the most effective way for an individual to fully engage in a musical environment with the educator's guidance. For example, when a child attends a lesson, there are plenty of musical stimuli created in the instruction, more so than when the child is alone. The student communicates with the educator; the educator imparts effective knowledge to the student, and gives feedback or comments to the student and so forth. Therefore, during the lesson, the child can easily develop schema by the process of constant equilibration and equilibrum.

However, apart from the lesson, students might lack opportunities to engage in a rich musical environment. For example, limited practice results when other subjects compete for limited time. This could bring about insufficient stimulus and interaction with the musical environment. As a consequence, equilibrum and equilibration will remain in a steady rather than dynamic state. This might lead to less adaption of schema, which will have a detrimental effect on the child's cognitive development since their subsequent exposure to potentially new phenomena will not have sufficiently developed schema to make sense of those phenomena. Educators should thus consider whether or not extra activities can provide more opportunities for the individual as a necessary supplementary environment to develop their intellectual structures outside the lesson. McNally believes that the equilibrium of the cognitive structure is a dynamic one achieved in order that the organism may once again interact and so develop progressively (McNally, 1975). Therefore, based on limited

musical experiences for piano learners outside the lesson, educators are required to find other appropriate musical methods to maintain children's state of musical experience and promote it further.

Thirdly, the appropriate stimulus is an important consideration in the piano learning process. Based on Piaget's viewpoint, if the individual reaches a higher level of schematic structure, the stimulus from the environment would match the individual's existing intellectual structure, or current experience (McNally, 1975). It is thus a necessary condition to promote the changing of schema. Mitchell Elkind asserts that once a structure is present, utilizing it becomes a need which is satisfied through exercise or through function pleasure (Elkind, 1968). The mechanism of progressive cognition shows the fact that the environment provides a stimulus for the individual, and the information is proceeded by continuous steps of confirming, accepting and adaption. During this process, we can find that if the stimulus does not match the individual's existing cognitive structure, the interaction might not generate progress. Elkind presents two examples to explain this statement. For instance, a 10-year-old child attempts to make a difficult calculation which is beyond his or her ability; another example is the opposite situation where an adult is set a task to shake a rattle. Both participants show their ignorance for these tasks (McNally, 1975). Based on these examples, the stimulation from the environment does not match the individual's current schema because these tasks are too difficult or too simple for them . As a result, they might lose interest in the task. Equally important, there is no doubt that the interaction with the environment is insufficient. Therefore, Piaget defines motivation as when the individual is most interested in that which is moderately novel (McNally, 1975).

Concerning the piano learning process at the fundamental level, it is a common phenomenon that children become bored with piano learning. Based on the analysis above, the reason is found in previous exemplifications by Elkind—inappropriate stimulus. For example, when children are learning some technical skills such as

learning notes, the principles of playing, and basic rhythms at the beginning, it is easy for children to lose patience when they practice. The reason is that the technical task might be too easy or too difficult for them, and the single or monotonous sounds do not draw in children's attention. It will make children draw back or lose confidence in continuing to learn. When the musical environment does not provide a suitable stimulus to match the child's current cognitive structure, a mismatch arises between the individual and the environment. What is more, this will impact learning outcomes. But how does one provide a suitable stimulus? This is a difficult question which has long troubled educators.

In my view, in this situation educators can refer to other approaches to solve the issue—for instance, the famous pedagogies of Orff , Kodaly and so forth. Certainly, these seem to be suitable methods utilizing rich musical environments and information, which could relieve the tension of learning attitudes in a lesson. However, it might not be the most direct and effective method for piano playing, particularly when it comes to the improvement of affective and musical understanding. I believe music pedagogy should not be directly related to musical expression of specific instruments. The focus should be more on utilizing musical knowledge, setting up a sense of music, musical identity and engaging in music using music group activities. But as educators, how do we design suitable ways to inspire the individual's cognitive structure in the piano learning context? That is the important task that needs to be studied.

Reflections on the relationship between musical identity and Piaget's theory

An important element linked to Piaget's theory is musical identity. Musical identity correlates to children's development of their intellectual structure because it arises from the same musical environment. Initially, Lamont asserts that personal identity consists of how we understand and define ourselves (self understanding) and how we understand, define and relate to others (self-other understanding) (Lamont, 2002). Taking a piano student as an example, during the process of piano learning, a child

interacts with a large amount of musical information and internalizes that information. At the same time, in this musical experience, a child undertakes a series of reflections between himself or herself and the other (the educator) via assessment, perception and conclusions in their mind. This is a process of self-recognition, and it is also a process of musical identity shaping. However, personal identity frequently changes according to certain circumstances the individual has participated in. Paul Ricoeur asserts that the course of recognition is built upon differentiating something from something else—on identifying something (Ricoeur, 2006). We can also see how differences in the environment impact on personal identity in Bronfenbrenner's ecological model (Jonathan, 2013). Therefore, musical identity is shaped by differences in stimuli from the musical environment. It shares the same source (the environment) with the development of schema because Piaget's theory emphasizes the importance of the relationship between the environment and the individual.

Musical identity as motivation correlates to stimuli from the environment. The more moderate the stimulus, the clearer the identity that is shaped, and this is an essential resource to support children's learning in the future. At this point, I believe that when children are in the process of learning a subject (piano), the appropriate stimulus arouses children's motivation or interest, which leads to continuous changes in their cognition. There is no doubt that more motivation, more aspiration, more endeavor and more achievement lead to more learning and understanding. For example, if a child has more opportunities to engage in a musical environment, the more musical information could be internalized. It will make him or her have more aspirations in music, such as to be a musician in the future. As a result, he or she will make more efforts to study performance, and he or she could progress more easily. This positive state is significant at the fundamental level because learning at the fundamental level is the process of accumulating general knowledge and developing ways of thinking. It is a foundational preparation for the next level. As Leon Festinger explains, in terms of shaping children's understanding of themselves and of others' developmental progression in personal identity, it may be more salient in earlier childhood, whilst

social identity becomes more influential in the processes of group comparison that children begin to engage in during middle childhood and particularly in adolescence (Festinger, 1954).

From the analysis above, it can be concluded that the development of schema and identity are influenced by the external environment. To be more specific, we could say that an environment featuring more interaction (in interpersonal and group interaction) correlates to promoting stronger personal identity and intellectual structure.

Reflections on the peer relations and musical identity

From my experience, peer relations offering multiple interactions provide an appropriate and powerful condition to strengthen personal musical identity, and promote the development of schema, abilities and understanding. Angelica Berger Emmy believes that peer relationships appear to be instrumental in the socialization and development of children's social competence (Emmy, 1980). This is a significant way for children to increase the possibility of interaction and stimulus with the external environment. Time-use studies show that by the time children reach their early to mid-teens, they spend more of their waking hours with peers than with parents or siblings perhaps because this stage of development is a time for working out identity issues (Csikszentmihalyi and Larson, 1984). What is more, the importance of peer relationships is also supported by the prevailing view among social scientists. They believe that peer relationships play a unique role in child development ---one that cannot be entirely duplicated by parents or other socialization agents (Asher and Coie, 1990; Berndt and Ladd, 1989; Bukowski, Newcomb, and Hartup, 1996; Harris, 1995; Ladd, 2003). Thus, peer relationships feature in a multiple interacting environment which is a suitable situation for children. Equally important, peer-group cooperation is beneficial to children's development of self-improvement, self-expression and tackling different problems between others. For example, children engaged in some musical group activities with near-aged members could gain more opportunities to discuss with other children who play

diverse instruments. This is a precious experience to foster their ways of thinking from other angles. Certainly, it is a valuable chance to gain other knowledge beyond their own areas. What is more, based on peer activities, children reinforce their musical identity while they might broaden their musical abilities and understanding as much as possible by comparative study. Based on the observations above, children involved in near age activities will have more time and create more interaction among each other. Therefore, peer relationships are a significant way for children to set up and strengthen personal identity, broad personal abilities and understanding.

If the individual piano student could engage in more group activities with the piano, the student will thus obtain more self-confirmation (personal identity), he or she will aspire more to engage in music learning, and he or she will gain more development in musicianship and musical understanding. Lamton explains that several factors inspire people to develop their musical understanding; “Social life and enjoyment of musical activities” had high loading on musical friendships, social activities, enjoying attending concerts, listening to music, and playing in musical groups, which are more important for children (Lamton, 2002). Therefore, as educators, we should consider what kinds of group-based activity forms are appropriate for piano students as a supplemental form to compensate for that lacking in individual lessons. This important topic needs to be studied.

To summarize, it is easy to see that the environment plays an essential role in children’s development. This is significant when it comes to the development of children’s schema. What is more, it is also a condition to shaping children’s personal identity. As for personal identity and schema, both require multiple, suitable and constant stimuli from others (the environment). This influences how much suitable stimuli children adapt, how clearly their musical identity is shaped, and how much benefit children will obtain via future exposure to the environment and to study. As a result, through studying Piaget’s theory, children engage in peer activities could better assist them to develop in their musical study.

Chapter 3: How Musical Embodiment influences children at the fundamental level

In Chapter 3, we will consider how the theory of musical embodiment influences a child's musical identity and their development of musicianship. The first part of this chapter will explain that the effective method of musical embodiment can be utilized to solve problems by integrating technique and musical understanding for piano students at the fundamental level. The later part of the chapter will raise issues around the possible limitations of musical embodiment for children at the fundamental level, and finally some personal suggestions will be offered.

Useful terms for musical embodiment

It is necessary to familiarize ourselves with basic concepts of musical embodiment. Arine Cox (2016) believes his theory of music embodiment offers meaningful ways for learners to combine listening with thinking and imagining, and thereby help them to gain a richer musical understanding. He explains that throughout the course of gaining musical experience as listeners, people strengthen their cognition in terms of their knowledge of how sounds are produced. They do this by actually imitating musical sounds and physical actions (Mimetic Motor Action), or at least by imagining such actions (Mimetic Motor Imagery), which itself involves some actual form of mimesis. In addition, he refers to covert mimetic behavior as the relevant muscle-related brain processes that do not manifest in overt actions. Here, "mimetic" refers to imitation, "motor" to movement, and "imagery" to thought, imagination, or mental representation (Cox, 2016). Thus, how we comprehend the behavior of others by imitating, covertly (MMI) or overtly (MMA), will influence our own cognitive outcomes. This is significant in supporting students in the development of their musicianship, such as the abilities of listening and musical understanding. For instance, there is no doubt that sounds are correlated to players' physical actions. According to Cox's explanation, when children imitate players' performances, they can strengthen their understanding of sound through observing a series of behaviors, and eventually children could improve their ability to identify sound. Therefore, if

children could independently master this principle in the learning process, it might help them to improve their aural ability and musical understanding.

For children at the fundamental level, MMI is likely to play a more vital role in musical understanding, and it is more difficult for children as well. From my experience, the reason for this is that MMA features action, which is more concrete, obvious and direct information that children can more easily integrate into their learning. MMI, on the other hand, is for children more abstract. What is more, a feature of MMI is recalling scenarios from the lesson, which children might have experienced a long time ago. And the content of the imagery can involve complex processes. Cox gives an example to emphasize this point. He notes that 'when I imagine playing the cello, this is normally a conscious and deliberate enactment of motor imagery, and when I imagine playing like Jacqueline de Pre, this is conscious and deliberate MMI and is thus a special case of MMI generally. MMI is grounded in motor-related brain processes that occasionally become conscious and occasionally are initiated deliberately' (Cox, 2016, pp.12). Thus, it can be concluded that MMI is more complex for children to achieve at the fundamental level, but it is a vital part. Although conceiving of MMI is not an easy task, it is useful to promote this in children in their development of musicianship, particularly musical understanding.

In my opinion, MMI could be utilized more often to help children to develop their musicianship. Apart from recalling the image of the performer playing (the action), another way to use MMI is concerned with internalizing imagery. This involves recalling a real scene which is closely related to the children's life. Equally important, the imagery is valuable for children because it features concrete symbols and detailed information. A story, with emotion and a dynamic scenario, is an important resource in promoting children's affective and musical understanding based on imagination. For example, we can recall that when we were students, some parts of our learning experience came from drawing on our pasts. Our tutors illustrated scenes, with concrete information we had already been exposed to in our lives, in order to inspire

us to understand the feeling of the music we played. That is MMI in action. Thus, we can conclude that how concrete the information of the scenery supplied is, and how real the details expressed are, will affect how deeply students might understand. MMI and MMA are both effective strategies in instruction. The process features the imagination based on the imagery to arouse children's ability in thinking and analysis. That is a solid foundation for the development of musicianship in the future.

How musical embodiment theory should be used by the educator

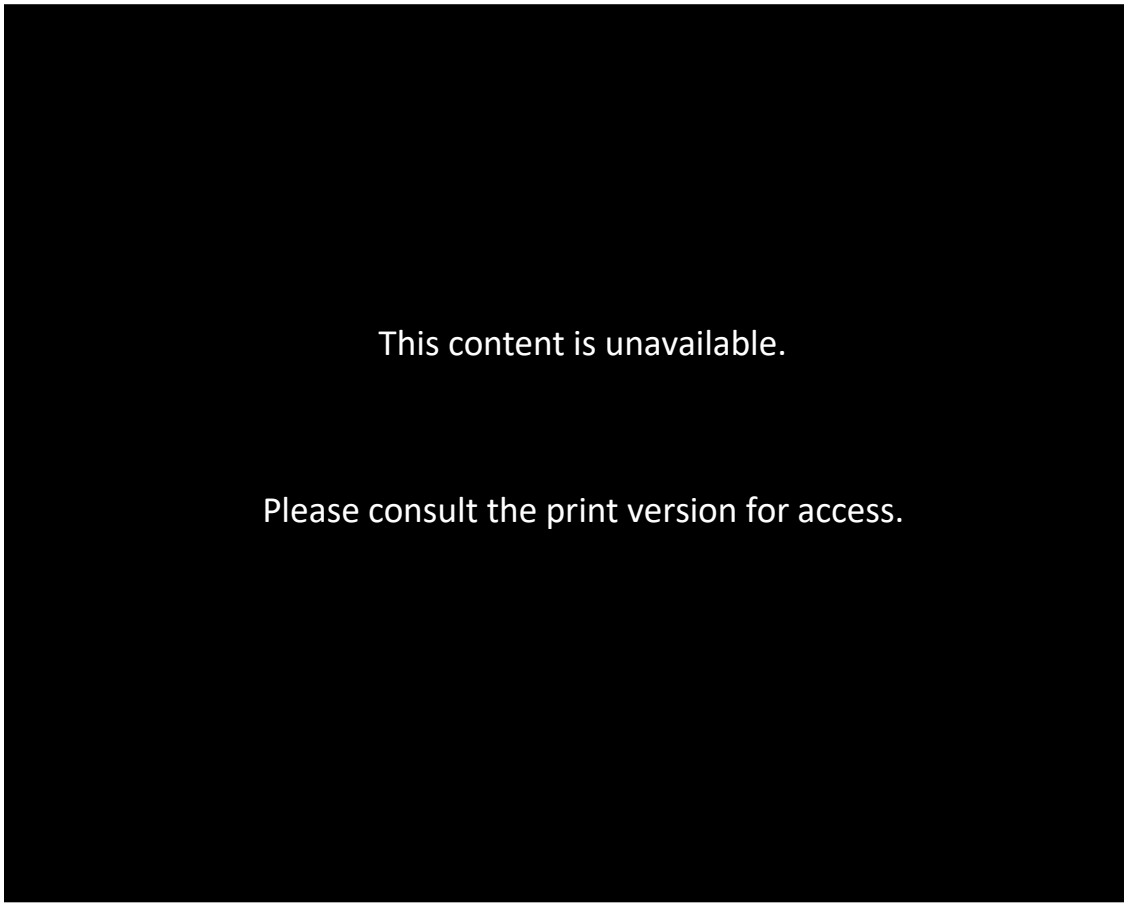
In studying musical embodiment theory, we realize that the thinking behind musical embodiment contains the most effective methods to benefit children in technique, and affective and musical understanding. However, this theory is often neglected in lessons as it needs cooperation between the educator and the child, and it also requires the educator to have some knowledge of that. It is not an easy task. From my perspective, educators could adapt their ways of thinking away from a single focus (only technique, visual aspects, and so forth) to multiple methods of instruction. Musical embodiment emphasizes the individual and environment as a whole, which consists of visual action, auditory imagery and auditory perception. What is more, it strengthens an awareness of the influence of external interactions on the individual.

The role of the external senses

MMI and MMA require specific strategies during instruction to help children improve their musicianship. Cox explores how promoting a specific feeling could set up a closer connection between the individual and music. He states that the five external senses of smell, taste, touch, vision and hearing are ways of acquiring knowledge about the external world, and each of these establishes a particular epistemology: visual, tactile, olfactory, gustatory, and auditory ways of knowing the world (Cox, 2016). In turn, these senses then play a key role in how we hold, position, and move our bodies, either during MMI or during MMA. In my view, his theory is suitable for individual students in piano lessons at the fundamental level. These external senses can provide fundamental-level students with a way of forming concrete ideas,

conceptions, and descriptions in their brain. More importantly, these external feelings correlate with students' existing experiences in their real lives with which they are familiar. All this can make understanding music easier.

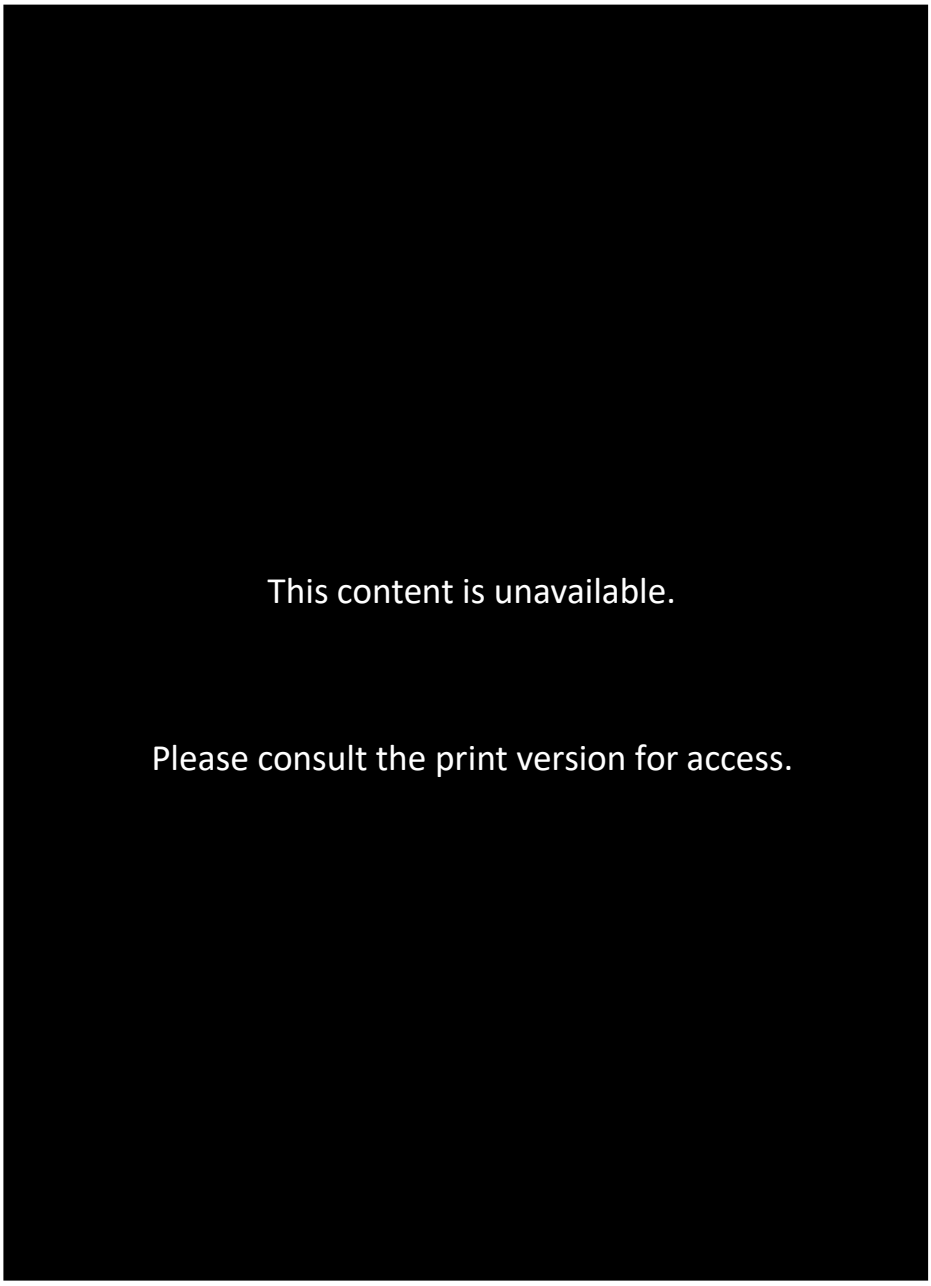
Cox holds that knowing is seeing (Cox, 2016). Knowledge is often reflected in the visual aspect. For example, when we say "I see what you mean", we are drawing on the conceptual metaphor "To know is to see." When musical educators deal with the visual part of instruction, it is inevitable to use staff notation. Staff notation is an important aid for performers, and it also has a significant influence on how well performers will perform. Equally important is the textbook, which plays a pivotal role during the learning process for children at the fundamental level. Cox points to notation as one of most important sources of information for people learning music. But what we understand through sight is, as Cox points out, often mediated through our other senses. To offer a basic example: teaching students to see and understand rising notes on the staff in terms of an increasing effort or amount of musical "tension" can help imbue the concept of pitch height with meaning. In general, when we analyse notes on the staff, a large amount of clues are contained. For instance, different note indications provide information on note lengths. Black notes (indicating shorter notes), might be seen to imply a sense of tension, while the openness of the white notes (indicating longer notes) might be seen to indicate relaxation. An embodied way of teaching even the most basic aspects of notation can enhance a young child's education.



From a music piece from *Piano Adventures*, long duration notes show bell sounds with a steady sense. Moreover, different pitch height asserts distinctive motion as well. The staff notation with a dynamic range of pitch height might give us an image such as intensive emotion; in contrast, it might imbue the musical pieces with a sense of peacefulness.

From a music piece from *Piano Adventures,* this piece of music utilizes a continuously increasing pitch with balloons floating in the air to inspire children. Here, the objectively rising pitches (and balloons) offer children a concrete way of relating the pitches on the piano to real-world meaning, for the pitches on the piano are layed out from right to left, not from bottom to top. The visual image of the balloons thus reinforces the objectively top-to-bottom nature of staff notation, which itself enhances the student's understanding of pitch relationships.

What is more, other elements such as musical terms at the beginning of a musical piece provide precise statements in terms of musical feeling.



For example, from a piece from *Piano Adventures,* the music term Mysteriously implies that the feeling of this piece is secret and its speed should be slow. (However, the last line of the piece shows a changed term of speed to quickly, and strong dynamics are now needed). The picture of the Loch Ness provided—with its undulating, serpentine curves—resonates with the curving contours of the melody and phrase markings. The picture encourages young students, if this connection is made explicit by the teacher, to see musical "lines" as imbued with real-life meaning. Thus, the ability of reading staff notation is a vital part for students, which needs to be studied carefully. It can be seen as significant knowledge that students have to obtain.

Therefore, attention should be drawn to seeing, reading and knowing this information or text.

Another aspect is the visual performance aspect, which can be reflected in imagery with physical actions. In other words, listeners can also observe objects. During the process of observation, imagery comes from performing actions in real time, which helps listeners to analyse and understand music pieces because actions are directive, objective and real. For example, in an individual lesson, students could gain valuable information from demonstrations by the educator. The performers' moving actions of arms, limbs and body might enhance the student's musical understanding. To exemplify, students can recognize their technical problems based on diverse demonstrations. Through the distinction of physical actions between the student and the educator, imagery as visual knowledge makes the student understand the correct form for performing. In the above example, the teacher might demonstrate the mysterious mood of the piece, and its relationship to the Loch Ness, by using fluid movements of the arm and wrist, up and down. Such a demonstration would provide the student a means of relating performance movements to meaningful musical "movements."

Cox states that knowing is hearing (Cox, 2016). This is demonstrated by our frequent use of the conceptual metaphor "To know is to hear", as evidenced by saying such as "I hear you" to mean "I understand you". Hearing is a process of auditory information from the environment being accessed by individual with their ears. By processing the auditory information, these sounds are conceptualized into understandable and describable knowledge and then this knowledge is internalized and assimilated into the child's musical cognitive structure. Initially, we should underline what a vital role the aural aspect plays during the learning process.

Listening in music plays a significant role in performance and music education, and it is also as an important area that has been studied by researchers. For example, as far

back as the 1830s, Lowell Mason strongly advocated aural fluency before introducing music notation to students. There is no doubt that the issue of listening has a long history. Listening is closely correlated to music perception. Music cognition is generated by a medium which is the brain, and the tool that conveys musical sounds to the brain are the ears. Although ears are the pathway to carrying musical sounds, they play a vital role too. For instance, as Robert states, ears in music have a special meaning. He further explained that "Playing by ear" means that the notes that are played--that is, the pitches and rhythms--are informed by an inner hearing. Skilled ear players do not require cues from notation to know what notes to play (Rober, 2012). That means ears have the ability to identify sounds. Thus, as for every instrumental player, learners need to consider how to utilize their ears as skilled ears. If learners have a limited ability in this, it will influence the sounds they play.

Although learners quickly realize how important the aural aspect is, some questions still need to be posed. Concerning musical sound identification, as listeners, how do we improve the ability to distinguish the quality of sounds? As a receiver, when the music melody input arrives in his or her mind, how do we comprehend that in depth? As educators, we may be greatly relieved when students have a great auditory sense; it will provide more opportunities for educators to explore more possibilities in performing and musical understanding in the instruction. This would be one of the luckiest things for most musical educators during instruction. As the auditory sense is an essential condition to be a musician, it is also the foundation for producing expressive and creative sounds.

Actually, aural ability can be fostered, despite children having differences in aural ability. In my opinion, "knowing is hearing" might be helpful. This concerns explanation by educators. The reason is that at the fundamental level—around age four to nine years old—children's schemas might not be fully developed. Piaget mentioned that children achieve certain schema with different speeds of intellectual progress; but whatever the progress is, they will finally reach the destination

(Wadsworth, 1984, as cited in Piaget, 1981a). Therefore, based on these differences, educators need to describe the feelings of the auditory sense with appropriate language. For example, words enable children to conceive concrete imagery and conceptions, which is reflected in the brain. What is more, the auditory information transfer from the abstract matter to concrete object (knowledge) forms the way of "knowing is seeing", and leads to the goal of musical understanding. Therefore, this is an invisible aspect connected to the visible and text aspects as a holistic measure which achieves musical cognition.

Cox argues that knowing is touching/grasping (Cox, 2016). We use the conceptual metaphor "to know is to touch/grasp" when we say things like "I grasp that concept now". This principle is related to physical actions of the listener. From my perspective, touching and grasping might be divided into two parts. The first part concerns the listener connecting with the demonstrator's physical actions during the performing. For example, in the individual lesson, the educator often puts students' hands on his or her hands, arms, wrists, shoulders and so forth, which makes students feel the appropriate actions or positions they should have at the performing moment. This could help students to understand and adjust their movements in time based on the demonstration. Another part that I consider important is maintaining touch with instruments or certain objects, which could help students to adjust their performing as quickly as possible. For instance, when students touch these objects, they can develop the sense of feeling through diverse texture. This real experience could help performers to utilize their feelings and understanding of the instrument so that they can adjust their performing situation. For example, if a piano student cannot play well on soft notes, the educator might ask the student to hold a piece of paper with their fingertips using the lightest possible touch while keeping the paper in its original state as much as possible (keeping the paper flat). After this training, the student can transfer that sense to the piano; it might give him or her better comprehension on playing soft notes by controlling the body's muscles based on fingers, arms and wrist, and form the feeling of being relaxed during the performing. Thus, "knowing is

touching or grasping" can assist in reaching the achievement of musicianship by utilizing the power of physical exertion based on a real personal experience. Importantly, it should be reinforced to students that such tactile knowledge is a reliable form of knowledge. To know something in your body is to assimilate it as tacit knowledge and understanding.

Possible limitations

There are still some gaps in this theory that need to be considered at the fundamental level, and that is the role of the educator of piano students. The problem might occur from the educator's perspective. The content mentioned above needs to be interpreted by the educator, which might not be enough to help the student to understand completely. During instruction, the educator helps students to improve their understanding by the mimetic approach (auditory and visual aspect). In addition, the educator as the medium needs to transfer the external information to the student, and then the student must adopt it. However, the language and expression of adults is different from that of a child. This will definitely influence children's understanding.

We have already mentioned that Piaget emphasizes that if children meet with suitable stimulation which matches their existing experience and feeling, children will cognitively adapt it smoothly. In contrast, inappropriate stimulation might be ignored or achieve understanding incompletely. For instance, based on the piano lesson of *Bells of Great Britain* from *Piano Adventures* mentioned above, if the educator describes the feeling of this piece as solemn or majestic, it may be too complex for children to construct in their mind. Therefore, based on this example, the description of the senses provided by the educator might be far away from the student's existing feeling, the student follows the description by the educator but it might not have a good effect on musical understanding. Educators need to be aware of the fact that the vocabulary we use to describe our feelings and moods is very much dependent on our stage of life and cognitive development.

Moreover, another issue might involve the practice after the piano lesson. When the student practices at home, the main reference they have is recalling the scene from the lesson, for example, what the educator demonstrated in terms of actions, and what kind of senses for music pieces were reflected in the lesson. Children will combine these recollections with some other resources such as listening to a recording to help their practice. However, the effect of the piano lesson may not satisfy what has already been mentioned above; in addition, children have limited cognition concerning some other invisible sources such as recordings. For instance, when children listen to these references, their limited musicianship and musical cognition might not be fully on the scale utilized by the theory of music embodiment. Therefore, combing both factors, there is no doubt that there is a deficiency reflected in the limited effect of studying during the process of practice, which is based on the limited concrete information and specific conceptualization they created themselves. We could say that at the practice step, the process of recalling and imagining might not give the student a proper simulation which matches the existing experience the student has. As a consequence, they cannot make enough progress in musical cognition. That is the reason why the effect of practice after one week may frequently not satisfy the educator's expectations.

To conclude, based on the analysis above, as the educator, we find that music embodiment is an effective way for the development of musicianship, particularly musical understanding. We can confirm that in the individual piano lesson, children could gain improvement in musicianship based on the proper utilization of this theory, while the insufficient aspect occurs at the time of practice as children lack references of comparing and directing. From my perspective, if children, particularly piano students, could have opportunities to engage in some events or programs with rich musical information, then a child's musicianship such as aural perception, deep musical understanding and music skills can be strengthened in a group cooperation, peer interaction, comparison, and competition. As a result, the insufficient part of the individual lesson would be solved to some extent. During long-term studies based on

my own practical experience, a piano chamber program might be most suitable. It features suitable interaction as well as continuing stimulation between the environment and the individual. For instance, members are close in age, they have similar cognitive schema and experience; in addition, members play multiple instruments, which creates the appropriate conditions for utilizing music embodiment (MMA, MMI); and the most important is that the educator with their authority conducts this performance. Therefore, the chamber form comprises the conditions which match both theories; it gives the educator more opportunities to provide the most effective instruction for children to improve their musicianship, particularly affective and musical understanding at the fundamental level.

Chapter 4: How to approach a piano chamber program at the fundamental level

Combining ideas from Piaget's and Cox's theories, experiences from ensemble playing can be seen to help young pianists improve their musicianship by increasing the cooperative experiences with various instrumental players. However, how could it be effectively targeted to pianists? In my view, the traditional chamber framework might not completely meet our requirements; therefore, we need to modify contexts and rearrange frameworks of the traditional chamber form so that it can be more beneficial to children.

Reflections on how to organize a piano chamber program

What is the purpose of a piano chamber program at the fundamental level? In my opinion, it should pay more attention to fostering children's abilities, particularly their analyzing and thinking abilities, because these are the foundations for children to be independent learners. If a child is an independent learner, he or she could obtain knowledge and extend his or her abilities, such as their affective and musical understanding, themselves. Taking piano instruction as an example, the educator utilizes different methods to inspire children to build an accurate analysis, expression and understanding of music. However, the lesson time is limited. Children spend the most time practicing and studying outside of the lesson. Thus, the effect of learning outside lessons directly correlates to children's outcomes. As younger children are limited in their self-control and self-directed learning abilities, the results of learning are often not as satisfactory as we might expect. Therefore, it can be concluded that personal ability in self-learning or as an independent-earner plays a significant role in children's development. From my perspective, this facet cannot be neglected, as the ability of self-directed learning not only influences current studies, but also contains the core elements to support children in their later study. However, as educators, the problem is how to effectively approach this? What kinds of environment could we create for children to improve their abilities? What kinds of methods could we use to guide them to be independent learners?

From my perspective, the program should be constructed from the assessment viewpoint. As for how we could organize this program, Chris Philpott's *Assessment for self-directed learning in music education* is a vital reference in the current research literature. Philpott offers suggestions for how educators could foster self-directed learning from an assessment view by taking the Musical Futures program as an example (Philpott, 2012). He shows us how to inspire players to extend their thinking by playing music, and rehearsing in musical ensembles and making music. He demonstrates how teaching methods are applied and how proper interventions can be utilized in this program. In my view, although a piano chamber program at the fundamental level does not closely relate to making new music (as Philpott's theory focuses on musical improvising), his teaching methods are valuable resources to promote children's musicianship and shape children's awareness of self-learning based on group cooperation. Moreover, his view of assessment is from the bottom up, which is an effective way to examine the children's existing knowledge. If we could consider this principle as primary, it might help us to carefully set up objectives and frameworks and to better complete them. Therefore, the framework of *Assessment for self-directed learning in music education* provided by Philpott is beneficial to a piano chamber program.

Some aspects concerned with the piano chamber program

Assessment is linked to learning. Thus, before the program is conceived, it needs to be established what types of learning (Function) will be focused on in the piano chamber program. This program aims to promote children's musicianship, particularly their affective and musical understanding, by attaining knowledge progressively. Equally important, it emphasizes increasing children's abilities by a series of teaching and learning processes. Eventually, this program assists children to build up their ability of self-learning. In this way it is correlated with the assessment for learning.

As Philpott and Spruce mention in *The pedagogy of Music,* the Assessment for Learning Programme emphasizes the relationship between pupils and educators. The

ongoing dialogue about music between pupils and teachers (and pupils and pupils) will include questioning, feedback, target setting, sharing criteria, self assessment, and peer assessment (Philpott and Spruce, 2012). Philpott and Spruce also mention assessment of learning being pupil-focused with the aim of developing musical learning and understanding through teacher observation followed by proactive interventions (Philpott and Spruce, 2012). There is no doubt that the relationship between pupils and educators plays a vital role in the instruction, and it directly influences instructional outcomes and children's achievement. As Black et al. point out, "....any assessment for which the first priority is to serve the purpose of promoting students' learning.... [is] usually informal, embedded in all aspects of teaching and learning...it becomes formative assessment when the evidence is used to adapt the teaching work to meet learning needs" (Black et al., 2003). A piano chamber program as an educational program needs to consider how to balance the role between pupils and the educator in group-based cooperation.

Various strategies are utilized to achieve self-directed learning. A piano chamber program could be seen as the teaching and learning process in a group-based form, which fosters children's various abilities by a series of methods and finally to become self-directed learners. Thus, when we launch this program, the framework should refer to 'a model for self-directed musical learning and assessment' (Philpott, 2012) because it is a valuable resource concerned with how we could guide children to reach their desired destinations based on the assessment view. By analyzing a framework of assessment for self-directed learning, there are several useful contexts which inspire us to integrate it into a piano chamber program.

> APPLICATION OF AFL STRATEGIES TO SDL, The National Strategy Key Stage 3 Music Programme (The NSKSMP) suggests that '...a key feature of modelling is the way that the teacher "thinks aloud" the processes of learning thereby making them explicit to the pupils'
>
> (Philpott, 2012, p.160).

Indeed, a piano chamber program should pay attention to the role of the educator, particularly the intervention. From my perspective, “Thinks aloud” could be linked with musical embodiment. For example, the educator “thinking aloud” could be seen as an alternative way of embodying music for children, as it can continuously strengthen children’s musical understanding by MMA and MMI based on continuous demonstrations by the educator.

According to the NSKSMP, scaffolds ‘can be prepared in advanced and effectively used to redirect pupil’s thoughts and learning, making sure that the next steps are those that will eventually lead to success’ (Philpott, 2012). A piano chamber program needs to redirect student’s thoughts, which is a feature of reviewing. As Philpott asserts, it is the first step to helping pupils recognize the standards they are aiming for (Philpott, 2012). In my view, although children in the individual lesson receive the educator’s redirection in terms of how to correct their inappropriate performance, the piano chamber program is able to provide other forms of redirection. For example, children are able to obtain further understand by comparing and observing others’ performing. To exemplify, when children play a slur improperly, the educator could ask wind players to demonstrate how the feeling of the slur could be performed by breath control. Alternatively, the educator could also ask strings players to show an unsuitable performance as a contrary example. These could make piano children have clearer minds on how to correct their performance, and meanwhile they could obtain affective and musical understanding in depth via a redirectional process. Thus, a piano chamber program provides a good chance for educators to redirect pupils in terms of their learning.

> The aim of target-setting is to ‘close the gap’ between what a pupil currently knows and what they are capable of knowing.
>
> (Philpott, 2012,p.160).

This program aims to foster children's ability, which is linked to their current and future learning. A piano chamber program is parallel to the individual lesson, and can be seen as an alternative activity to solve current problems and extend abilities to a group basis. Thus, when educators organize this program, they need to keep in mind exactly what objectives this chamber educational form should achieve. For as children grow, educators might deal with various problems arising from the one-on-one process. This means multiple strategies should be aligned with the chamber objectives, and they need to be modified in time in order to match the aim of target-setting mentioned by Philpott.

> Self and peer assessment is at the heart of SDL and has much potential if handled well.
>
> (Philpott, 2012, p.160).

Although this program creates a suitable environment for children to improve their musicianship through stimuli in peer interaction, how should the educator keep these stimuli at a steady level? As Philpott mentions above, self and peer assessment could solve this problem because the ownership in this program impacts on the degree of stimuli. For example, role-exchanging in self and peer assessment is a good strategy because children might easily accept their peer's input. During this process, children are encouraged to play the role of teacher to teach others or give some feedback based on some problems that need to be solved. Thus, it is a suitable way to keep the stimuli at a moderate level. 'To teach is to assess' underpins an interventionist method of learning based on teachers establishing and planning a productive tension between musical encounters and musical instruction (Swanwick, 1988). Therefore, educators should consider how to balance the role of children and teacher during the program.

In the following part, I will focus on the principle of musical strategies in the adaption of piano pieces. Musical pieces are important in this program because the context will directly impact on children's learning outcomes.

Firstly, the difficulty level of adapted music pieces needs to match children's current performance ability. These adapted music pieces could be seen as moderate stimuli from the environment (the ensemble form) to develop children's musical schema. One of Piaget's experiments shows that the child at the perceptual stage (4-7 years) emphasizes one aspect of the situation at the expense of the other; that means the child is unable to attend to the differences in things and to their similarities at the same time (McNally, 1975). Therefore the child can focus upon only one aspect at a time. As a piano chamber program at the fundamental level focuses on strengthening current knowledge based on the individual lesson as well as promoting musical understanding in depth, the better option is to select music resources from those that the children have already learned. These known melodies are familiar to the children, making it easier for them to become involved in the program. Furthermore, Doug Goodkin believes that the best education is to be found in gaining the utmost information from the simplest apparatus (Goodkin, 2013). For example, if children feel that the context of the music is easily accepted, it could help them engage in the musical pieces more quickly. This will solidify knowledge for future use, should they play music with similar features.

A simple musical context can also assist children in improving aural ability by distinguishing differences based on comparing others' performances. For example, the adapted music pieces with simple music might benefit children in that they concentrate on listening to others playing rather than being distracted by technicalities. Learning simple music pieces will help children to reinforce the conception of dynamics, timbre, rhythm and so forth. By continuously practicing these musical pieces, children could become more conscious of musical feeling and gain a richer musical understanding. As a result, training in this process could be seen as an effective way to improve children's aural ability.

The selection of musical pieces needs to be categorized into different contextual areas

as special contexts feature specific meaning, providing an array of information to assist children to more easily understand music. When we adapt musical pieces, it is important to consider what kinds of contextual areas will be suitable as well as inspirational. As Piaget's theory concerned, if the the individual reaches the higher level of intellectual structure, the stimuli from the environment need to match children's current experiences. Thus, music pieces should be adapted based on what children had learned or are familiar with in order to make them easier to accept and understand. For example, special categories or topics—carnivals, seasons, dances, animals, songs and so forth—can provide suitable stimulation. These concrete figures correlate with children's existing life experiences, which can help them to learn in a fun and interesting environment, encouraging participation and positivity. Examples might include Children's Corner by Debussy; Variation on Folk Themes by Kabalevsky; Microcosms For Children by Bartok; Scenes from Childhood by Schumann, and so forth. These suites are easier to understand because each piece presents diverse concrete figures. What is more, some musical concepts (rhythm, scale, musical structure and so forth) in these pieces might be assimilated by the child more easily because they are related to real-world features. It will lead children to further obtain affective and musical understanding.

Musical pieces adapted for a chamber program should have a variety of timbres that can help children to improve their aural ability, a foundation for musicianship and musical understanding. Through interaction and cooperation with other instrumental players, pianists can strengthen their existing knowledge, build musical cognition, and finally reach affective and musical understanding. Thus, when educators organize this program, they should try their best to involve many different voices and ranges. For example, instruments involving bass, alto and soprano parts should be utilized as much as possible. Goodkin points out that children's experiences with the traditional functions of bass, alto and soprano ranges, with diverse timbres from various instruments, is beneficial for developing a skilled ear (Goodkin, 2013). Therefore, a variety of timbres is a foundation in the development of children's musicianship,

particularly aural ability.

Ostinato, following and echo are three elements required in adapting music pieces. Music pedagogues, such as Orff, Kodaly, Dalcroze and Suzuki, provide inspiration in terms of how to develop music materials in meaningful ways. These music pedagogues emphasize how to guide children to build up musical perception through various musical experiences and ways of learning. Concerning the ostinato in Orff, it is an effective musical element for children to build up their musicality, particularly their sense of rhythm. A continuous repetition of musical phrases, ostinato is parallel to the main melody as a background melody. Such repetition of beats and harmonics provides steady and regular patterns for children to learn about the concept of tempo and harmonic function, in particular shaping the steady feeling of tempo and harmonic sense in music pieces. Kodaly pedagogy also utilizes the ostinato element. For instance, training songs in Kodaly mentions teaching by singing games combined with step, clap and sing. The process is divided into three steps: step the beat, clap the rhythm, and step the beat and clap the rhythm at the same time; The teacher maintains an audible beat and has the class sing and clap the rhythm (Lois Choksy, c1981). These examples from Kodaly and Orff show us that ostinato can foster children to keep the steady beat of metric accent as well as assist them to set up multi-voice musicality through intensive ear training experience.

With respect to the element of following, this can be seen as a way to improve self-directed learning in terms of improving technical skills and musical understanding. It is based on listening, and analyzing others performing through repetition of musical phrases. This strategy seems to be intimately connected to the theory of musical embodiment. When children engage in the following process, they will actually imitate musical sounds and physical actions (Mimetic Motor Action), or at least imagine such actions (Mimetic Motor Imagery). Thus, through empathizing with others, children could discover musical concepts and establish the precept of music themselves by imitation. For example, children could promote their musical

expression based on listening. When children follow the continuously changing musical elements in musical phrases, such as pulse of rhythm, dynamic change of musical emotion, diverse timber, tempo and so forth, they will constantly adjust their performance based on the melody they have heard. Therefore, it could be seen as a way of fostering self-learning ability. Music pedagogy provides much evidence in this respect. For instance, Goodkin explains that both subtle shadings and combinations in Orff's ensemble are available as the orchestral ear develops and matures (Goodkin, 2013). Equally important, the method is also reflected in Dalcroze pedagogy. Taking a training activity as an example, it states that one of members finds a music phase from the piece, he or she gradually changes the tempo, and other children continuously follow the changing melody. Thus, this benefits children through peer cooperation and interaction.

Another element that is involved is echo. Echo is a common and important factor of music studies at early childhood, and other genres such as the canon and round also rely on this. It focuses on training difficult or challenging points. It can be represented by repetition, listening and responding, and so forth. There is a subtle difference between echo and following. Echo focuses on detailed points, and it has a larger range of possible contexts, including short motivation, technical points, and so forth. In my view, echo could be seen as a quick reaction. It leads children on a sequence of mental working, such as intensively thinking, correctly analyzing and judging, and quickly responding to the changing of musical elements. There are substantial echo training evidences reflected in music pedagogy. Turpin states that Orff's ensembles for string players use echo clapping, echo singing, echo playing, pattern repetition and walking the beat through difficult passages, incorporating the techniques of Orff (Turpin, 1986). He also explains the echo element in Suzuki's method, which listens to and plays exercises involving the teacher, who plays one or two measures with the strings repeating the phrases on their instruments (Turpin, 1986). From these examples, it can be concluded that the echo method can assist children in solving some specific and basic problems in order to improve children's musicianship, particularly affective and

musical understanding.

Games in a piano chamber program

Games have a positive influence on learning outcomes. For children, play is one of the most reliable and familiar aspects in their lives.

> Play is nature's schooling and its curriculum has been developed for thousands of years to fit children just right. These games are bursting with rich language, patterned math, colorful history, scientific observation, physical challenge, visual design, rhythmic dance, and exuberant music---a complete curriculum by any school's standards.
>
> (Goodkin, 2013, p.11).

Certainly, games combined with pedagogical elements in a logical process provide an effective opportunity for children to gain better outcomes. Goodkin gives an example of Orff pedagogy concerning a rhythmic training game. In this game, various textures of rhythm are integrated in a poem, which creates an interesting moment for children to easily engage in.

> In a poem like 'Pease Porridge Hot', one group pats the beat lightly on the knees, another pats the floor on the word 'pease' (downbeat/meter), another snaps whenever the text stop(rest), another only claps on 'porridge'(ostinato), another claps sharply on all rhythming words--- 'hot, cold, pot, old'(accent), another sounds the rhythm of the words in the first three phrases with a ch sound in the voice and still another walks the final phrase 'nine days old' .
>
> (Goodkin, 2013 p.20).

Dalcroze also involves the game element in the learning process. For example, the quick-reaction exercises of eurhythmics integrated with different musical elements requires children to immediately respond to music when they hear changing signals. From my perspective, the activities in Dalcroze and Orff show us how logical and effective ways could provide real experiences for children to gain musical concepts and extend their musicianship. Game also connects to

earlier thoughts mentioned about in musical embodiment as learning. Thus, it is an essential way to reinforce their affective and musical understanding.

Games are a valuable vehicle to motivate children in their aspiration to gain outcomes through peer cooperation and interaction in an active, social and competitive environment. Goodkin asserts that peer pressure impacts on children in that "when children play, they are learning under a pressure; they are trying hard to make sense of their world and building neural connections in the brain, they are creating a sense of self, they are tuning their physical bodies and social selves" (Goodkin, 2013). From the statement above, there is no doubt that in this environment there is a good opportunity for children to communicate with others by giving comments and receiving feedback. What is more, competition provides peer stimuli for children, which transfer simultaneously into self-motivation. Bartunek and Martin believe that students' motivation comes from how they judge themselves compared to others; when they start to look at their peers as potential rivals, the motivation assists them in maximizing the experiences and doing well (Bartunek and Martin, 2007). Therefore, games are a suitable strategy to create a suitable environment to inspire children to engage in the learning process.

To summarize, this chapter offers a way of planning a piano chamber program at the fundamental level. As for the framework of this program, it focuses on reinforcing existing knowledge from individual piano lessons, improving children's affective and musical understanding, and eventually achieving children's self-learning abilities through hearing peer feedback. Music pieces are adapted from existing piano music pieces, using ostinato, follow and echo strategies to focus on listening. Equally important, the method is embodied by games, it is a reliable and rational resource with a logical conception and progressive development.

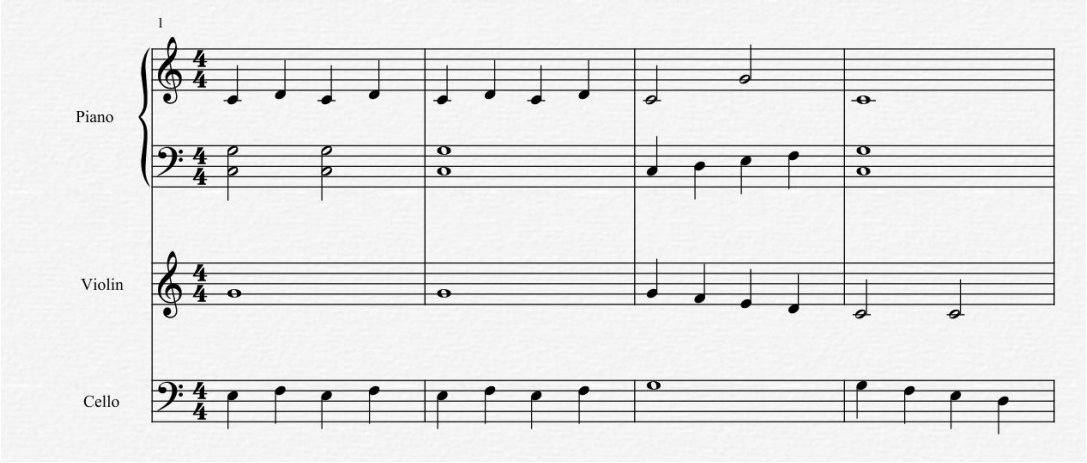
Chapter 5: Some reflections on the piano chamber program

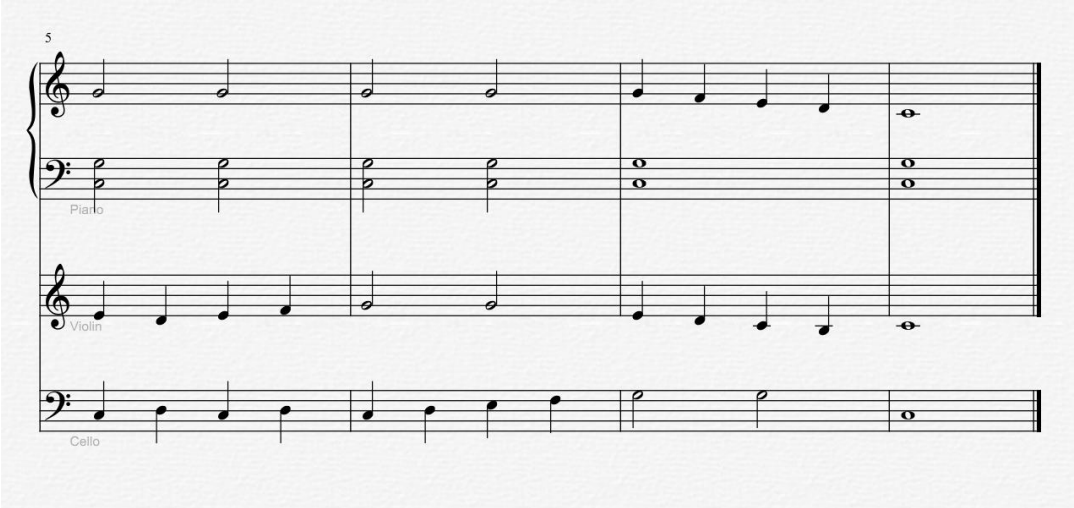
In this chapter, I will attempt to adapt some pieces of music based on those principles of the piano chamber program I designed in the previous chapter. In addition, I will provide some personal opinions in terms of what benefits this could bring to children for their future studies.

Some exemplifications of the piano chamber program

Here are four adapted pieces as examples. Each piece integrates echo, following, ostinato and game elements, which aim to promote children's musicianship based on effective listening of recurring patterns. In this program, music pieces could be trained in a flexible way, depending on children's requirements. At the fundamental level, the educator is a guide; he or she needs to make children realize what a rational way of practice is, based on listening, comparing, analyzing and thinking about the pieces of music they are playing. Eventually, through regular training, children can improve their self-learning abilities.

Finger Scale practice



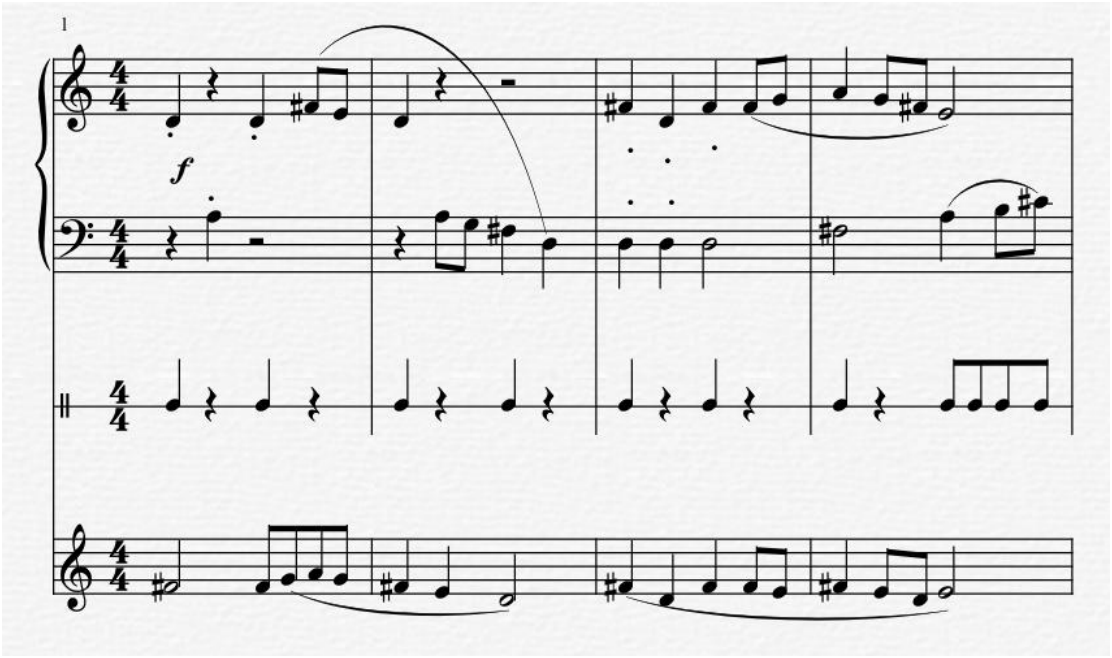


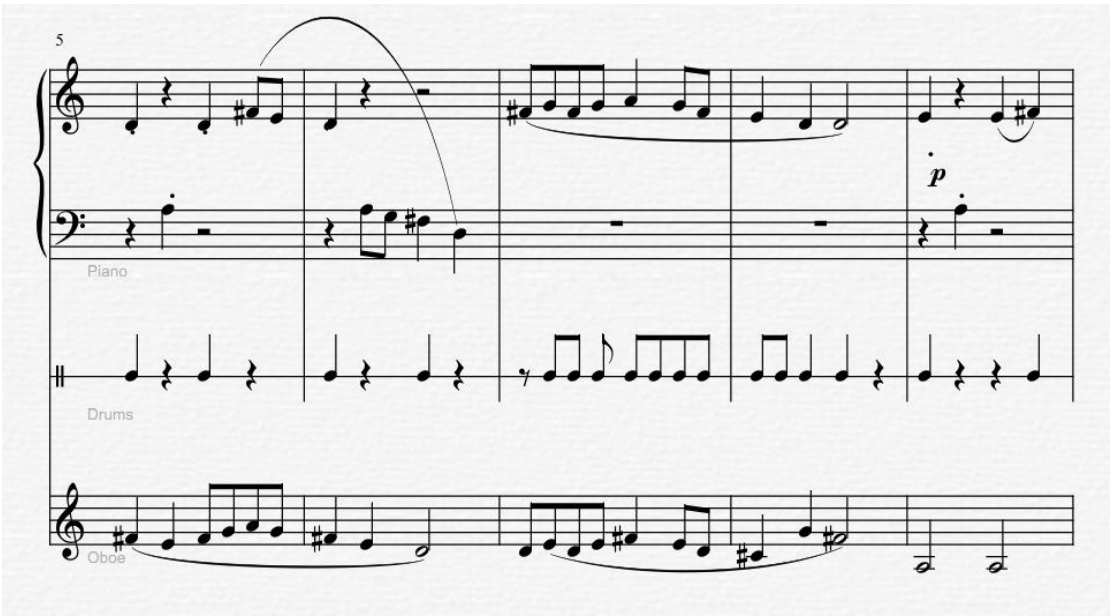
Finger Scale can be seen as a technical practice at the beginning of a lesson. This piece consists of echo, ostinato and follow elements, which involve different voices. This practice integrates with training in terms of techniques and musical expression. It could be practised by different instrumental combinations, such as piano and cello, piano and violin, violin and cello. What is more, this piece could add a body percussion part as well. For example, the scale of C D E F G could be tapped on different parts of the body--stepping feet, patting legs, clapping hands, snapping fingers and tapping shoulders to cooperate with other members' playing.

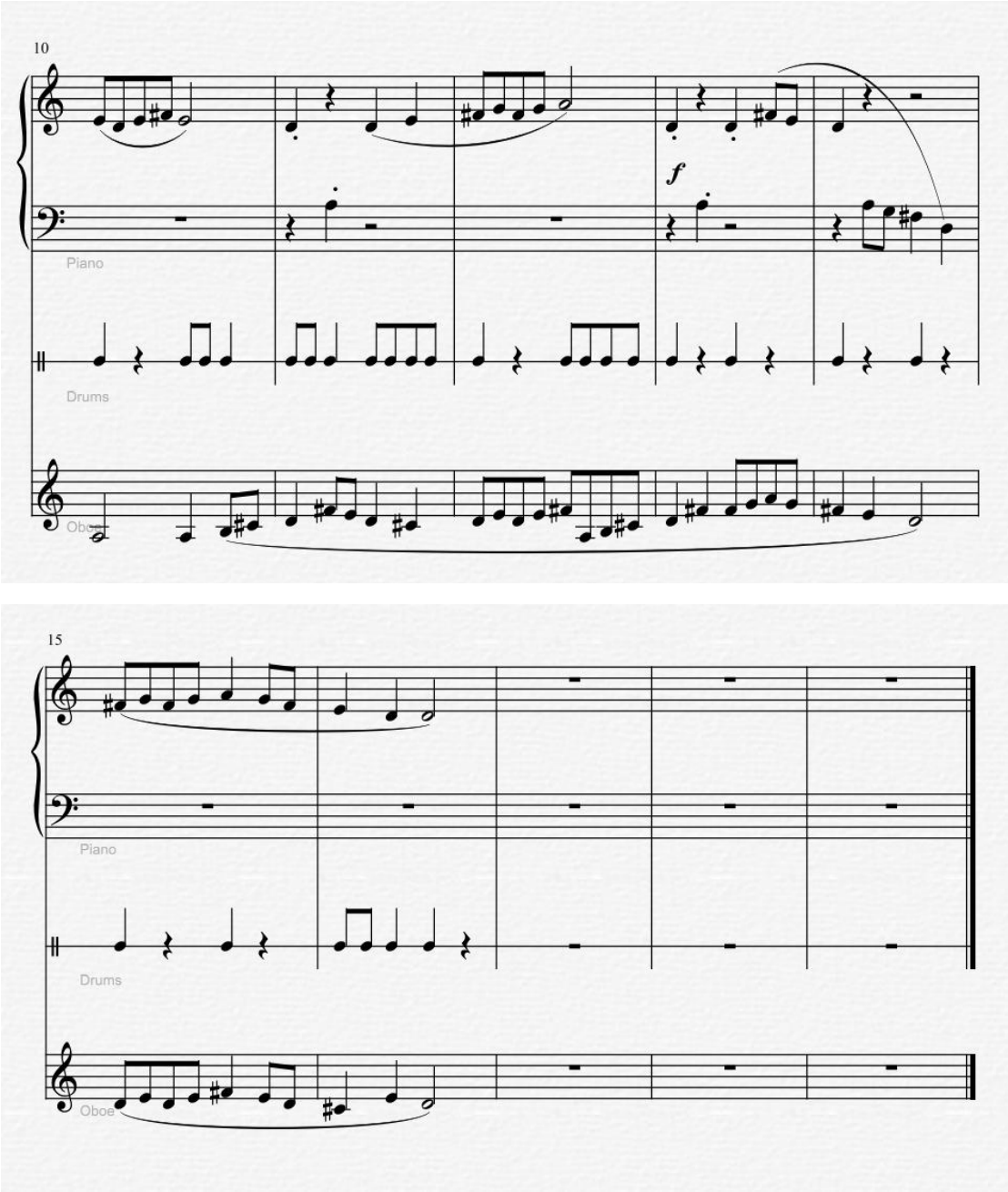
Another way of practicing could be playing a game. For example, children might play four lines of voices separately in or out of order; or players could select different bars to practise on a random basis. To exemplify, during the playing, they could set up 4 bars or 8 bars as a unit, and each unit can be played in various patterns with diverse dynamic changes, such as adding ostinato elements, playing in a quick-response way, or doing an assigned playing (one player who is playing gives the signal to assign the next player to take over the playing).

March of the English Guard

Proudly marching







This piece is adapted from the March of the English Guard in *Piano Adventures Level 1* by Nancy and Randall Faber. It is a good example of how to train children's feelings of tempo, rhythm, connection and affective expression of melody.

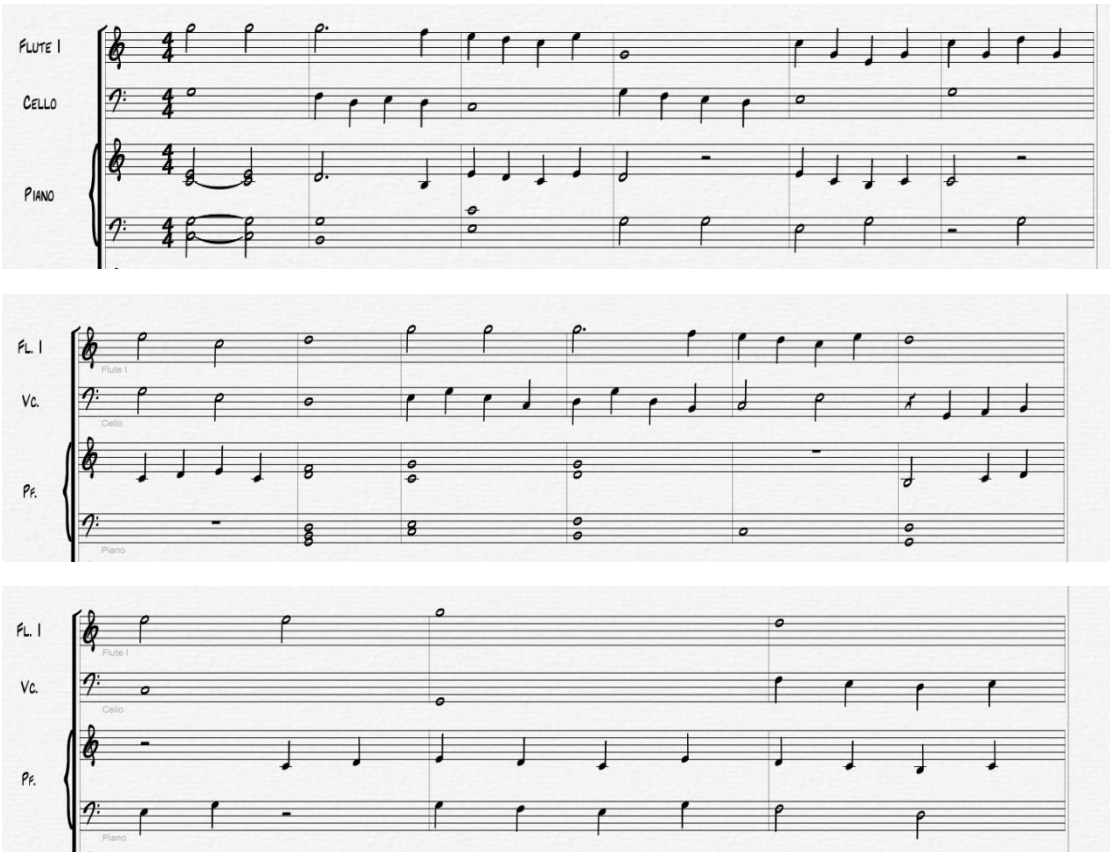
According to the title of this piece, it is a grand parade which features a steady rhythm. Thus, this is a good opportunity for children to sustain a steady tempo and accurate rhythm based on the drum part. In this piece, a percussion part has been created to help children shape the feeling of the beat. What is more, brass and woodwind

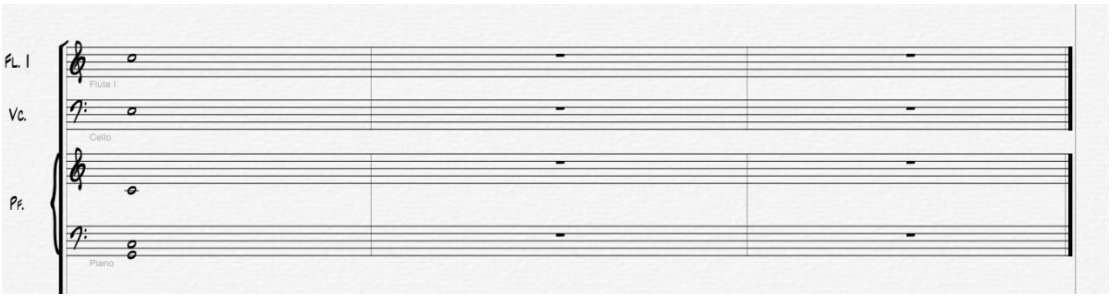
instruments provide the sense of a royal and majestic atmosphere.

When this is included in the program, the voices could be played by any instrument. What is more, some voices could be selected to rehearse instead of the whole piece as this could provide more opportunities for children to learn in depth. For example, regarding the feeling of connection (bar 1 and bar 2), the piano and woodwind or brass wind part could be selected; and concerning natural dynamic changing (bar 11 and bar 12), children could be guided to feel the dynamic changing by the woodwind's or brass wind's performance. Thus, various strategies utilized in this piece could improve specific aspects of children's musicianship through cooperation with some particular instruments.

Trumpet Song

Dignified march

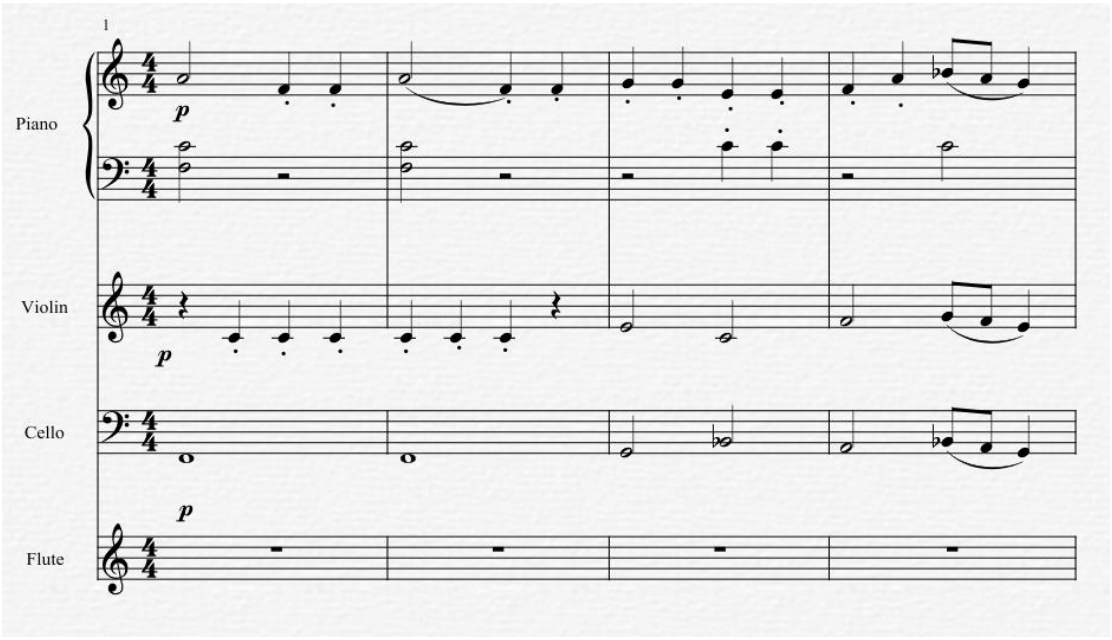


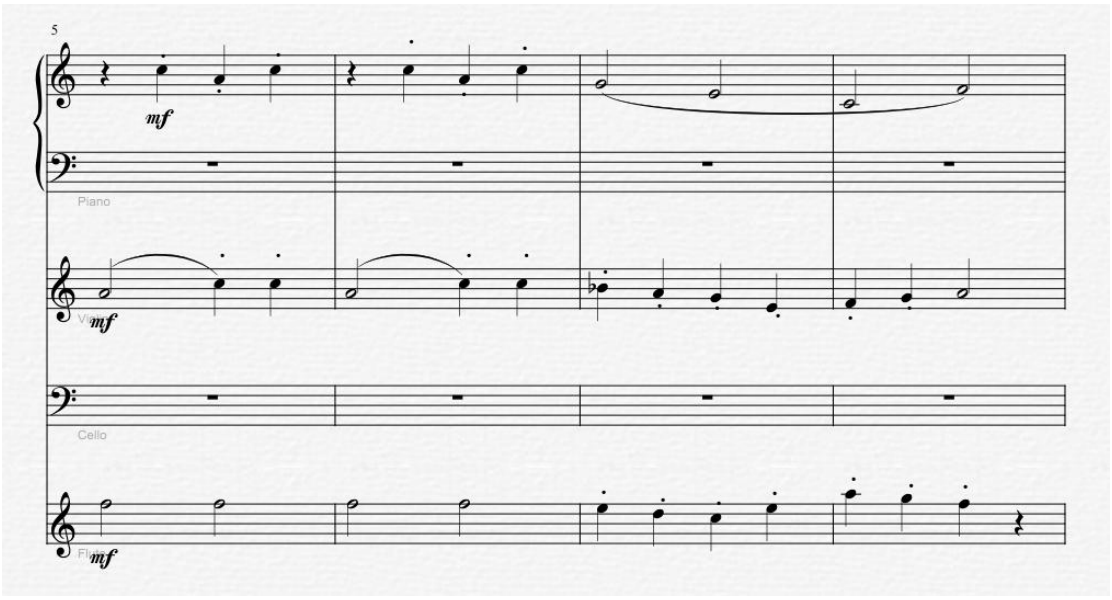


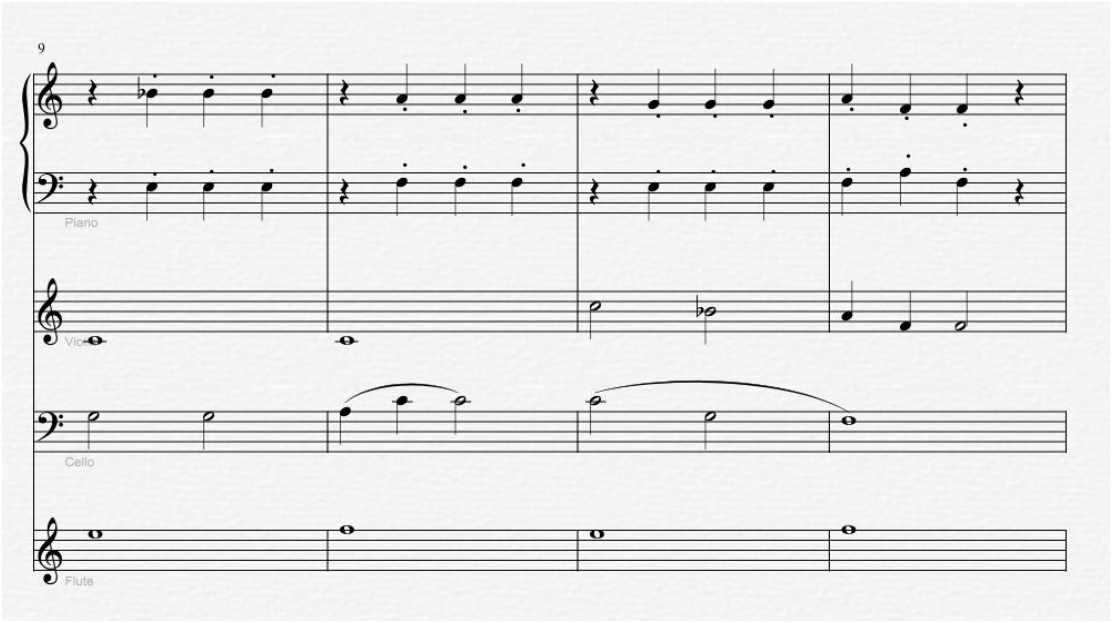
This piece is adapted from Trumpet Song in *Piano Adventures primer level* by Nancy and Randall Faber. This piece of music focuses on how children could be inspired in terms of the expressive connection of notes. In the first half of this piece (1-8 bars), two different instruments, such as woodwinds (flute) and strings (cello), could be used to demonstrate the feeling of connection of the notes and the dignified feeling. When children listen to both voices, they are able to gain some inspiration about the sense of the music. In the last part of this piece, the main voice shifts to the piano part. Children could imitate group members' performances (utilizing MMI and MMA) based on the experienced audition and vision. What is more, some echo elements in the piano part, such as bar 3, 5 and 6, could serve as the preparation for playing the last part.

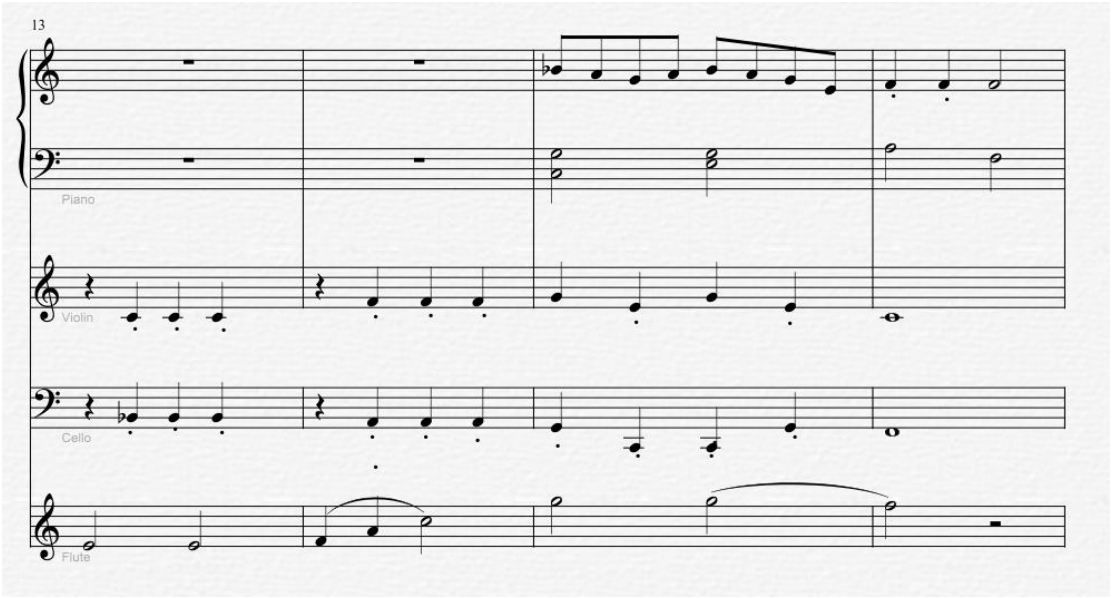
The Clock Shop

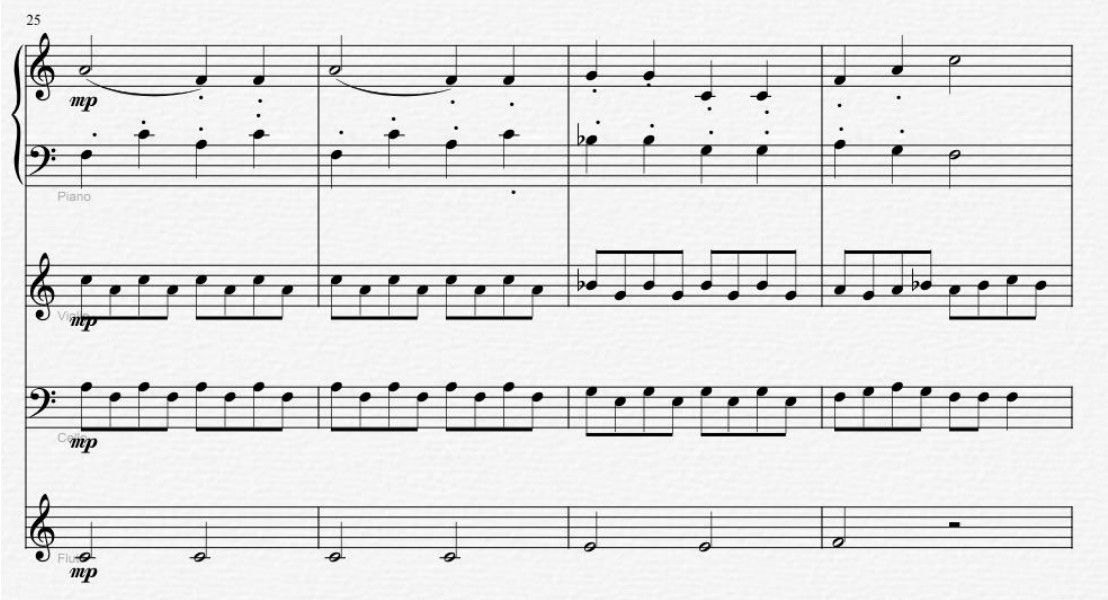
Moderately

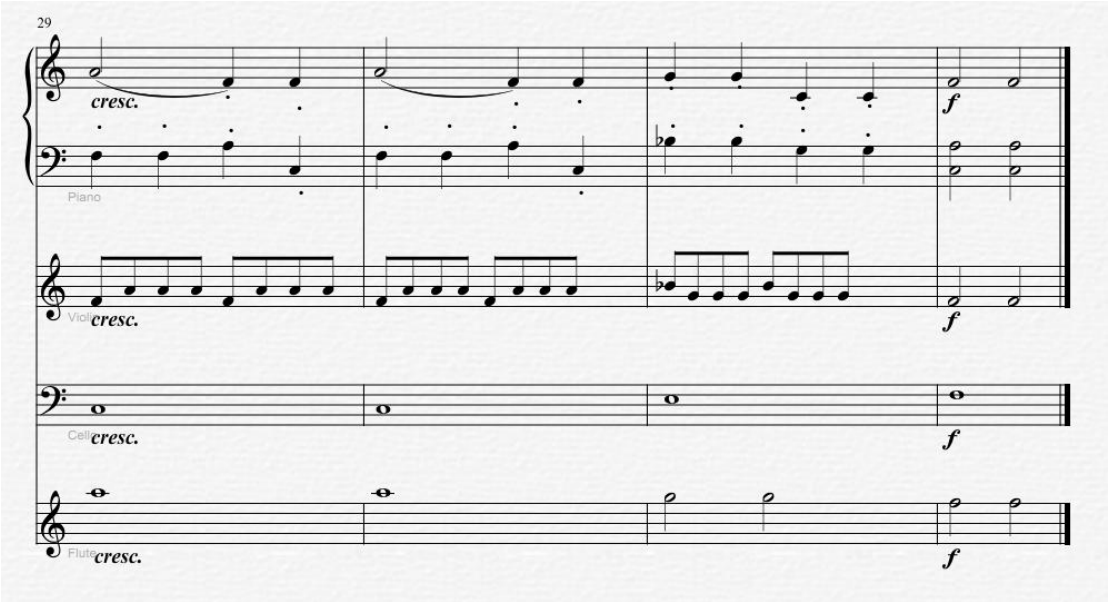



5
mf
Piano
mf
Cello
mf


9
Piano
Cello
Flute


13
Piano
Violin
Cello
Flute





This piece is adapted from The Clock Shop in *Piano Adventures level one* by Nancy and Randall Faber. This piece features various clocks and consists of legato and staccato. It requires children to play accurately in terms of the legato and staccato touches.

To this end, the theme has been designed as a recurring pattern throughout each voice. This theme is repeated continuously, thereby increasing children's feelings of legato and staccato, and strengthening their performing ability in both techniques based on observing and listening to other players' performing. For example, in the first two parts, the theme is repeated by each voice respectively. During the performance,

children can imitate wind and string performers based on playing legato and staccato. Different instruments will express diverse sensations in terms of playing legato and staccato, making this a good opportunity for children to compare how they play those articulations. In the last part, all the elements combine together. In this part, children need to pay more attention to listening carefully, and think intensively in order to adjust their playing as quickly as possible.

In sum, these pieces offer ways forward for thinking about how a piano piece can be adapted to ensemble pieces based on children's needs. Various strategies are utilized in this program, based on Piaget's theory and musical embodiment, to help children to improve their affective and musical understanding.

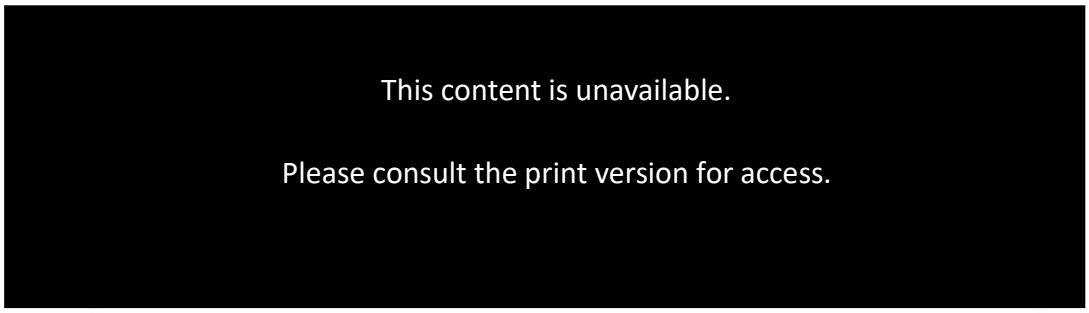
Further reflections on the piano chamber program and children's future studies

I have already talked about how group-based study plays an important role in the piano learning process at the fundamental level. From my perspective, the piano chamber program not only benefits children by extending their musical abilities at the fundamental level, but it also helps them to better prepare for their study in the future. In this part, I will give some brief explanations regarding how the piano chamber program can be linked to children's future studies.

Firstly, this chamber program is the preparation for playing music with a flexible tempo at a higher level. In the piano chamber program, it was noted that ostinato is a useful strategy to encourage children to maintain the sense of a steady tempo at the fundamental level. This stable tempo is a vital part of supporting a player to perform music accurately. What is more, having a stable sense of tempo is the foundation for children to access the intermediate level smoothly. When children reach the higher level of study, they will play a large number of music pieces with a flexible tempo. This can be a challenge for children because they have to have enough ability to accommodate this development. Therefore, children with more stability of tempo might be better able to master these pieces with a flexible tempo. Although some

piano contexts such as *Piano Adventures*, *The Thompson's Easiest Piano Course* and *Bastien Piano Basics* give much more training in the notion of tempo, it is not sufficient. As we mentioned in the previous chapter, individual lessons lack multiple-voiced musical environments, so essential for musical learning. If children could participate in the piano chamber program at the fundamental level as supplementary training, they would obtain more experience of feeling a stable tempo, through cooperation and through comparing their learning experiences.

A higher level of studies requires a higher ability to control tempo. For example, there are many music works with changeable tempo from the romantic period, such as *Scenes from Childhood* by Robert Schumann. This suite consists of 13 pieces. We can see that tempo changes are abundant in these pieces based on the different moods of the music. For example, in bar 19 of No.2, *Curious Story,* the ritardando might reflect the meaning of being uncertain in mind.



When the player plays this music, they might hold or suspend the feeling at the end of the music in order to create a sense of doubt, as well as combining a gradual decelerando with the tension of physical action to achieve that feeling. However, performing this changeable feeling requires progress in training. It needs to be accurately expressed and come from the foundations of a steady tempo. A steady tempo is a significant preparation for the flexible tempo.

Another example is in No.4 ---*Entreating Child*. It describes the scene of constantly pleading and a strong eagerness in children.

The continuous ritardando should be played naturally, and it demands students have a certain ability to control tempi. This also needs a progressive training based on a stable tempo. Other exemplifications can be found in *Children's Corner* by Debussy and *Six Dances in Bulgarian Rhythm* by Bartok. In my view, the changing of a tempo is based on the foundations of a steady tempo, and it is a progressive process which needs to be practised in diverse musical environments, and trained by various methods of comparison and cooperation for an extensive period of time. Therefore, the piano chamber program is a useful preparation.

Secondly, this program is the preparation for having accurate rhythm in the future. How accurate the performed rhythm is, is directly linked to the quality of musical expression. The study of rhythm plays an important role in the musical learning process for all instruments at the fundamental level, because different rhythms show diverse styles of music. For example, syncopation can represent a Jazz style, and this style is introduced in *Piano Adventures* at primary level.

This is vital preparation for the higher level of performance in terms of various syncopation.

Importantly, rhythm is an essential element when it comes to supporting children at the higher level of study in the future. *Easy Variations On Folk Themes* Op.51 No.1 by Kabalevsky is an example. This piece consists of five Russian Folk Songs. In these pieces, children need to accurately play between notes and rests. If players ignore accuracy when playing, the meaning of these songs could be impacted, as folk songs are deeply concerned with the breath in phrases and lyric expression. An example can be seen in No.3--- "*Gray Day"* Variations on a Slovakian Folk Song. In this piece, the elements of tenuto, rests and notes should receive close attention, for these elements are essential parts of folk song .

Another example is from *Six Dances* in Bulgarian Rhythm by Bartok. These piece of Bulgarian rhythm have irregular rhythmic patterns: No. 148 is 9/8; No. 149 is 7/8; No.150 is 5/8; No.151 is 8/8; No.152 is 9/8 and No.153 is 8/8. Magrath explains that all these irregular and changeable patterns, alternating chords, whole-tone scales and so forth are creative and appealing works for listeners (Magrath, 1995). If students cannot meet these requirements, such as highly syncopated features with some slightly changeable chord notes, frequent shifts between staccato and legato, stable playing on ostinato and so forth, they will not appealingly express the strong feeling of Bulgarian Rhythm. However, children might not get effective practice themselves. Therefore, they need to obtain the ability of self-directed learning in order to better meet the challenges at the higher level of studies. At this point, children should be encouraged to engage in some activities to assist them in improving this ability, such as music pedagogy. This is the reason why I designed a piano chamber program based on various musical pedagogy in a group-based setting with cooperation and interaction. This is a specific opportunity for children to be an independent learner based on such an environment.

Thirdly, this program is the preparation for appropriate musical expression in future

studies. Affective and musical understanding are important factors in the instrumental learning process. They are also a central point of focus in this paper. This paper attempts to utilize various strategies and create diversified environments to arouse children's awareness of musical expression, and promote their musical understanding in depth at the fundamental level. For example, the following and echo measures are correlated to the connection between phrases, while cooperation and interaction with other instrumental players provide a good opportunity for children to experience diverse feelings as well as to improve their musical thinking. These are essential elements of performance when children access the higher level of studying. An example of a music piece at the higher level is *Children's Corner* by Debussy. In *The Jimbo's Lullaby*, Debussy utilizes a low range of musical notes to represent the soul of the elephant (Magrath, 1995). If children have had the experience of cooperating with some lower-register instrumental players, such as the cello or tuba, the figure of the elephant and its clumsy physical feeling could be recalled during performance. One could imagine, in a chamber group context, the teacher asking children to mime or mimic the effect of the "elephant" sounds made by the cello or tuba. The children might walk slowly, close to the ground, and with gestures suggestive of a large animal. Unconsciously, what the children are learning here is how to map properties of sounds onto bodily properties. Children don't need to necessarily know why they are making these gestures (presumably because "low" and slow sounds are suggestive of big objects or big movements that suggest a heaviness and thus closeness to the ground). Rather, their embodied participations are a suitable form of self knowledge. This will assist children in musical understanding and better playing in the future.

Multiple voices are an essential and vital part in various piano works. For example, *Scenes from Childhood* by Schumann involves three layers of voicing, particularly the most famous piece--*Dreaming.* It demands children have skilled ears when they play it.

The expression of voice lines, particularly the inner line, needs to be interpreted carefully. At this point, if children have had some experience of engaging in a rich-voiced musical environment at the beginning of learning, they might have gained

more opportunities to promote their aural ability, and promote their ability of sound identification. It will therefore be helpful for them to play such pieces. As far as the piano chamber program is concerned, the strategies of ostinato, following and echo are utilized to foster children's aural ability based on cooperation with diverse voices.

To summarize, as for the higher level of studies, effective musical expression is based on a certain level of affective and musical understanding of music works and strong technical aspects. Therefore, as mentioned previously, all aspects of training should be launched in a comprehensive way at the early stage. These learning experiences could foster children in shaping their musical approaches to thinking and analyzing. They are an essential part of supporting children to extend their musical understanding and the related technical aspects. This is a necessary condition for children to meet challenges in the future as well as achieve life-long learning.

Conclusion

As educators, we always think about the purpose of learning instruments and what real benefits children should and can gain through instrumental learning. We find that while there are plenty of helpful references in terms of piano pedagogy in individual lessons, there is a lack of literature on the young pianist's life in chamber situations. Many published works are concerned with how to improve performers' musicianship. However, exactly how this musicianship can be internalized by children at the fundamental level, or how these contexts can benefit young children, has not been made evident. If this valuable research cannot be utilized at the fundamental level, piano pedagogy at the fundamental level might not improve further. It is thus a vital issue for educators, and the reason for this study.

This paper has designed a group-based piano chamber program, with multiple interactions with peers at the fundamental level, to help children improve their affective and musical understanding. This chamber programme is based on what we know of children's cognitive development, and it features music pedagogy, musical embodiment, and ensemble playing. It creates a rich musical environment for children to develop their musicianship.

From my perspective, learning at the fundamental level is of crucial importance, particularly the learner's way of thinking and self-directing. It directly impacts children's future development. Thinking could be seen as an imaginary director who directs your physical actions on which your performance depends. How sharp the mind is influences the quality of the performance. Thus, independent thinking is an essential skill that should be focused on at the fundamental level. Ignoring this will lead children to having limited abilities, and eventually hinder their development in musical learning. If we want to improve this most pivotal aspect, we have to promote children's abilities of affective and musical understanding. In my view, it is essential to close this gap, as affective and musical understanding, based on a large amount of

musical knowledge, provide a good opportunity to foster children's ability to analyse and think. By assisting children to feel and think in this way, we support children in their quest to become independent learners in the future.

This program still needs improvement. The specifics of exactly how the proposed programme would be carried out are missing; indeed, there is no room for a full experiment-based study in this exegesis. What I have offered here, however, are the first foundational constructs for a programme I believe could richly enhance young pianist's musicianship and creative and analytical thinking skills.

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