

# A Preliminary Study on Music Education Using Gamification

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## ABSTRACT

Music education skills are generally considered complex and difficult to learn. Several digital application efforts have been made to teach these skills and improve or encourage students to practice them. However, these efforts do not benefit the features of modern technology. The preliminary study was conducted with 32 students from one secondary school at Kota Kinabalu, Sabah, using an online Google form questionnaire. Results found that 57.9% of students have been used a game or learning application in music education, and 42.1% are interested in learning music education based on a mobile application. This show the need to develop a teaching and learning tool aids with proper guideline. Since gamification can be a valuable teaching method by helping students develop critical thinking skills, this outcome of the preliminary study may have an overview of student interest in using gamification. It is hoped that using gamification for music education can increase student motivation and participation during class.

**Key Words:** skill, digital, application, teaching, interest

## 1. INTRODUCTION

According to the Music Education Blueprint 2013-2025, Music Education subjects are designed to enhance students' development from various aspects, including physical, emotional, spiritual, intellectual and social, in line with the aspirations of the Malaysian National Education Philosophy (Ministry of Education Malaysia, 2013). Through this effort, it can further provide students who are knowledgeable and basic skills and healthy and active mentally and physically. Music Education subjects cover aspects of singing, movement, percussion and stringed instrument playing and theory. In music theory, student needs to know musical notation and should have an ability to read musical notation. Therefore, reading musical notation is read musical notation that has never been seen before and only needs to be read from a page of written music (Penttinen & Huovinen, 2011). Wolf et al. (2020) defined notation reading as part of music played for the first time without practice. It was developed by Kopiez and Lee (2008), which is characterized by processing very complex notation readings for performers (e.g., musical scores), and there is no opportunity for correction in real-time. This allows students to read musical notation easily and quickly.

Specifically for students, the ability to read musical notation from a good perspective allows them to devote more time to musical interpretation instead of learning to read notation. For music teachers, reading musical notation for the first time is important to show students. Like most other skills, practice is key to improving musical notation reading skills. Kopiez and Lee (2008) proposed a positive relationship between the two, i.e. a person spends time practising reading musical notation and improving the level of reading musical notation. They also found that although musicians had general musical expertise, their reading ability and vision improved, which only happened for very modest works in terms of playing skills.

For these reasons, the practice of reading with practice is very important to improve ability. Quality feedback is also a great learning tool for the student looking to improve their music and reading skills. Dawson et al. (2018) studied the effect of feedback on reading learning and found that students who got feedback increased faster than those who did not. Therefore, the reform of teaching techniques needs to be improved to attract students' interest in reading musical notation, among others, through gamification methods.

When difficulties in reading notation can be overcome, students will find it easier to develop the skills of playing music independently. Yet otherwise, students will not benefit as they will feel saturated, dizzy and may not want to learn to read musical notation. Gudmundsdottir (2010) suggested that failure to acquire music reading fluency holds back countless music students and maybe a major cause for drop out of music study. This statement shows that failure to read musical notation is the main reason most students are not interested in learning to read musical notation. So through this, researchers argued that improving the reading of musical notation requires a variety of training by utilizing learning media.

Learning media can be used to convey the message or content of the lesson and stimulate the thoughts, feelings, attention, and abilities of students to encourage the learning-teaching process (Siadari, 2018). Sanjaya (2012) classified learning media into three categories, namely audio media (has only the element of sound), visual media (only visible) and audiovisual media (a combination of audio media and visual media). Today, the young generation is easier to accept changes in various fields, especially from innovation in education. Thus, the implementation of gamification in education, especially in student learning at all academic levels, is highly encouraged because of its ability to influence behaviour in PdPc and is very interesting to elevate educational strategies (Rosly & Khalid, 2017).

Gamification in education is also a method and way to increase the motivation and involvement of students in PdPc (Ahmad & Fariza, 2017). This is because the gamification element in the game plays a role to attract the interest of students, especially the badge and leaderboards. A study on the element of gamification that positively influences learning in Malaysia was conducted by Khaleel et al. (2016). In the end, the gamification planned and used in this research is expected to overcome the previously mentioned problems to improve students' ability to read musical notation effectively. Thus, this study aims to explore the interest of mobile application and gamification with music education among students in a secondary school.

## 2. RELATED WORKS

The development of innovation and innovative elements in human capital production is a key aspect emphasized in the 9th Malaysia Plan. Gamification is an option that interests students to improve their reading of musical notation (Espinosa, 2020). Gamification is a virtual world game that combines learning and plays in students (Raed, 2017). The fun in playing causes students not to feel they are learning. This situation can generate students' skills and motivation, which can engage students and make learning more meaningful and effective (Perrotta, 2014).

The focus will also be given entirely to what they are learning, which in turn helps improve the students' learning strategies and abilities. Most digital games require concentration and the use of creative thinking while playing. Players need to give full focus and attention, and this also involves them in complex thinking and problem-solving. This complex thinking is an important mechanism in 21st-century learning where students need complex thinking in decision making (Burton, 2014). In line with high-level thinking skills applied among students today. Technology appropriate is a technology that is interactive and able to engage students.

The use of gamification as technology in teaching is not only suitable for application in music education subjects. Still, it can also be applied in other subjects in various fields and various teaching levels (Hwang et al., 2014). The gamification method is very much in line with the way of learning of the present generation.

## 3. METHODOLOGY

A quantitative method using Google form (Malay version) was used in this preliminary study to find out interest and issues among students in music education. The instrument was adapted from Leung and Sun (2013). The study was done in one of the secondary school at Kota Kinabalu, Sabah. There are 32 students who participated in the study; 68.8% female (22) and 31.3% male (10) from Form Three level with three different classes. They have briefed in WhatsApp to fill up the questionnaire and completed it within two weeks.

#### 4. RESULT & DISCUSSION

There are 14 items that were asked in the study. Table 1 and 2 show results from data collection.

Table 1. General Music Education

No	Question	Always	Seldom	Never
1	Did your music teacher give you punishment during music lessons?	0%	56.3%	43.8%
2	Do you often participate in activities such as games, performances, dances, and competitions in music?	9.4%	68.8%	21.9%
3	Does your music teacher often assess you during class?	53.1%	34.4%	12.5%
4	Does your music teacher allow you to comment on your peers' musical instrument performances?	62.5%	37.5%	0%
		<b>Yes</b>	<b>No</b>	<b>N/A</b>
5	Do you want to participate in activities such as games, performances, dances, and music competitions?	71.9%	12.5%	15.6%
6	Do you like music education classes?	87.5%	3.1%	9.4%

Based on Table 1, 56.3% of student answered 'seldom', 43.8% answered 'never' for Item 3 (the music teacher to give them punishment during music lessons). As for participation in activities such as games, performances, dances, and competitions in music (Item 2), 68.8% answered 'seldom', followed by 21.9% for 'never' and 9.4% 'always'. While a total of 53.1% answered 'always' for the question asked them about frequent assessment during class, 34.4% 'seldom' and 12.5% 'never' (Item 3). For questions asking about the music teacher allowed to comment on peers, shows a percentage of 62.7% for 'always', 37.5% for 'seldom' and 0% for 'never' (Item 4). More than half of the students (71.9%) showed interest in participating in games, performances, dances, and music competitions (Item 5).

Table 2. Music Tool/ Instrument

No	Question	Yes	No
1	Have you ever performed a musical instrument?	75%	25%
2	Have you used a game or learning app in music education?	57.9%	42.1%

Based on Table 2, many students have performed a musical instrument (75%), while only 25% answered 'no' (Item 1). Students were also asked if they had ever used a game or learning application in education; a percentage shows that 57.9% answered 'yes' and 42.1% answered 'no' (Item 2). As for the question, which is for learning or game purpose, 47.7% of students answered it for learning, while 36.8% were not applicable and only 15.8% were for games. To specify the application, 10.5% of student stated 'Angklung' and piano tiles respectively, followed by quizzes and music, which is 5.3%.

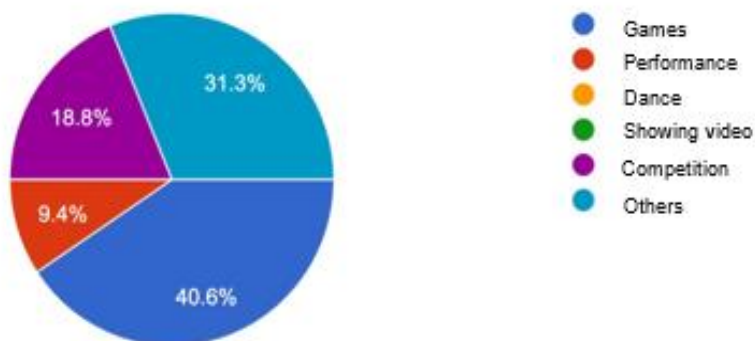


Figure 1. Music Activities

Figure 1 shows the activities do by their music teacher during music class. A total of 40.6% responded for 'games', 18.8% for 'competitions', and 9.4% for 'performances'. For others, they stated the answer was playing musical instruments and recognize musical notes, listening to the song, singing, doing a performance, competition, and the teacher give a task.

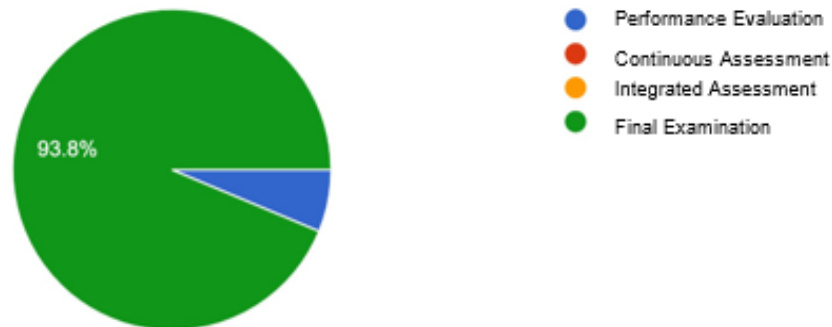


Figure 2. Music Evaluation

Figure 2 shows that majority of students (93.8%) were assessed based on the final examination. Only a small percentage of these students, however, were assessed based on performance evaluation. None of the students was assessed based on continuous assessment and integrated assessment.

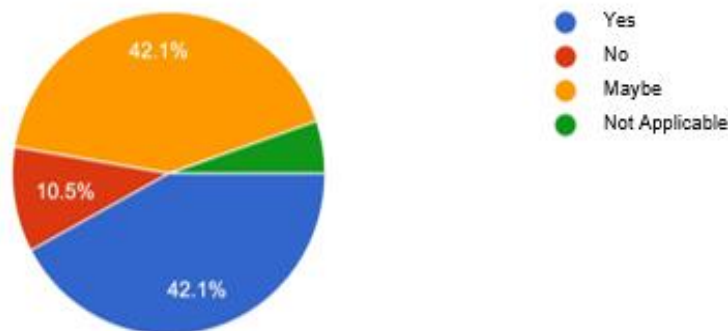


Figure 3. Learning Music Education

Figure 3 shows that only a small percentage of students (10.5%) have no interest in learning music based on a mobile application. Nearly half of the students (42.1%) showed interest in learning music education based on a mobile application. Also, half of the students (42.1%) may be interested.

**5. CONCLUSION**

Interests and inclinations play an important role in the teaching and learning process. Every individual who is interested in the things learned will show high achievement in the things pursued. In the selection process, interest plays a vital role. The selection of activities is influenced or driven by one's interests. Overall interest can be considered a motivational variable. The memorization approach that involves various tips and simple ways has caused the teaching and learning activities of music education theory in the classroom to be bland and meaningless. Teachers should create a new atmosphere of learning in the classroom. Based on the findings, students have shown high interest in music education and mobile application using gamification. Thus, there is a need to develop teaching and learning tools with appropriate guidelines. Since gamification can be a valuable teaching method by helping students develop critical thinking skills, the result of preliminary research may outline students' interest in using gamification. Besides, the use of gamification in music education can improve students' enthusiasm and participation in the classroom. Other than that, gamification in music education is a relatively new instructional design space with examples of limited lesson plans available for use. Educators may be limited by the creative use of their game lesson designs. Further works of gamification in music could lead to subsequent curriculum development. The theory follow-up course will provide additional information on the area of game lesson design but focus on applying this strategy outside of the music classroom.

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