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Development of Learning Media for the Digital Native Generation

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ABSTRACT

Digital Native is someone who was born in the 21st century, where the role of technology cannot be separated from his daily life, as well as in learning the art of music composition, the presence of the Score Creator application greatly assists the teacher's role both in conveying music material, analyzing music to creating a work of musical composition. Apart from that professional teachers are also required to develop an ideal learning model that is appropriate to the era, so that the classic problems that are often found by teachers in learning will be greatly assisted. This study aims to determine the benefits of Score Creator in learning music composition. This type of research is (research and development). The development steps chosen by the researcher refer to the ten steps of implementing the research and development strategy according to Borg and Gall. The results of the study show that by using the score creator music application learning music composition is more effective. The learning model developed can maximize students' abilities in making a piece of music. Students will find it easy to write notations, compose compositions and provide interpretations of the works they create, and be able to perform well-performed music without the need for expertise in playing musical instruments.

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1. Introduction

The modernization of educational practices has been sparked by global advancements in technology. Similar to this, schools always work to make sure that staff members can use technology and gather information. According to Wahab & Sapriya (2011, p. 64), "technology innovations have brought new intelligence that creates digital-based interactions in order to form digitally literate citizens," this has also been discussed.

It is undeniable that technological advancement and sophistication have had a significant impact on all spheres of life, particularly in the field of education. Accordingly, in the educational environment, particularly technology-based learning is a challenge that must be addressed by educational actors, especially teachers, which leads to how the teacher's strategy is in creating learning tools w In line with the flow of progress which says that this world is an all-digital world.

This assertion is supported by the remark that "Educators are not only facilitators but are also necessary to understand learning methods and be able to apply them in the learning process and develop learning by integrating technology in learning," according to Saputra (2020). Edi Syahputra is quoted as saying that education in the twenty-first century must be able to train future generations of Indonesians to embrace technology advancements in social life. The sporadic societal growth is what constitutes 21st century learning. (2018) Edisyahpurta. Similar to how music has evolved, so too has "smart" technology, or technology that has intelligence. Digital learning is currently popular in music-related activities. One can

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even make their own music using particular softwear, which is typical of digital music (Tri Wahyu Widodo. 2020).

Similar to this, the teacher's role is crucial in developing innovative approaches so that studying music arts can be taught easily for the digital native generation of SMA Cendana Pekanbaru, as evidenced by the statement (Saputra, 2020) Along with the development of human civilisation, technology keeps evolving. Technology is undeniably evolving quickly right now, and people are starting to rely on it more and more to make their lives easier. One such convenience is the ability to create music quickly and practically with gratifying results.

Due to rapid internal changes, conventional schooling is becoming less and less popular in today's technologically advanced world (Yates & Tilson, 2002). Technology in music education is helpful for broadening curriculum goals and enabling cross-disciplinary practice (Coutinho & Mota, 2011; Savage, 2005). However, keep in mind that adjustments to pedagogy must be made to offset changes in curriculum content (Green, 2001). Learning trends are currently beginning to shift as a result of sociocultural changes in every region. The manner that people connect, which is increasingly pointing toward the digital world, has an impact on these shifting situations (deNoyelles & Seo, 2011).

Glance In the past, when classical or traditional learning was used, the focus was on the teacher's role as a source of knowledge (teacher centered), but in the modern era, the teacher's role is changing to being student-centered with the teacher's role as a guide for students to access information and direct the learning process (Harsanto, 2007: 45). Teachers and musicians must think creatively, innovatively, cooperatively, and productively in order to teach music in the digital age. As technology advances, we must also become proficient in IT, communication, and computerization (Wena, 2011: 22).

Up till today, music technology has continued to advance and gain new features and functionalities. These features and capabilities include the ability to compose notations (publishing notations), establish midi interfaces, record, modify sound (tone generator), and do instructional tasks. Digital audio workstation (DAW) technology can be used to directly write notation and record music in a number of applications. The method used in the usage of music technology can be beneficial in the creation of musical works.

The writing of music notation (software notation) can be done using a variety of music-related programs, such as fruty loop, Sibelius, encore, overture, musescore, nightingale, etc. Because it is simple to use anywhere and can be installed on various sorts of student smartphones, researchers utilize the Score Creator app to teach music creation. However, a number of other programs are restricted by convoluted characteristics and can only be utilized or installed on laptops or desktops. Because it can be used to write musical notation, produce musical works, and hear them, the score creator is extremely effective and may be used to enhance the learning process for music. The application's features are fairly full and simple to install, making it quite practical for students to own and utilize.

Learning about music composition is relevant to the fundamental skills found in the K13 syllabus for class X, specifically at KD 4. Therefore, students are required to take music composition. The implementation of technology-based learning through the use of music applications does not impose time or space constraints. The hallmarks of 21st-century learning include IT-based instruction that can be completed from a variety of locations at any time (Rusman, et al 2012: 54). With the application, students may study whenever and wherever they wish. So that traditional education, which primarily focuses on educators/teachers and can only be done theoretically in the classroom, is no longer used in the learning process. You can learn by engaging in direct practice (Saputra, 2020).

Earlier, a number of pertinent studies had been carried out. He adds that the usage of apps like Sibelius can simplify and expedite the work on inventions of two learning sounds, which is in line with Nainggolan's conclusion that the Sibelius application makes it simple for students to write music and create musical compositions (Nainggolan, 2018). It is the same as what Antonius discovered in his research, which claimed that using an application to create music compositions can be done more quickly than doing so by directly asking artists (Antonius, 2013). Herdinasari used classroom action research to conduct research on the use of applications in teaching musical notation. He mentioned that some of his class VII G pupils at SMP Negeri 4 Ungaran had trouble reading musical notation, so he utilized an app to help them (Herdinasari, 2013). Setyawan conducted additional research and found that using Sibelius might help students in class XII A IPS learn how to read block notation (Setyawan, 2017). When learning how to notate a song using the steps of the TTI Transposition idea (Transfer, Translation, Imitation), using the Score Creator is incredibly useful and quick (A heryanto & dedi Firmansyah 2019)

According to the researcher's examination of the findings from numerous earlier experiments, the program is merely a tool for reading, writing, and listening to block notation. A computer or laptop is still utilized in earlier studies, and music programs are only used to hasten the development of musical works—not to actually display them. The findings of earlier studies were still restricted to the functional element of developing technology-based music apps. Prior studies did not focus on the meaning and elements of taste

in music. The ability in solfegio is one of the aspects of taste in issue. Previous studies were still restricted to musical compositions that were both produced and played by a music application. In contrast to the application used in this research, where musical pieces must be performed live by musicians while also incorporating tastes and interpretations created by music applications. The goal of this research was to advance science, technology, and the arts in order to raise student standards. The purpose of the study is to provide fresh understandings regarding the program Score Creator's utilization in pertinent learning scenarios used in music composing courses. This study employs a qualitative research methodology. Research techniques that result in descriptive data from people's speech or actions that can be observed (Moleong, 2012).

2. Methods

The method is a research and development strategy (R&D). The R&D research method is a research technique used to create specific goods and evaluate their efficacy (Sugiyono, 2011). Research and development (R&D) is a process or set of actions that can be used to create new products or enhance existing ones (Nana, 2009).

In the field of education, research and development (R&D) is a method for creating and evaluating a product. As a result, academics will conduct development study to create teaching strategies for learning music composition using the Score Creator app. According to Borg and Gall in Nana Syaodih Sukmadinata (2009), the 10 steps for putting the research and development plan into practice are as follows: The 10 stages are: (1) gathering information; (2) planning (defining skills, formulating goals, deciding on the order of learning); (3) developing initial product forms (preparing learning materials and evaluation equipment); (4) conducting initial field trials; (5) revising the results of trials; (6) conducting primary field trials; (7) perfecting the results of field trials; (8) conducting operational field trials; (9) improving the final product; (10) disseminating the results. There were just three research phases in this work.

3. Result and Discussions

A. Research and information collecting

In order to gather data for this study, five face-to-face sessions of music composition class were used to observe the learning process. Unstructured interviews with a number of students who participated in music composition sessions were also used to collect data. A literature review was used to gather the final set of data. In order to identify fresh findings that have not been revealed by prior research on the usage of the Score Creator program in enhancing student proficiency in music composition, a literature study is carried out by gathering and assessing pertinent studies that have been completed.

B. Planning

Making a research plan was the first step of the research, which was conducted utilizing a research and development methodology. When creating a research plan, factors such as the researchers' ability to conduct research in music composition classes, the accessibility of student-owned hands-trees, the capability of using the Score Creator application, the research steps, the preparation of the formulation of research objectives—in this case, the ability to compose music in a way that balances that ability with musical sense and interpretation—as well as the evaluation of research findings—are all taken into consideration.

C. Develop Preliminary From Of Product

With the usage of the Score Creator application for learning music composition, technology is integrated into the development of learning techniques along with instrumentation for product evaluation. Additionally, this teaching strategy can help students develop their musical sense and their direct ability to interpret a musical composition in the performing arts in addition to their ability to write notation. For students to be able to communicate musical works to listeners through the musical messages they generate, this interpretation capacity is crucial.

D. Digital Native

The term "digital native generation" refers to a group of people who have grown up around technology. Other names for this generation include the "Net generation," the "iGeneration," the "Z generation," the "virtual generation," the "C generation" (issue or community), the "silent generation," the "Internet generation," and even the "Google generation." The Greatest Generation (World War II, 1901–1924), The Silent Generation (1925–1942), The Baby Boomers (1943–60), Generation X (1961–1981), Millennials (1982–2002), and Digital Natives (Generation Z or Internet Generation), from 1994 to the end of the current year, are some of the explanations about human generations put forth by various experts, such as Jim Marteney (2010; 7). Baby Boomer Generation (born 1946–1964), Generation X (born 1965–1980), Generation Y or millennial generation (born 1981–94), Generation Z or also known as iGeneration, Net Generation, Internet Generation (born 1995–2010), and Alpha Generation (born 2011–2025), are the five

generations that make up the human race. Graeme Codrington & Sue Grant– Marshall (2004) claim that these generations are as follows: The term "native gadget born in the digital age" is occasionally used to describe the generation of digital natives (Avarez, 2009; Brynko, 2009; Prensky, 2001). Generation Z, according to Tapscott (2008), is "a cohort born from 1998 to 2009."

E. Music Composition

The word "composition" is derived from the German verb "kompenieren," which was first used by Johann Wolfgang Goethe (1749–1832) to describe a method of creating music in which the lead voice, or "lead voice," is followed by other voices that are arranged, coordinated, laid out, and strung together to follow the main sound. Kusumawati (2004: ii) describes composition as a musical creative process that calls for a number of prerequisites, including talent, experience, and aesthetic preferences. In the meantime, musical composition, according to Syafiq (2003: 165), encompasses the fundamentals of creating musical compositions or musical works in line with the rules, types, and forms. The term "composition" refers to both a process and a product, specifically the action of creating music (Kratus, 2012). According to Hogenes, activities in understanding interpretation and creation theory can be used as a foundational skill in applying music education material and can be used to generate music composition material that is employed in classroom learning (Hogenes, et al, 2014). Additionally, Bruner noted that music composition is a musical science that integrates performance and interpretation, allowing it to be seen as the process of creating meaning through musical compositions (Bruner, 1986). To be able to produce music works as effectively as possible, students must assimilate all of the elements found in the science of music composition. The ability to compose and perform music is a component of both emotional intelligence and musical experience (Ariani and Sukmayanti, 2013: 151). There is a substantial correlation between musical intelligence on the one hand and emotional intelligence on the other (Atqa, et al, 2018: 1-14). Music can be used as a medium to study the capacity to feel and function of the brain because, in general, it is always correlated with IQ, which is connected to cognitive abilities, and EQ, which is related to one's emotions (The Royal Conservatory of Music, 2014: 1). According to Schellenberg's research, children who had gotten music instruction as young as six showed greater emotional and cognitive competence than those who had not (Schellenberg, 2004: 511-514). Additionally, those who learn music—especially the piano—have better logical reasoning skills than those who cannot play any musical instruments (Demorest and Morrison, 2000: 35).

F. Score Creator in Learning Music Composition

Beginning with the first steps of mastering the art of music, the author's Score Creator application is completely utilized. Creating installation tutorials is the first step, then creating weekly tasks for advanced students to learn how to write musical compositions from simple to sophisticated. A composer needs to be skilled at creating melodies using motif processing methods (Schoenberg, 1972). Additionally, the composer will be able to create new melodies from the primary melodies by learning the ideas of melody and harmony (Dieter Mack, 1995). According to the experts' opinions, students should be able to master the ideas of melody and harmony by the end of the first meeting and during the next four meetings. Students must be able to create motifs and phrases in a melody and be able to rearrange them into new melodies as part of learning that takes place over the course of four meetings. Before moving on to the next section of the lesson, which is more complex, pupils must master this primary competency. The use of a Score creator to master the fundamentals of music composition can yield the best learning outcomes since it is possible to classify the combination of face-to-face learning and the use of technology as a blended learning model that can be used both inside and outside of the classroom (Wicaksono & Rachmadyanti, 2016). Increased learning independence, critical thinking, and student learning achievement toward lectures have all been demonstrated to be benefits of blended learning learning methodologies (Sari, 2013). When compared to traditional learning, learning that incorporates technology as a learning medium has been shown to boost student understanding of the topic and motivation to learn (Bibi & Jati, 2015). To be able to make musical compositions, music is founded on the idea of music theory, taste elements from Solfeggio, and logic from the science of harmony. This is evident in the lyrics they compose, the music they play, and the interpretations they give to their works. When compared to the music composition learning technique, which makes no use of any music software, the learning outcomes reveal extremely noticeable variations. It is also believed to be less successful to teach music composition when using only Sibelius' music application for writing notation. In order to make the learning process more successful, different learning approaches must be combined.

4. Conclusions

From the results of research and development carried out in learning music composition at SMA Cendana Mandau, it shows that the learning model of music composition is more effective. The learning model developed can maximize students' abilities in making a piece of music. Students will find it easy to

write notations, compose compositions and provide interpretations of the works they create, and be able to perform well-performed music without the need for expertise in playing musical instruments.

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