

The Innovation Through Mind Mapping to Learn Classical Guitar Interpretation in Facing Industry 4.0

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ABSTRACT

Industry 4.0 is becoming a trend as technology advances. Therefore, educators should understand the concepts of the Industrial Revolution 4.0. This paper explores the ideas to apply education 4.0 as a response to the Industrial Revolution 4.0 on classical guitar learning through deeper interpretation with mind mapping method. The interpretation in question is how one can translate musical aspects in a musical score so that the musical composition is well presented. This study employed a literature review, observation, and interview as data collection techniques. This learning consists of two aspects through deconstruction namely historical analysis and text interpretation. Mind mapping related to dynamics, song structure, tempo, technique, and anatomy of the players was then provided. Finally, group discussion, drill and trial error methods to get the final result of a reliable interpretation were conducted.

Keywords: *classical guitar interpretation, mind mapping, industrial revolution 4.0*

1. INTRODUCTION

Nowadays, we are facing the Industry 4.0 or known as the Industrial Revolution 4.0. It is an era of disruptive innovation where innovation is developing very rapidly to help create new markets. The disruptive era is closely related to the advancement of technology which goes along with various innovations and inventions. The era makes people abandon various conventional systems. Some systems existing in this era support continuous learning and make things easier and limitless in terms of place and time. Facing major challenges related to Industry 4.0, in the aspect of education, teachers should improve the quality of education by making innovations. Education 4.0. requires students to keep on thinking and behaving creatively and innovatively. This idea is crucial since students should be able to compete in getting and creating jobs. Teachers of this era should possess information technology and communication literacy so that their students have certain competencies. It is not limited to formal education only, non-formal educational institutions should be capable of matching the learning strategies, methods, or approach with Industry 4.0.

One of the remarkable effects of the Industrial Revolution in the music industry is the plenty of musicians being popular from the YouTube platform (a free-access platform). Musicians can publish their work without producing labels and complicated procedures whatsoever.

Besides, plagiarism on their music can be easily detected since people can recognize from one or more phrases of the songs. Then, because traveling abroad becomes easier and more affordable, more musicians are motivated to participate in international competitions.

Jogja Guitar Society is a community actively participating in international competitions. It is a place where high school and college students develop their music skills, especially using classical instruments. They participate in classical guitar roadshows conducted in some cities, recitals, workshops, and both local and international classical guitar competitions. It is proof that members of the Jogja Guitar Society are competent since maximum efforts are needed in performing a song. □

Music interpretation is someone's ability to interpret the meaning of music work through musical expression. Music appreciation is carried out through music element analysis, meaning analysis, and historical studies. According to Adam, in order to get the knowledge of grammatical interpretation about music, historical analysis and work analysis including auditive and sheet music should be done [1]. The concept of interpretation in musical performances is something that emphasizes on what music means to the listeners and what essence is captured when listening to the music. When a music player interprets, he/she fully recognizes what the meaning of the music is according to listeners.

Music performance is one-way communication initiated by a composer, delivered by performers, and shared with listeners. Meaning making depends on some variables, namely performer's understanding, self-experience, and musical symbols, such as pitch notation, harmony structure, rhythm, tempo, keys, time marks, dynamics, etc. Some of these variables are easy to understand, but a performer does not necessarily know exactly what the music parameter should be like and the relatively main things such as how soft someone plays a part marked with *pp*, *f*, or an *accelerando*.

When performers use Rosenblat's principle, they see scores as a starting point showing how the scores are interpreted and their meanings expressed. To be able to do so, they must perform and listen to musical performances both artistically and aesthetically. Interpretation is an act that puts intellectual, socio-cultural, artistic, physical, and emotional aspects into a performance. If a performance does not show the interpretation of a work being played, it only means copying scores.

Unfortunately, based on a preliminary study conducted by interviewing 45 members out of 71 members of the Jogja Guitar Society, the students' competences in playing a classical guitar are at the aesthetic level. In other words, the music appreciation course has only reached the student's cognitive and knowledge aspects. Machfauzia states that the dimension of knowledge from interpretive learning includes reading the correct notation, perform phrasing technique correctly, and explaining techniques [2]. Even though most members of the Jogja Guitar Society have experienced teaching classical guitar in private classes, they often ignore the fact that their students are too young to master the complex artwork. Students do what their teachers ask. The teachers provide instructions for students to interpret, and as a result, students are not able to interpret the artwork independently. Another case is when the student is between 11 and 16 years old, they have a very good cognitive ability.

As stated by Piaget adolescence is in their formal operational stage. It is a stage in which the capacity for abstract thinking can be optimized [4]. At this stage, they are able to imagine problems in their mind and develop hypotheses logically and systematically, so that they are not limited to what is seen and heard. A teenager is no longer limited to the actual things, as well as the experiences that actually happened. By reaching the formal operation stage, teenagers can think flexibly about complex matters. A teenager is able to find alternative answers or explanations about a matter, unlike a child who has just reached the stage of concrete operation where they can only find an explanation for a thing. If interpretation is an interaction between artistic and aesthetic, the aesthetic context tends to be related to each other's personality, and it will be less effective if students are forced to interpret something before they are ready to do it.

The need for a deeper understanding of interpretation is imperative for a classical guitar player because it improves the skill of playing a classical guitar. On the other hand, if the student wants to be both a teacher and professional guitar player, he will be able to direct their students to think critically and creatively on how to play quality music-on how to interpret the meaning in the text or sheet.

In music education, good teaching does not literally mean trying to make students play music. Good teaching tries to make students create art related to music [5]. Thus, a good teacher does not try to change his/her students in an instant, but they tend to encourage the students to be more critical and smarter.

One of the methods of learning that can stimulate creativity is mind mapping. According to Tony Buzan, mind map is a creative and effective way to record thoughts [6]. Mind mapping is a recording technique employing words, colours, lines, symbols, and images by combining and developing the brain's potential to optimally organize and remember all information. Besides, this method is relaxing, fun, and creative. Buzan states that mind mapping may help individuals in many ways by providing a holistic view of an issue, encouraging someone to solve problems by finding creative solutions, and explaining all the information being mapped out.

Employing mind mapping techniques for learning music interpretation, teachers can invite students to explore their potential so that they can easily understand the full meaning of the music they learn. In addition, students are expected to find and express music meanings through their personalities, and then analyse the sheet music in aesthetic terms, rather than being dictated by the teachers to interpret songs. By doing so, students can improve their cognitive capacity and creativity so that meaningful learning has resulted. Subjectivity is one of the problems of interpretation so that clear stages are needed. Sundin states that there are four criteria of interpretation in music performance, namely history versus actuality, originality versus expressiveness, personal characteristics versus differences in interpretation, and objectivity versus subjectivity [7]. Based on the explanation above, mind mapping is used to improve the ability to interpret classical guitar play. This strategy is innovative learning media which makes learning more fun, meaningful, and comprehensive.

2. DISCUSSION

2.1. *Music in Industry 4.0*

The education era influenced by the industrial revolution 4.0 is called education 4.0. Education 4.0 is an education system characterized by the use of digital technology in the learning process. 1.0 Education is defined as the process of exploring basic science and knowledge, as the first phase of the birth of new technologies. Education 2.0 begins to produce various kinds of technology. Education 3.0 generates plenty of knowledge. Then, in Education 4.0, amid rapid information technology advancement, innovation in the field of education is very crucial. Industry 4.0 is not only about the pace of technology and information innovation since art attracts more and special attention. Songs and music are now disrupted by the progress of the industrial revolution. However, in this era, a piece of creativity will never be replaced by a system or robot.

Almost all fields of art employ both technology and the internet to get more into the core of social life. Similar to what happened in the age of information technology, the industrial revolution 4.0 also has a positive influence in the field of art. Music education in the digital age requires educators and artists to think creatively, innovatively, collaboratively, and productively. Technology keeps on advancing, but art should play certain roles in building the nation character and identity. In addition, teachers are required to be familiar with technology, communication, and computers. As educators, teachers also need to improve their literacy regarding data, human, and culture. The educational system should fully adapt to the development of technology, from the curriculum, teaching method, and teaching system.

2.2. *Musical Interpretation*

According to Lee and Gura, interpretation is the art of communicating with the audience about a work of art from intellectual, emotional, and aesthetic perspectives [8]. It implies that art contains the skills to perform. In performing, the right tools, as well as intelligence, experience, and the ability to put experience and response in a meaningful show are needed. Musical experience comes from reading and imagining notation [9].

Creative artists pour ideas, words, voices, and rhythms into certain forms and then put them into symbols. Meanwhile, an interpreter carries these symbols, turns them into printed forms, and then brings his personal experiences to make a relation with a composer's directions. Then, the interpreter proposes subjective experiences and responses to orders imposed by creative artists and then takes the responsibility to perform the work completely. This process requires in-depth analysis, perseverance, and discipline.

Analysing is one of the most difficult aspects of interpretation. Although it is very difficult to select and discuss certain aspects of the work of art separately, a full appreciation of the whole product of art needs to be improved by carefully analysing. According to Schleiermacher, hermeneutic science consists of two aspects, namely grammatical and psychological interpretation [10]. To obtain grammatical music knowledge, someone needs to start from a number of works that represent the times. The problem in this case is that there is a time gap between the composer and the interpreter which results in different meanings even with the same sentence. Therefore, Schleiermacher suggests that an interpreter should understand the original meaning before performing changes. This understanding may be achieved through historical analysis, work analysis, as well as both auditive and sheet music analysis. Likewise, Derrida mentions that the deconstruction of a form of text interpretation is through history, but it does not necessarily mean that it is a master concept in the past since related matters about the concept may appear.

Silverman in *Musical Interpretation* states that philosophical and practical issues are the roots of a theory proposed by Louise Rosenblatt. This theory has many similarities in music interpretation. Rosenblatt's theory, known as the transactional theory, is based on three basic principles applied to musical interpretation. The first principle is that texts are compositions of printed symbols that point to something outside themselves. The second principle is related to the interaction between the readers and the texts. The last principle involves the activity in which readers construct meaning by referring to previous experiences. Silverman's analogy on Rosenblatt's theory and musical interpretation is used as an argument by expert players. They mostly argue that interpretation is more than just an aural representation of a score. It is the act of bringing one's entire intellectual, social, cultural, artistic, physical, emotional and personal existence to a performance.

To Rosenblatt, a text contains printed signs that function as 'symbols' (potentially) referring to something outside themselves [11]. Rosenblatt views an interpreter and text as partners in interpretation—the process of meaning-making. From this perspective, interpreters do not find the meaning of the work in the text itself, nor can they find the meaning of verbal symbols alone. The meaning involves both the written text and what the interpreter performs. A consequence of Rosenblatt's second principle is that the same interpreter can make different meanings of texts because of their ever-changing activities, moods, needs and experiences. This attitude makes an interpreter approach the text with an open mind and the hope that the transaction process has the potential to produce a large number of interpretations over time.

Thus, the teacher's role is to facilitate students to uncover this implicit meaning. Since composers create lyrics on texts, the value of a text should not be underestimated. Without the text, readers are not able to make meaning of music work. What Rosenblatt focuses on is that when a text is created, there is a writer domain. Symbols have no meaning before readers activate them and live with them. Rosenblatt's third principle explains how readers make meaning. This principle depends on the main difference between the two reading attitudes which he refers to as the efferent and the aesthetic attitudes. These attitudes determine what type of meaning the reader makes and how they do it. The response is influenced by the attitude of the reader in determining whether it will be efferent or aesthetic. When acting as an efferent reader, the reader will focus on implied facts, while the aesthetic attitude basically lies in the attitude of the reader to connect it with personal experiences through the epistemological process. Dilthey states that in understanding a text, meaning must be reconstructed rationally [12]. It implies that whatever the type of reading attitude is chosen, the most important thing is the purpose of reading. It may highlight the literal and factual aspects or present emotions and personal experiences [13].

Therefore, there are three main aspects of the Rosenblatt theory. Firstly, a music player must reflect on the level of meaning of the music they play. Secondly, the viewer needs to consider the nature of the musical work being expressed, communicated or conveyed to the audience. Thirdly, Rosenblatt stresses the urge to introduce certain texts at certain times. Determining the times to introduce certain composers' works is very important. Martin Krause believes that beginners are not supposed to play the Mozart Concerto, and he believes that Schumann should not be taught early.

2.3. Musical Interpretation Through Mind Mapping

The Mind Mapping method was first introduced by Tony Buzan in the early 1970s. Tony Buzan in his book " *Buku Pintar Mind Map*" defines mind map as a creative and effective strategy to take notes and literally map the mind [6]. In line with Buzan, Caroline Edward states that mind mapping is the most effective and efficient way to record and extract data from or to the brain. This system works according to the natural working system of our brain to optimize the full potential and capacity of the human brain [14]. The mind mapping method greatly facilitates students in developing creativity. Melvin L. Silberman argues that mind mapping is a creative way for each student to generate ideas, record lessons, or design new research [15]. From the explanation above, it can be concluded that the mind mapping method is a data recording technique that can map, integrate, and develop the potential of the brain to work effectively and develop one's creativity.

The mind mapping method results in notes containing a lot of information on one page. Thus, with the mind mapping method, long listed information can be transferred into colourful, highly organized, and easy-to-remember maps which are in accordance with the nature of the brain. According to Tony Buzan, the mind map is a route map for memory that allows us to arrange facts and thoughts in such a way that the nature of the brain is involved [16]. This means that remembering information is easier than using certain techniques to make notes. Trianto defines mind map as a concrete graphic illustration indicating how a single concept is connected to other concepts in the same category [17].

A mind map makes use of the brain's ability to get combinations of colours, pictures, symbols, and curves. Mind maps are more visually stimulating than the traditional note-taking methods which tend to be linear and single-coloured. It will greatly facilitate us to remember the information presented. Mind maps help teachers understand the kinds of concepts embedded in the broader topics being taught. This understanding will improve teacher planning and instruction. Clear mapping can help avoid misconceptions formed by students. Without the concept, teachers will tend to choose the topics that they remember. Topics chosen by teachers may be the most appropriate ones especially for teachers who have had previous successful experiences with the material.

For the classical guitar interpretation course, there are three principles for implementing the mind mapping method. Two aspects of interpreting are historical analysis and text interpretation. Those aspects are the first as well as the main aspects of understanding a song lyric because deconstruction is a cognitive process. Thus, the first step is the process of recalling knowledge obtained from music history, science analysis, and musical theory. Then, after the two aspects are completed with descriptions, specific branches are put in each aspect. The branches consist of dynamics, song structure, tempo, technique, and anatomy. The contents related to these points will be found according to the extent to which they are able to explore cognitive knowledge. Industrial Revolution 4.0 provides many conveniences to explore these points. The Internet may be used to search for studies on song structure and history. A wide selection of forms of interpretation in terms of dynamics, tempo, and techniques can also be accessed through the YouTube platform where many famous musicians publish their plays. Finally, after all the branches are deemed sufficient and produce a meaning, the results of mind mapping their interpretation are discussed with other players and trial and error drill for maximum results in classical guitar playing can be conducted.

3. CONCLUSION

Since the 4.0 Industrial Revolution marked by advances in the internet, technology, cloud computing, and machine learning, educational institutions must be able to change the mindset of the younger generation. The institutions need to present internet and technology-based learning processes including how to use information technology advances wisely.

Even though information technology is developing so rapidly and learning resources can be easily obtained, the teacher's role as an educator is irreplaceable. The teacher's main task is to educate, teach, guide, direct, train, assess, and evaluate each student. Utilization of information-digital technology with various systems and techniques will increase the possibilities for extraordinary work even though creativity is not solely determined by those systems. However, learning requires innovation to improve both teacher and student's creativity.

One of the innovations in classical guitar learning is through the use of internet-based mind mapping. Everything that can be used as a data bank in mind mapping in the overall knowledge of classical guitar learning, especially music interpretation can be obtained from the internet. Based on Derrida's deconstruction theory, the main branch of mind mapping in learning classical guitar music interpretation consists of two cognitive aspects namely historical analysis and text interpretation. Furthermore, the extension of small branches involves aspects of psychomotor such as dynamics, song structure, tempo, technique, and anatomy. When the mind mapping branches are coherent, the teacher's role is to help evaluate the mind mapping results. In addition, to fulfil the affective domain, group discussions with guitar players or other classical guitar instructors, as well as trial and error drills may be conducted so that the interpretation results are more valid and idealistic subjectivity is eliminated.

REFERENCES

- [1] Sektian, Jazzy Adam Sila. "Analisis Bentuk dan Struktur Lagu Jeux D'eau karya Maurice Ravel [Form and Structure Analysis of Jeux D'eau by Maurice Ravel]." *Pend. Seni Musik-S1* 5.5 (2016). p. 24. URL: <http://journal.student.uny.ac.id/ojs/ojs/index.php/musik/article/view/6638>
- [2] Machfauzia, Ayu. "Strategi Guru Musik Dalam Pembelajaran Interpretasi Musik Romantik Di SMK N 2 Kasihan Bantul Yogyakarta [Music Teacher Strategies in Learning Romantic Music Interpretation at State Vocational Highschool 2 Kasihan Bantul Yogyakarta]." *Universitas Negeri Yogyakarta-Disertasi S3* (2013). p. 14. URL: <http://eprints.uny.ac.id/id/eprint/22725>
- [3] Lazarus, Richard S. *Educational Psychology in Social Context*, 4th ed. Cape Town: Oxford University Press, 2010. p. 32.
- [4] Piaget, Jean. "Piaget's theory." *Handbook of child psychology* 1.4 (1983). p. 67.
- [5] Matthay, Tobias. *Musical interpretation: Its laws and principles, and their application in teaching and performing*. Boston Music Company, 2010. p. 2.
- [6] Buzan, Tony. *Buku pintar mind map [A mind map smart book]*. Gramedia Pustaka Utama, 2006. p. 4.
- [7] Sundin, N. "Aesthetic criteria for musical interpretation: A study of the contemporary performance of Western notated instrumental music after 1750." (1997): 0325-0325. p. 264.
- [8] Gura, Timothy, and Charlotte Lee. *Oral interpretation*. Routledge, 2017. p. 53.
- [9] Scruton, Roger. *Understanding Music: Philosophy and interpretation*. Bloomsbury Publishing, 2016.
- [10] Hardiman, F.X. Budi. *Seni Memahami: Hermeneutik dari Schleiermacher sampai Derrida [The Art of Understanding: Hermeneutics from Schleiermacher to Derrida]*. Yogyakarta: Kanisius, 2015. p. 48.
- [11] Silverman, Marissa. "Musical interpretation: philosophical and practical issues." *International journal of music education* 25.2 (2007): 101-117. p. 105. DOI: <https://doi.org/10.1177%2F0255761407079950>
- [12] Hardiman, F.X. Budi. *Seni Memahami: Hermeneutik dari Schleiermacher sampai Derrida [The Art of Understanding: Hermeneutics from Schleiermacher to Derrida]*. Yogyakarta: Kanisius, 2015. p. 76.