Application of The Creative Multiplicity: Black Box and Glass Box Stages in Songwriting Activities at PKBM Omah Dongeng Marwah

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Abstract

Creativity does not start from a rational and systematic mind. Creativity multiplicity believes that creative activities and products start from an 'infinite', dynamic, accepting of possibilities, random, disorganized and chaotic thinking structure. This stage is referred to as the 'black box', which then proceeds to a leap of understanding as the mind manages the disorder. The second stage is the 'glass box', where the information in the mind only gets a rational stage through a planned process of analysis, synthesis, and evaluation. The black box and glass box creative processes of the multiplicity creativity concept were tested in songwriting activities at PKBM Omah Dongeng Marwah. The method used in this research is qualitative. The primary data came from systematic, participatory, and experimental observations of songwriting activities at PKBM Omah Dongeng Marwah. The data is summarized through the process of data analysis, synthesis and reduction. As a result, learners are more involved in a holistic and humanistic process. 11 learners aged 15-17 years at PKBM Omah Dongeng Marwah succeeded in creating original songs with their uniqueness and character, so that the process of creating songs through the stages of black box and glass box creativity was said to be successful.

INTRODUCTION

Although not new, creativity is still interesting to discuss, where various experts try to analyze creativity through their theories. What distinguishes creativity from inventiveness and productivity? What makes someone more creative than others? Creativity may still be a difficult thing to define and measure. The complexity of creativity, both in terms of definition and measurement tools, makes the world creativity ranking data in the 2015 Global Creativity Index (GCI) by Martin Prosperity interesting to examine, especially after seeing Indonesia placed at the low end of the rankings, at 115 out of 139 countries.

Indonesia's low level of creativity in the eyes of the world is a challenge in the world of education, because education is largely responsible for creativity. The creativity ranking by GCI triggers efforts to improve the quality of education in order to produce creative and internationally competitive graduates. If this is a world competition, then Indonesia needs to know the measurement tools to win it. However, if we examine the GCI creativity measurement tool, it seems that a review of the foundation of creativity that is relevant to the characteristics of the Indonesian nation is needed. This is because the dynamics of social conditions in each country produce different theories, and creativity is no exception.

The GCI creativity ranking takes economic development, competitiveness and prosperity as the parameters of creativity of the 139 countries studied (Florida, Mellander, & King, 2015). The examination continues; Richard Florida, one of the researchers of the Global Creativity Index, has actually suggested creativity as people who create creative products and generate economic value in his book, The Rise of The Creative Class (Florida, 2003). Community art, folk art and cultural festivals are seen as economic capital. Although related, he did not link creativity with social, cultural and religiosity, making his view too economically valuable (Piliang, 2018).

In a society dominated by capitalism, one's fate will always be determined by the law of competition. The weak will lose, and those who win will act as rulers over the losers. The indispensable power to win this free competition is creativity. The higher one's creative power, the more often one comes up with novelties, then one will emerge victorious. However, since capitalism is closely related to liberalism, the creativity required in the competition is individual creativity. The individualistic tendency of liberalism reduces creative power to the power of the individual (Piliang, 2018).

The creativity measurement tool in the Pancasila Learner Profile element of Merdeka Curriculum has the potential to direct learners to individual creativity. Creativity in the Pancasila Learner Profile is oriented towards producing, acting, and thinking originally (Badan Standar, Kurikulum, dan Asesemen Pendidikan Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia, 2022). Producing, acting and thinking in an original way will only flourish if the creativity dimension is fulfilled. If not seen as a whole, these three demands only emphasize output and potentially see learners as product-producing

machines. Although creativity is a natural human trait (), creativity has complex dimensions and must be seen as a whole.

Creativity in education must begin to see students as humans with multiplicity of intelligence. Indonesian education, which still borrows the principles of capitalism creativity, makes researchers interested in looking at other foundations of creativity that are more compatible to be implemented. The compatibility can be measured from the suitability of the characteristics and needs of students. Not only matters of rationality, aspects of cognitive complexity such as imagination, emotion, body intelligence play an equally important role in the creative system. The multiplicity theory of creativity pays special attention to the variety of intelligences that make humans, human (Johnston, 2022).

Compared to the creativity of capitalism, the creativity of multiplicity is more holistic and humanistic. Creativity is not only dependent on the power of the individual, but also on the 'collective mind of society'. The idea of multiplicity creativity leads to more collaborative fields (Piliang, 2018). Then, how can this multiplicity creativity be implemented in education?

Creativity is born from disorder (Linstead & Thanem, 2007). Piliang (2018), in his book Medan Kreativitas, argues that creativity that produces novelty is only born from the 'world of possibilities'. Creativity works on the chaotic structure of human thinking; order and disorder, certainty and uncertainty, determination and indetermination, entropy and redundancy (Piliang, 2018).

In the creative process, the disordered stage of the mind is often referred to as the 'black box'. The term black box is borrowed from the world of experimental theater; a black room that presents an intimate, purposeful, mysterious and uninterrupted performance (Naas, 2022). This metaphor, commonly used in science and engineering, describes the 'input-output' processes that occur in the darkness (the unconscious human mind). We cannot see what is inside the box internally. However, in the black box state, internal processes are less important than what goes in and out (Bolton, 2010). Thus, the black box stage is interpreted as a process of exploration, investigation, and discovery.

Then, the second stage in the creative process that Piliang emphasizes in Medan Kreativitas is the 'glass box' stage. Glass box describes transparency and clarity (Bolton, 2010). This stage is built by the principle of rationality, where the previous irregularities are processed systematically and measurably. The information in the mind goes through a planned cycle of analysis, synthesis and evaluation, resulting in an optimum solution.

This 'disorder creativity' stage is assumed by researchers to be a more effective foundation of creativity implemented in education than the four stages of creativity theory initiated by Wallas (1962). Graham Wallas (1858-1932), one of the founders of the London School of Economics who is an expert in social psychology (Clarke, 1978) initiated creativity into four stages: 1) preparation, 2) incubation, 3) illumination, and 4) verification (Sabri & Yanuartuti, 2023). Phenomenally,

the implementation of this theory often falls into the trap of pragmatization. The first point is an example; although the preparation stage is interpreted as a phase of gathering information, Indonesian education often translates it into a programmed mechanism. Thus, education tends to be shallow, unchallenging, and infertile for creativity (Piliang, 2018).

Education is dynamic and follows the times. Therefore, it requires courage to test approaches and learning models that are creative and relevant to the era. Today, schools as the place where children spend the most time, should be a place for the development of creativity that is contextual and relevant. Through the multiplicity creativity approach, this article aims to test the black box and glass box stages of songwriting activities at PKBM Omah Dongeng Marwah.

METHOD

This research was conducted at PKBM Omah Dongeng Marwah which is located on Jl. Ngasinan No. 9 Kec. Bae Kab. Kudus. The type of research used is qualitative which aims to describe the song creation activities at PKBM Omah Dongeng Marwah as an application of the black box and glass box stages of the concept of multiplicity creativity. The population of this study consists of 3 elements, namely 1) place, 2) actors, and 3) activities. The people studied were the students of PKBM Omah Dongeng Marwah which consisted of 11 children, aged 15-17 years. Primary data for this research comes from observations of songwriting activity at PKBM Omah Dongeng Marwah through the black box and glass box stages.

Observations were carried out both unsystematic, participant and experimental. Unsystematic observations are carried out with a design whose nature can change based on field situations. Participant observation is observation that allows researchers to take part in the dynamics of the subject being observed. Experimental observation is an observation that requires the researcher to create a situation in such a way as to 1) find out whether the behavior that appears is really caused by previously controlled factors; 2) giving rise to variations in behavior because the observer does not know the purpose of the observation (Hasanah, 2016). This observation technique was taken to be in line with what will be tested in this research, namely the concept of multiplicity creativity which is full of possibility, irregularity, and uses a holistic and humanistic approach.

Then, secondary data sources in this research are photographs of activities and relevant literature studies. The data will be concluded through the process of data analysis, synthesis and reduction.

RESULT AND DISCUSSION

Description of Field Data

Omah Dongeng Marwah (ODM) was established at the end of 2014 in Purworejo Village, Bae District, Kudus Regency, Central Java. Starting from a storytelling workshop, ODM developed into a learning studio that explores the talents and interests of children. Various activities in this PKBM include storytelling, music, creating songs, dance, film, and theater. Since

2017, ODM has been registered as a Community Learning Activity Center (PKBM) and opened equivalency education Package B Equivalent to SMP / MTs and Package C Equivalent to SMA / MA / SMK.

PKBM Omah Dongeng Marwah's equivalency education has an atmosphere and learning model that emphasizes children's talents and interests. This humanistic learning method positions teachers as facilitators. So, in addition to the implementation of academic materials, students will still get a legalized certificate through the assistance of the learning process in accordance with their respective methods, talents and interests.

Analysis of the Application of Black Box and Glass Box Stages in Songwriting Activities at PKBM Omah Dongeng Marwah

Creativity in education must begin to see learners as human beings with multiple intelligences. Beyond rationality, aspects of cognitive complexity such as imagination, emotion, and body intelligence play an equally important role in the creative system. Multiplicity creativity theory pays special attention to the variety of intelligences that make humans, human (Johnston, 2022). The growth of creativity depends not only on individual strengths, but also on the 'collective mind of society' (Piliang, 2018). This means that although creativity is a natural human trait (Ru'iya, 2014), creativity has complex parts and must be seen as a whole, both from the dimensions, aspects, stages, and factors of creativity (Rhodes, 1961).

Creativity is born from disorder (Linstead & Thanem, 2007). Piliang (2018), in his book Medan Kreativitas, argues that creativity that produces novelty is only born from the 'world of possibilities'. Creativity works on the chaotic structure of human thinking; order and disorder, certainty and uncertainty, determination and indetermination, entropy and redundancy (Piliang, 2018). Creativity of multiplicity among others also addresses an infinite world composed of ideas, notions, imagination, and fantasy.

There are two creative stages that will be applied in this research. The first stage is the 'black box'. The principle of this model is built on irregularity, randomness and unpredictability, and the creative leap is generated by going through it. The leap of insight can only be generated when the mind within the disorder changes its structure, creating a Eureka moment! (Piliang, 2018). Brilliant ideas can be generated when the order in the mind can be managed (order in disorder), so anxiety is precisely the main fuel for creativity.

The second thinking model is the 'glass box', which is built on the principle of rationality. Solutions are generated through a systematic and measurable process. The problems (information) in this mind go through a planned cycle of analysis, synthesis and evaluation, resulting in an optimum solution (creativity).

The stages of creativity in song-making activities in this study are described as follows.

The Process of Creating a Song with Black Box and Glass Box Stages

1.   Black box: In the black box stage, learners explore through listening, analyzing and critiquing music. The researcher tries to present irregularity in the black box stage by listening to 3 songs, each with a different theme and genre. Then, learners were invited to have a panel discussion to communicate their emotional experiences, opinions, and free ideas about the songs they heard. The researcher mostly acted as a listener and discussion partner. This stage is random and open to possibilities.

In addition to listening to music, the black box stage is also coupled with activities to explore musical instruments, both from the tone, sound source, and how to play it. This process is implemented with an experiment, where learners try to fill water into 7 glasses placed in a row, until the row of glasses produces the desired tone. This stage is closed by discussing, reflecting, and evaluating the activities that have been carried out.

2.   Glass box: After exploring songs, music and instruments, the glass box becomes the stage where learners create songs. Learners are allowed to carry out the project individually or in groups. The researcher invites learners to develop the concept of the song they want to make. Learners are allowed to include an existing song (commercial song) as a benchmark example for the song they want to make. At this stage, learners get full assistance from researchers to communicate and actualize their concepts. Once the concept is finished, learners can start to structure the lyrics or create a tune first, according to their preferences.

The lyrics and tones that learners have created continue to be processed until they reach the desired aesthetic and message. The learners' song fragments are needed to be a simple song that can be enjoyed, then recorded simply with a gadget for documentation.

3.   Evaluation: Learners presenting their simple song guides that have been created in the black box and glass box stages. Learners then appreciate,   discuss,   reflect   and evaluate the process and results of the work that has been created. Learners' creativity is assessed by the complexity and authenticity of the process, the sources used in the creation, and the characteristics of the product.

Application   of   The   Creative Multiplicity Concept: Black Box and Glass Box Stages in Songwriting Activities at PKBM Omah Dongeng Marwah

In the first meeting, learners explored by listening to music that was later discussed. The three songs that were listened to had very different languages, themes, lyrics, and genres. In   the   discussion   session,   the researcher will be more in the position of a listener and companion only, so that the stage that emphasizes the activeness of the learners is random and open to possibilities.

Learners listen to several songs with different themes and genres. The 3 songs are 1) System of A Down - B.Y.O.B, 2) Kunto Aji - Sulung, and 3) DJ Kejora ft. Anjani - Ling Lung. The first song was an English rock song. With satirical-explicit lyrics, the song expresses resistance to political warfare that harms the middle and lower classes. The second song is a

local experimental song with therapeutic lyrics, and is relevant to the problems of young people in this era. Meanwhile, the third song is in Javanese, dangdut-remixed and tells the story of a woman's love for her partner.

While listening to songs, students show different forms of first impressions. These include laughing, dancing, following the beat of the song by moving their heads, and some even cover their ears. They then communicated their experience of listening to the 3 songs. Students discuss the emotions they feel. Radian Pasha Bimantara (class X) admitted that he got goosebumps when he listened to the second song. Novel Febiola Hariyadi (class IX) expressed her dislike for the first and third song genres. It doesn't stop there; Researchers were involved in wild discussions, where students continued to discuss broader themes, namely music as a tool of war and propaganda.

Researchers participated in responding to the discussion by explaining the role of songs in human life and the elements of songs that influence listeners. Researchers also explain that songs are a space to express the feelings and thoughts of the creator. From this discussion, students come to understand that songs have the power to change situations—and most importantly, students realize that they can make that change through their own songs. This session closed with instructions to students to write down the musical elements of the songs they had heard (tone, tempo, beat, lyrics, musical instruments, etc.).

Figure 1. Music instrument experiment

At the second meeting, students were invited to recognize musical instruments, both from scales, sound sources, material sources, and how to play. Researchers encourage students to imagine the origins of musical instruments in this world. Then, this imagination apparently gave students awareness that musical instruments could be created from the availability of surrounding objects.

Practice is carried out after discussion. They were invited to fill water into 7 glasses placed in a row. The volume of water determines the sound produced when the glass is hit with another object. Students were challenged to fill the glasses with a certain volume of water until they reach the desired scale. Students gave a variety of impressions from this activity. Most admitted that the alignment process was quite difficult to carry out. This difficulty resulted in their admiration for the history of musical instruments and cultural actors in Nusantara.

From the naked eye, the various activities in the black box stage are like a flowing conversation with open experimentation. However, in fact, students have learned the role of songs, musical elements, and musical instruments. The imagination and inspiration they get encourage them to

become creative actors themselves. This stage occurred progressively compared to what the researcher expected, so the researcher decided to be more open to the implementation of the stages by adapting to field needs.

Students develop the concept of making their song in the second week. Because the creation process has a large personal dimension, students are allowed to work on it individually or in groups. In preparing the concept, students write down the theme and genre of the song they want to create. Students also include existing songs (commercial songs) as examples and benchmarks for their songs. This commercial song as a benchmark will make it easier for them to create tunes or lyrics until their song creation reaches the aesthetic level they expect.

In the process of creating songs, all students choose to compose the lyrics first. Students show varying progress. For example, Javier Al Ghani Devariano (class X) wrote lyrics about his parents, Eka Setyadi (class VIII) wrote lyrics about the love he harbored. During adolescence, physical, hormonal and psychological changes occur which cause great emotional turmoil towards the opposite sex (Fhadila, 2017). This phenomenon often makes it difficult for teenagers to translate their thoughts and feelings, especially when their social environment does not accept them. So, instead of being ignored, this anxiety needs to be channeled.

In this process, the humanistic side of the concept of multiplicity of creativity becomes the approach used by researchers in dealing with students. Students are free to express their thoughts and feelings before actualizing them in lyric form. Not only focusing on products, researchers listened to students' personal stories which strengthened their authenticity. Songs are positioned as a space for expressing and processing students' internal experiences.

This phase places students at a leap of insight moment. They try to grasp patterns from the irregularities of their thoughts. This practice of feeling and translating thoughts naturally encourages students to create notes that represent their lyrics, so that the lyrics composed by students also undergo a transformation throughout the process of adding notes. The transformation of the lyrics is also changed based on the beauty of the rhyme, meaning, metaphor, and so on. The following are the song lyrics written by Ghani (class X) before repaired.

Engkau sangat baik kepadaku

Mengandungku membesarkan aku

Kalau aku sakit Mamah-lah yang sudah memeriksakan aku dan mendidik aku dengan hal yang baik

Untuk segalanya yang kau curahkan untuk aku

Terimakasih Mamahku yang tercinta

After undergoing improvements and adjustments to achieve the desired aesthetic, Ghani's song lyrics changed as follows.

Jasamu takkan pernah terganti

Nasihatmu 'kan teringat dalam hati

Kasih sayangmu tak hilang dalam memori

Terima kasih Mama

Untuk segalanya

Students are assisted by researchers to create tones using the modification method. This method is to create a new melody through music or minus one song (benchmark) that they have previously conceptualized. At this stage, the researcher is reviewing to avoid plagiarism. The situation in the field shows that, even though they use the help of existing songs, the melodies presented by students were completely different.
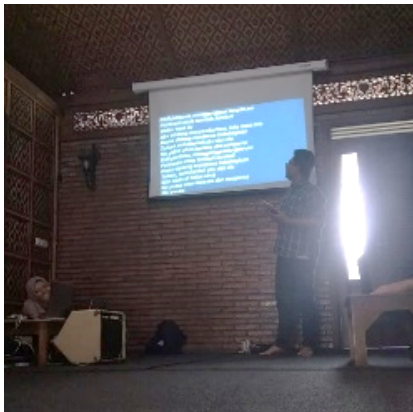

Figure 2. Lyric Presentation

Apart from using the modification method, there are a small number of students who choose the process of exploring tones directly. The choice of this method tends to be taken by students who carry out projects individually. With the help of a guitar, Researchers help convert the taste and character of their lyrics. All of the tone creation processes are recorded on the device. Apart from documentation needs, recording is done so that the ideas that continue to flow wouldn't lost.

At the fifteenth meeting, students presented their songs. Students carry out appreciation activities, discussions, reflections, and evaluate the process and results of the work that has been created. This dialectical process led the researcher to a conclusion: 11 students aged 15-17 years, have produced original works from the integration of open, wild, intensive and holistic processes. The results of the students' songs were considered very rich, both in terms of the lyrical style and the themes presented.

CONCLUSIONS

Creativity in the world of education must begin to see students as humans with multiplicity of intelligences. Not only matters of rationality, aspects of cognitive complexity such as imagination, emotion, bodily intelligence play an equally important role in the creative system. The multiplicity theory of creativity pays special attention to the variety of intelligences that make humans human (Johnston, 2022). This means that even though creativity is a natural human trait (Ru'iya, 2014), creativity has complex dimensions and must be seen as a whole, both from dimensions, aspects, stages and factors of creativity (Rhodes, 1961).

Multiplicity creativity also discusses a limitless world composed of ideas, notions, imagination and fantasy. Creativity is born from disorder (Linstead & Thanem, 2007). Creativity works on the chaotic structure of human thinking; regular and irregular, definite and uncertain, determination and indetermination, entropy and redundancy (Piliang, 2018). In the creative process, the

stage of thought disorder is often referred to as the 'black box'. The term black box is interpreted as a process of exploration, investigation and discovery. Then, the second stage in the creative process is the 'glass box' stage. Glass box depicts transparency and clarity (Bolton, 2010). This stage is built by the principle of rationality, where previous irregularities are processed systematically and measurably. The information in the mind goes through a planned cycle of analysis, synthesis and evaluation, so that an optimum solution (creativity) is obtained.

This article aims to test the concept of multiplicity creativity using black box and glass box stages in song creation activities at PKBM Omah Dongeng Marwah. As a result, students are more involved in holistic, humanistic, imaginative, enthusiastic and challenging processes. 11 students aged 15-17 years at PKBM Omah Dongeng Marwah succeeded in creating original songs, so the song creation process through the black box and glass box creativity stages was said to be successful.

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