Systematical Review and Exploration of the aspect of Creativity in the Context of Education

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Abstract. The success of learning in school is determined by the ability to find and use effective learning strategies or in this case the term creativity is used. Creativity is not only an important element in solving a problem but also an indicator that individuals have Higher Levels of Excellence Functions in a good category. The existence of creativity character is one of the issues that has not been widely discussed and realized in the context of education, especially in creating an effective learning process. This is partly due to the lack of comprehensive understanding, knowledge and awareness of the images and activities of learning based on creativity. A systematical review approach is used in this study by reviewing and exploring as many as 450 scientific articles based on the results and analysis of three experts who participated in the study. The results of the study show that creativity has a specific model based on aspects of definition, characteristics of creative subjects, supporting factors, inhibiting factors, the domain of creativity and creativity strategies in the school. Furthermore, creativity is also a significant character and has a particular model for students, teachers, and for the school principal.

Keywords: Creativity; Good Education; Systematical Review
INTRODUCTION

The success of education in school not only depends on the policy, equalisation, and integrated system applied but also about the collaboration amongst key elements of education inside the school (Ramdani, 2018). This collaboration should encompass the role and the power of the school principal to create such good environment of the school. The success of education also depends on the quality of teachers as the educator in preparing the next generation and the students as the subject of education who will become the next leaders (Ramdani, 2018). One key aspect that should be involved in those educational elements and become the characteristic of those elements is creativity. Based on the prior research, creativity aspect holds key role not only in creating such interesting education but also as the indicator that an individual is active and able to develop his/her best potency that could influence the output of education in the future (Ramdani, 2018).

The aspect of creativity has been discussed in many fields in human life, especially in the area of Positive Psychology. Theoretically, creativity helps an individual to reach his/her purpose using certain way which is considered as new, unique and original (Peterson & Seligman, 2004). These ideas or this characteristic should be as adaptive as possible that could give the benefit to an individual and other people (Peterson & Seligman, 2004). In educational context itself, thinking creatively involve in Higher Level of Executive Functions in human, in which this aspect holds a key role in solving the complex problem or used when an individual experience a pressured condition (Delis et al., 2007). Furthermore, a teaching based on creativity can help students to think creatively which in turn can become the indicator that an individual able to solve the problem completely. On the other hand, the indicator that an individual has the creativity can be seen in his/her personality, knowledge, motivation and how they give the influence to their environment (Strenberg, 2006).

However, in fact, this creative aspect becomes one of the educational aspects that has not been fully developed in the area of education. The prior research done in the high achiever in the students shows that there was little attention given to the aspect of creativity in one’s academic activity (Ramdani & Fahimi, 2014). Not only for the students, in the prior research, it was found that the teachers also got low score of creativity from the test given using the scale of Values in Action Inventory Scales (VIA-IS). The level of creativity was lower than any other aspects such as the Openness and the Level of Willingness to Learn (Ramdani, 2018). This research aims to gain the comprehensive understanding of the concept of creativity in the school,what factors that can support or hinder the creativity, what teaching strategies that based on creativity and how to a create creative environment in school.

METHOD

This research was done step by step using the approach of mixed-method. This method aims to gain a comprehensive understanding that could be generalized about an object or phenomena by using qualitative and quantitative method (Mertens, 2015). For the qualitative method, this research used the systematic review to review the scientific articles. This was done by gathering scientific articles using the database about the topic of creativity in school(Ashford, Edmunds, & French, 2010). In this step, the researchers gathered the scientific articles using the database machine such as Science Direct, Sage, dan Ebscohost.

The researchers used some keywords such as “creative climate”, “creative in school”, “elements of creativity”, “teacher’s creativity”, “teaching with creativity”, “innovation in school”, “school’s creativity”, “schools leaderships innovations”, “sources of creativity”, “creativity of schools principals”, “students creativity” and “creative education’. Then, in the next step, the researchers did the Judgement and Selection process to select the most relevant articles that fit with the objective of this research.

Collecting Data (450 scientific articles)

Judging & Selecting Data (Articles were divided into three groups that were analysed by 3 experts)

Deleting Irrelevant Data (Deleting the Irrelevant Articles)

Validating Data (The researchers got about 50 articles that relevant to the creativity in school)

Crosscheking Data (The Researchers Discussing the Data)

Analysing Data (Data was crosschecked based on prior discussion about the concept of creativity in school)

Double Crosschecking Data (Data was crosschecked again amongst the researchers)

Describing and Concluding the Concept of Creativity in School (Such as in school principal, teachers and students)

Schema 1. The Plot of Systematic Study
RESULT AND DISCUSSION

Based on article review, 53 articles were selected as the most relevant scientific articles with this research. To have a more comprehensive understanding of creativity, the result of the review article then be grouped into 6 themes discussed below.

1. Definition of Creativity
   Creativity is defined broadly with its own complexity based on some types of viewpoint and research found in these articles. The review of creativity encompasses broad definition, starting from creativity as the human intelligence which is flexible, complex, has many domains, unique, the process of critical thinking, divergent thinking, abstract, to the definition of creativity as individual’s ability to create something new, unique and innovative.

2. The Traits of Creative People
   Based on the review, it was found some keywords that indicate that a person can be categorized as creative people. These are: imaginative, the willingness to try something new, thinking originality, persistence, discipline, high curiosity, openness to new things, thinking divergently, confident, hardworking and like to face the challenges.

3. The Factors that Support Creativity
   The level of creativity in an individual is influenced by some factors such as socio-economy status, where some research shows that a family with high socio-economy status could contribute to the good level creativity of a child. Other than that, the environment also gives a big contribution to a child’s creativity in which a supportive environment (e.g. in school and at home) could potentially develop student’s creativity in a good way. Furthermore, the teaching strategy employed by a teacher in the classroom also contribute to the development of students’ creativity.

4. Learning Process Based on Creativity
   Some research has been done to develop such teaching methods which based on creativity. Several teaching methods such as Multiple-based Instruction, Design Thinking Skills or some other teaching methods posit creativity as the centre of teaching and learning process in which teachers take the role as the agent of creativity to stimulate students’ potential creativity.

5. Creative Climate in School
   Some research emphasizes that there should be the distribution of students’ spaces to support creative learning in school. For instance, there should be a special room for discussion, presentation, doing the experiment and other important spaces such as personal space where students can freely develop their creations or thinking skills. Besides, it is important to provide the spaces where students can socialise with their friends.

6. The factors that can Hinder Creativity
   Some factors that can inhibit creativity found in the article review are the social relationship where creativity is not supported, the culture view, an unsupportive environment and the obstacles found in the individual itself.

   In summary, the result of the review articles is displayed in the schema below.

Schema 2. Conceptual Framework of Creativity

DISCUSSION

Creativity is a concept that is defined broadly to give the description about its meaning, thus there is a need to define and describe creativity in a more detail and operational way. Creativity is defined as the ability that is flexible and focused on the process by using the higher order thinking in the human (Zhou, Shen, Wang, Neber, & Johji, 2013). This process demands an individual to think adaptive and solutive towards every problem that is being faced. Due to its complexity, there is no instrument that can measure the construct of creativity directly or holistically (Lucas, 2016). This makes many scholars agree that those who are able to work creatively is the people who have the high level of intelligence (Abdulla & Cramond, 2017). In a simple way, it can be explained that creativity appears in a set of the idea, the mix of feelings, words, and the behaviours that link each other to solve a problem or accomplish a task (Konstantinidou, Zisi, Katsarou, & Michalopoulou, 2015).

Another perspective explains creativity as an executive function that encompasses the basic ability in human, especially in thinking abstractly (Hoffmann, Ivcevic, & Brackett, 2016). This, in turn, deploys in an individual and consists of cognitive, social, emotional, and the characteristics which in the end attached in an individual (Maksić & Pavlović, 2011).
Creativity appears because it is driven by one’s potential of intelligence that has been formed and genetically inherited from one’s parents. Therefore, the level of creativity depends on what the parents give, teach and implement to their children's life (Burns, Zhang, Wieth, & Touyz, 2017). The intelligence that comes from their parents becomes children’s basic knowledge which in turn develop one’s confident step by step (Bush, 2014). The environment where individual live in will also strengthen or weaken the potential of creativity that depends on the school where the children study, how they interact with others, how they solve the problems they face or another life context in terms of the development of the children (Collard & Looney, 2014).

There are some creative characteristics that exist in an individual that makes them recognized as a creative person. Generally, creativity can be described into 3 perspectives that are originality, novelty and differentiation (Choi, 2004). A creative person has special traits such as 1) Imaginative, 2) The willingness to always try something new 3) Original thinking and high curiosity (de Alencar, 2014). From other perspectives, creativity can be analyzed through some characteristics such as: 1) Imaginative (Playing with possibilities, make connection, use the intuition), 2) Inquisitive (Imagining and questioning, exploring, investigating and challenges) 3) Persistence (Unique, persistence in the misery and tolerance), 4) Collaborative (Give and receive the advice, suitable collaboration, and share the result), and 5) Discipline (Reflection about the criticism, development of the technique and the development of the personality (Soriano, 1985).

Creative persons are those who have the personalities of openness to new experience, high curiosity, the willingness to explore the unknown, and ability to understand the ambiguity (Collard & Looney, 2014). This openness reflects the curiosity based on one’s intelligence and the tendency to create something new (Burns et al., 2017). Creativity also can be related to the originality of an idea, openness to experience, the willingness to receive something new, different and it might be irrational, willingness to take the risk in thinking or behaviour and having the sensitivity about the aesthetics of those ideas.

Creativity in the area of education can not be separated from two significant aspects: teachers, as the educators, and students as the knowledge receiver. There are some forms of creativity that can be seen in the area of education. Firstly, the learning aspect which can be linked to an interesting presentation, the importance of learning, the application of the knowledge to the daily life, and using the stories as the learning method. Secondly, the Class Management which can be linked with how the teachers change the size of the class and give the additional session outside the class. Thirdly, the homework aspect by giving the creative tasks or homework that can be accomplished individually or in a team. Fourthly, the interaction between teachers and students where teachers stimulate the students to actively posing the questions, using students’ existing knowledge, and giving positive feedback. Fifthly, in terms of teachers' characteristic, in which this relates to enthusiasm, interest and attention, open minded, and actively listen to the students’ need (Abedini & Broujeni, 2016). Meanwhile, the indication of students' creativity can be seen in some aspects. Firstly, the learning based on self-reflection. Secondly, autonomous in learning. Thirdly, showing the great motivation and high curiosity. Fourthly, creating or producing something. Fifthly, showing more than one perspective in analysing something. Sixthly, having the originality in new ideas. Seventhly, accomplishing the task until the maximum effort (Jahnke, Haertel, & Wildt, 2017).

Creativity is considered as the prominent aspect in this millennial era (Lucas, Claxton, & Spencer, 2013). The best way to having the creativity in this millennial era is by capable enough to see the potencies in one’s personality and able to enhance this creativity by utilising the media as the profitable source. Besides, there is also a need to face the challenge and dare to take the risks.

The basic understanding about “what is creativity” and “what is a creative person” is the basic understanding that can be used to set up the teaching and learning strategy that can enhance students’ creativity. School as the place where education is built up should be a place that supports creativity by creating such environment where students are invited to creatively face the new situation with good confidence and brave enough to face the unpredictable condition (Collard & Looney, 2014). By creating this circumstance is school, it is hoped that students could grow with optimism because they get used to the challenging habit and pressured situation which in turn could force the students to give their endeavour and best effort to reach the goal (Techman, 1976). Overmore, the strategies and teaching methods can be done by applying many types of activities which can stimulate the creativity such as the teaching and learning method based on self-reflection, autonomous learning, high motivation and curiosity, creating something new and giving the best endeavour in accomplishing the task (Abedini & Broujeni, 2016).

The supporting factors that are linked with creativity are the individual's hardworking and the influence of environment and group where an individual live in (Seng, Keung, & Cheng, 2008). Furthermore, other factors also support the creativity, such as students’ intelligence, knowledge, the way of thinking, motivation, environment, personality, and the individual’s components in promoting the creativity (Strenberg, 2006).

The encouragement or intrinsic motivation and socio-economy status (such as the availability of learning sources at home) can support the creativity, though it was found that this only influence
students’ creativity in the early stage of their age while the development of creativity in the next stage is highly influenced by social environment where the students live (Thoring, Desmet, & Badke-Schaub, 2018). It was found that students who were supported by their school in enhancing their creativity have higher self-efficacy and found to be more creative (Chang, Wang, & Lee, 2016).

Another perspective reveals 3 challenges that influence creativity that are fluency (the quantity of the idea), flexibility (the variation of the idea), the originality (new and the usefulness of the idea). Therefore, it is understood that an individual who has the creativity is demanded to have the various idea which is original and can give the advantage (Warren, Mason-Apps, Hoskins, Azmi, & Boyce, 2018). To sum up, it can be concluded that creativity is a complex concept, so that it is need to be understood seriously by comprehending the aforementioned factors. There is a hope that the result of this research could give understanding and the reference about the importance of creativity aspect in education.

CONCLUSION
Creativity as a complex aspect can become a suitable indicator to predict the achievement of education in the school. Due to its complexity, every educational element should posit creativity as the essential factor. Thus there is a need to have a good understanding about the concept of creativity. Therefore, this research has been done to give the comprehensive understanding of the definition of creativity, the traits of creative person, creative climate in the school until the factors that could support or inhibit the creativity.

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