THE EFFECT OF CURRICULUM ON THE LEVEL OF FIGURAL CREATIVITY AMONG ELEMENTARY SCHOOL STUDENTS

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ABSTRACT

One of the most important elements everyone has to have is creativity. There are several factors that can affect one's creativity level one of which is the environment. The school environment is one of the factor that affect the level of creativity of children because children use a lot of time in school so that a good school environment will greatly affect the behavior and creativity that is owned by a child. The process of teaching and learning in schools is guided by the curriculum, so the curriculum that is able to stimulate all the students' skills from various sides is very important. The purpose of this study is to determine the level of creativity in elementary school students who apply curriculum KTSP and K-13 in Padang city. The approach used is quantitative analysis, sample selection is done by random sampling technique, there are two schools that have different curriculum, form each school selected 20 students 10 years old, The Figural Creativity Tests (TKF) were conducted to determine the level of figural creativity of students. The results showed the test value = -1,774 is significant with 0.084 bigger than 0,01 which means there is no significant difference between the figural creativity level of students in elementary school A (KTSP curriculum) with the figural creativity level of students in school B (K-13 curriculum). The mean value of the KTSP curriculum is 100 but the mean value of the K-13 curriculum is 95.50, this means that the curriculum of KTSP influences student's figural creativity more.

Keywords: Creativity, curriculum, elementary school

INTRODUCTION

The study of curriculum has become an important aspect in the system of national education. Curriculum is very important because the curriculum will direct all educational activities to achieve the goals of national education. The purpose of national education is to develop the potential of students to become human beings who believe, devoted to God Almighty, have a noble character, healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic and responsible. One of the important elements in the goal of national education is to develop the potential of students to become creative human beings. So the creativity is an important thing that needs to be applied in an attempt to improve the achievement of the learning results. The importance of creativity development is contained in MPR-RI Decree No. 11 / MPR / 1983 in Utami Munanda, as follows: "The education system needs to be tailored to the needs of development in all fields that require different types of skills and skills as well as to improve productivity, creativity, quality and efficiency".

Because creativity is very important then the curriculum changes from curriculum 2006 (KTSP) to the curriculum 2013 (K-13) which creativity is the key word in the K-13 curriculum. According to Mendikbud Mohammad Nuh when socializing the K-13

curriculum, creativity is the basic capital to give birth innovative children, who are able to find alternatives to an increasingly complex problem or challenge in the future. But in its application there are still schools that use KTSP curriculum.

Several studies have been conducted related to evaluation or analysis of the use of K-13 curriculum when compared to the KTSP curriculum and see student creativity based on the implementation of the K-13 curriculum, such as research at elementary school Al - Azhar Syifa Budi Legenda stated that with the K-13 curriculum students are more creative, it can be seen from the students are able to give an explanation in answering a question, the students are no longer focused on memorizing the book (Nurhadi Santoso, 2014). Studies by suwarsono indicated good results in applying the K-13 curriculum to develop creativity of students in math lessons

However, few studies have been done on the effect of curriculum on the level of figural creativity of students is only measured or seen from the way of learning and learning outcomes in one subject only. While in this research the level of creativity of the students is measured by using the tool tests is a Figural creativity test which tests were conducted by an psycholog using test tools that have been standardized, so it can measure the level of creativity of students more valid or better. The purpose of this research was to determine whether or not difference in the level of student figural creativity in elementary schools with KTSP curriculum compared with students in elementary schools with K-13 curriculum.

The result of this research could be a consideration to reevaluation of how management and implementation of K-13 curriculum so that the development of student creativity can really be achieved.

BACKGROUND WORK

Curriculum

According to the Law of the state of Republic of Indonesia Number 20 article 1 (9) in 2003, the curriculum is defined as a set of plans and arrangements concerning the purpose, content and learning materials as well as ways that are used as guidelines for learning activities to achieve specific educational goals.

Creativity

According to Solso (2008) and Suharnan (2005), Creativity is a cognitive activity that produces new ways of looking at a problem or situation in terms of prkatis as well as new ideas.

According to Mann, K. et al. (2009) Reflectiveness is defined as a person's ability to produce composition, new products or ideas that were previously unknown.

According to Parjanen, S. (2012) Creativity is a process that aims not just results, creativity leads to create something new, different, unique, oral or written, concrete or abstract that has a useful or valuable.

According to Munandar S.C. Utami (1999) in Dharma, U. S. (2013) Creativity is defined as a process that manifests itself in fluency, in flexibility as well as in originality of thinking. Fluency is to be understood as the ability to come up with ideas rapidly, where the emphasis is on quantity and not on quality. Flexibility is the ability to produce a great variety of ideas, with freedom from perseveration. Originality refers to the ability to produce ideas that are statistically unique or unusual for the population of which the individual is a member.

Figural Creativity

Creativity figural is the ability to bring up ideas or new idea through images that are created. Figural creativity is based on drawing activities to generate new ideas or ideas, but does not require skill or drawing skills. Figural creativity emphasizes the ability to spark aspects of creative thinking and measure aspects of fluency, flexibility, originality and elaboration Munandar S.C. Utami (1999). The level of one's figural creativity can be known through a test tool that is the figural creativity test (TKF).

METHODOLOGY

The approach used in this research is quantitative method. The purpose of this research is to determine whether there is a difference in the level of figural creativity between elementary school students applying the KTSP curriculum with elementary school students applying K-13 curriculum.

The research begins with field observations to conduct a review to the Private Elementary School in Padang, Padang was chosen because it is known as the largest educational city or the most popular educational city in the Sumatra Island, Indonesia. Then the selection of schools and students is done by random sampling techniques so that obtained 2 schools that have a different curriculum that is KTSP and K-13, 20 students were selected from each school by age 10 because development of creativity at this age 50%-70%, creativity evolved from childhood and will reach its peak in producing creative things at the age of 30-40 years, after which creativity tends to stagnate or decrease (Hurlock, 1978). Total sample in this research were 40 students.

The level of figural creativity of all students were measured using a test taken from the Torance Test of Creativity Thinking (TTCT), the Figural Creativity Test (TKF). According to Munandar et. al. (1988), the Figural Creativity Test (TKF) is an adaptation of the Circle Test made by Torrance and was then standardized in 1988. The figural creativity test (TKF) was first used in Indonesia by Utami Munandar in 1977. The creativity measured in TKF has an understanding as the ability to form new

combinations of given elements reflected in the fluency, flexibility, and originality in giving ideas and abilities to develop, elaborate, and enrich (an elaboration) an idea.

Data analysis in this study using the technique of Independent Compare Sample T-test. The calculations in this analysis are performed using Statistical Product and Servise Solution (SPSS) software.

RESULTS

Figural creativity tests are performed by an psycholog, the form of a given figural creativity test includes activities: 1) Make a picture of a given form; 2). Complete the image, based on some excitatory lines; 3). Make various images of a given circle. The student's figural creativity test score is classified into several levels, it can be seen in Table 1.

Table 1. The Level of creativity quotient (CO)

Creativity Quotient (CQ) Range	Creativity Quotient Level	
>128	Very Superior	
120 - 127	Superior	
111 - 119	High Average	
91 - 110	Average	
80 - 90	Low Average	

Normality test aims to test one of the basic assumptions of t test are independent and dependent variables must be normally distributed or near normal (Santosa 2000). The statistical test used to test normality is by using the Shapiro Wilk normality test. The normality test result at school A with KTSP curriculum shows the significance value of 0,135 and at school B with curriculum K-13 shows significance value 0,389. Both values of significance greater than 0.05 so that the distribution of figural creativity scores in both schools is normal.

Homogeneity test aims to determine whether the variants of the variables used are homogeneous. From the calculation shows the significance value on the test of homogeneity of variances is 0,226. Because the value of significance is greater than 0.05 it can be concluded that figural creativity data has the same variance.

In the descriptive analysis the data used are the students figural creativity scores, where the Figural Creativity Test from School A with the KTSP curriculum can be seen in graph 1, the result are 5% of students are at the superior level, 20% of students are high average levels, 55% of students are at an average level and 20% of students are low average levels.

TKF Level

Superior

High Average

5%

20 %

Figure 1. Figural creativity test in school A

Figural Creativity Test Results from School B with K-13 curriculum can be seen in graph 2, the result are 5% of students are high average level, 80% of students are at an average level and 15% of students are low average level.

Figure 2. Figural creativity test in school B

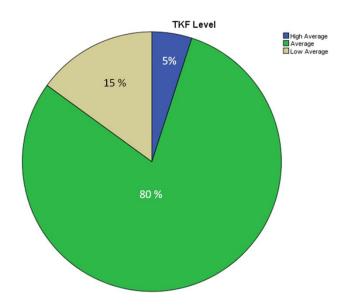
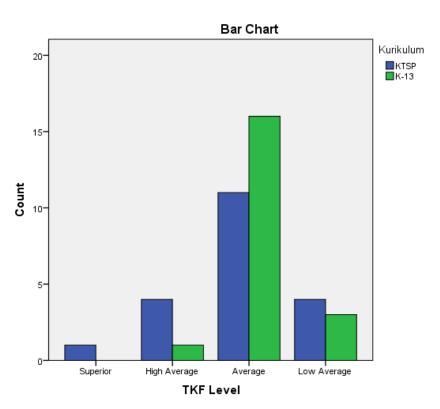


Figure 3 and Table 2 show comparison of student's figural creativity test results from both schools. In addition, Table 2 is shown the figural creativity level of the overall sample 2.5% superior level, 12.5% high average level, 17.5% low average level.

 $Table \ 2. \ Student's \ figural \ creativity \ test \ from \ both \ schools$

TKF Level	Curri	Total	
	KTSP	K-13	
Superior	5%	0%	2.5 %
High average	20%	5.0%	12.5%
Average	55%	80%	67.5%
Low Average	20%	15%	17.5%

Figure 3. Students figural creativity test from School A and School B $\,$



Comparative test conducted on the two schools that apply different curriculum is based on t test that is obtained obtained t value = -1,774 sig 0.084 bigger than 0,01 which means there is no significant difference between the figural creativity level of students in elementary school A (KTSP curriculum) with the figural creativity level of students in school B (K-13 curriculum).

Although there is no significant difference but from the two applied curricula that have higher mean values is the KTSP curriculum, it can be seen in Table 3.

Table 3. Mean value calculation results of student's figural creativity tests

Curriculum	N	Mean	Std. Deviation	Std. Error Mean
KTSP	20	100.00	9.234	2.065
K-13	20	95.50	6.589	1.473

The mean value of the KTSP curriculum is 100 but the mean value of the K-13 curriculum is 95.50, this means that the curriculum of KTSP influences student's figural creativity more.

DISCUSSION

One of the important things that underlies the changes from Curriculum 2006 (KTSP) to curriculum 2013 (K-13) is the development of creativity (creative thinking or creativity figural) both on students and teachers. So the authors suggest to do reevaluation of how the management and implementation of the K-13 curriculum so that the development of student and teacher creativity can really be achieved.

Increasing the quality of human resources at this time certainly cannot be separated from the development of information technology and communication, especially computers. If seen in real time the use of computers in schools has not been maximized. It can be seen in schools that implement KTSP curriculum, computers are used only when students learn subjects Information and Communication Technology (TIK). While in schools that apply K-13 curriculum, TIK is not as a subject but as a tools of learning.

The use of computerized technology that follows the times need to be introduced from an early age to students such as robotics technology. Where when students learn robotics, students not only learn the computer technology that is in it but also involve motoric skills, develop imagination thinking, and others. So it is expected to stimulate the figural creativity in the students.

Based on the results of data analysis conducted in this research is the analysis of the level of figural creativity done on elementary school students with age 10 years, it can provide input to the school and government agencies to re-evaluate the primary school curriculum and conduct a review in the implementation such as school facilities and abilities teachers in the implementation of the curriculum.

REFERENCES

Adams, K. (2005). The Sources of Innovation and Creativity. Education 1-59 doi:10.1007/978-3-8349-9320-5

Aurum, A. & Gardiner, A. (2003). Creative idea generation. Aust. Stud. Knowl. Manag.

Dharma, U. S. (2013). PENGEMBANGAN KREATIVITAS DALAM PEMBELAJARAN MATEMATIKA PADA KURIKULUM 2013, 1, 1–24.

Fasko, D. (2001). Education and Creativity. Creat. Res. J. 13, 317–327

Garaigordobil M (2010) Intervention in Creativity With Children Aged 10 and 11 Years: Impact of a Play Program on Verbal and Graphic – Figural Creativity Intervention in Creativity With Children Aged 10 and 11 Years: Impact of a Play Program on Verbal. 18:37–41

Hurlock, Elizabeth, B. (1978). Child Development, Sixth Edition. New York: Mc. Graw Hill, Inc.

Honeck, E. (2016). Inspiring Creativity in Teachers to Impact Students. Torrance J. Appl. Creat. 1, 33-38

Jaarsveld, S., Lachmann, T., Hamel, R. & van Leeuwen, C. (2010). Solving and creating raven progressive matrices: Reasoning in well-and ill-defined problem spaces. Creat. Res. J. 22, 304–319

Kim, K. H. (2006). Can We Trust Creativity Tests? A Review of the Torrance Tests of Creative Thinking (TTCT). Creat. Res. J. 18, 3-14

Kim, K. H. (2011). The Creativity Crisis: The Decrease in Creative Thinking Scores on the Torrance Tests of Creative Thinking. Creat. Res. J. 23, 285–295.

Mann, K., Gordon, Æ. J., & Macleod, Æ. A. (2009). Reflection and reflective practice in health professions education: a systematic review, 595–621. https://doi.org/10.1007/s10459-007-9090-2

Munandar, S.C. Utami.(1999). Kreativitas & Keberbakatan. Strategi Mewujudkan Potensi Kreatif & Bakat. Jakarta: PT Gramedia Pustaka Utama.

Nakano, T. de C., Wechsler, S. M., Campos, C. R. & Milian, Q. G. (2015). Intelligence and Creativity: Relationships and their Implications for Positive Psychology Psicología Positiva Positiva. Psico-USF 20, 195–206.

Parjanen, S. (2012). Experiencing Creativity in the Organization: From Individual Creativity to Collective Creativity, 7.

Ryan TG and Brown K (2012) Musical Creativity: Measures and Learning. J Elem Educ 22:105-120

Santoso, N & Mustika, E, (2014). Pengembangan kreativitas siswa berdasarkan implementasi kurikulum 2013, pedagogik, vol.II,

No.1 Februari 2014

Sharp, C. (2001). Developing Young Children's Creativity Through the Arts: What Does Research Have to Offer? Invit. Semin.

Sharp, C. (2004). Developing young children's creativity: what can we learn from research? Pract. Res. Educ. 5–12.

Solso, Robert L. (2008). Psikologi Kognitif. Jakarta. Erlangga.

Sternberg, R. J. (2006). The Nature of Creativity. Creat. Res. J. 18, 87–98

Sternberg, R. J. (2006). The Nature of Creativity. Creat. Res. J. 18, 87–98

Suharnan. (2005). Psikologi Kognitif. Surabaya: Srikandi Suriasumantri.

Suwarsono, Prosiding SNMPM Universitas Sebelas Maret 2013. Vol.1 hal.2

Thang, B. et al. (2008). Comparing the creativity of children's design solutions based on expert assessment. Proc. 7th Int. Conf. Interact. Des. Child. - IDC '08 266–273 doi:10.1145/1463689.1463765

Yoenanto, N. H. & Aliyati, P. D. (2014). Hubungan antara perceived autonomy support siswa terhadap guru dengan kreativitas siswa kelas xi sma insan mulia surabaya. J. Psikol. Pendidik. dan Perkemb. 3, 21–29