

The Effect of Restriction of Choices on the Creativity of Primary School Children in Calabar, Cross River State

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Abstract: *Fostering creativity seems to be a core concern of educators in the 21st century. While stake holders in education re researching ways to stimulate and enhance the creative capacities of learners, they are also careful not to destroy the innate creative potential of learners by the practices that characterize the classroom/learning environment. The current study seeks to investigate the effect of restriction of choices; one of the identified ‘killers of creativity’ on the creativity of primary school children. The design employed in this study is the post-test control group quasi experimental design. Sampling was, two intact classes of grade four pupils were utilized for the study. Data was in form of graded creative artwork of the children during their creativity class. One research question was asked and one hypothesis formulated for the study. Data was analysed using the independent population t-test statistical tool. Result revealed that restriction of choices has a negative effect on the creativity of primary school children. Recommendations were made based on the finding of the study and suggestions given for further research.*

Keywords: *Creativity, restriction of choices, innate creative potential, perception*

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I. Introduction

The issue of creativity, what hinders or destroys it and how to stimulate or awaken it, is topical in the 21st century. This might not be unrelated to the numerous challenges thrown to the human race by the continuous transformation of our universe and the threat to the existence of the human race in the coming years. There is a need for humans to develop innovative measures to contain the effects of climate change, natural disasters, population explosion, availability of nuclear weapons and so on. It is for this and other reasons that the educators of the 21st century are concerned with stimulating the creative potential of children and turning them into the next generation inventors.

Creativity refers to the capability of the individual to use existing resources in creating novel products, or the use of existing products in novel ways all with a goal of providing solutions to existing problems and enhancing adaptation of man to his environment. It also involves providing entertainment and relief to the human race by creating products of value that is appealing to the human race. It is in the second category that the works of great artists such as Pablo Picasso, Michelangelo, Vincent Van Gogh, Leonardo da Vinci, Handel Messiah and others belong. As a matter of fact, these creative art works also increase adaptation to life. From the work of Al-Nouh1, Abdul-Kareem & Taqi (2014) creativity was understood to mean, the use of natural skills of individuals in proffering solutions to everyday situations in a way that is unusual, enduring difficulties, and crafting out innovative ways to handle daily routines. Hence one dimension of creativity involves engaging in daily routines in a more productive way. Beyond engaging in normal activities in an unusual but highly productive way, creativity also involves providing solutions to problems. DeWulf in Sadeghi and Ofoghi (2011) identified three characteristics for creativity including ability to visualize ideas, effective use of memory, convergent and divergent ways of thinking. Hennessey and Amabile in Wilson (2018) identified seven killers of creativity, surveillance, evaluation, over control, restriction of choices, reward, competition and pressure. The current study seeks to investigate the effect of restriction of choices on the creativity of primary school children in Calabar Municipality.

Restriction of choices was defined in Wilson (2018) as deciding for children which activities to participate in instead of allowing them to participate in activities that they are curious and passionate about. Restriction of choices is thought to restrict active exploration and experimentation. This is likely to limit the creative abilities in individuals. In Nigeria, restriction of choices occurs to such an extent that parents make career choices for their children and in many cases may compel children to travel career paths that they; the parents, have chosen. Some parents tend to want to live their unfulfilled dreams through their children. This trend is disturbing as it may limit the children's success in these parents chosen career. The parental choice may not tally with the children's interest and abilities and this may also limit their creativity on the job.

Sellier and Dahl (2011) in a research that utilized a knitting and crafting contest in two experimental studies, it was discovered that restriction of choices of creative inputs actually increased the creativity of more experienced consumers; that is, it increases the creativity output. This increase in creative output as judged by experts in the field of creativity was thought to be due to an increase in the enjoyment of the creative process. The study found out however that both experienced and inexperienced consumers perceived the restriction of choices of creative inputs as being detrimental or limiting to their creativity or creative outputs. According to Moreau and Dahl in Sellier and Dahl (2011) a combination of restriction of creative inputs and imposing of inputs increases creativity and creative outcomes by forcing inputs consumer on the path of least resistance. This is due to the fact that the consumers are compelled to move away from the known solutions to a problem.

Gray (2012) stated that studies show a decline in creativity among American's children over the last two to three decades. This was demonstrated by declining scores on the Torrance test for Creative thinking (TTCT) in a study carried out by Kim in Gray (2012). Kim (2011) stated that there seems to be a reduction in children's emotional expressiveness, verbal expressiveness, humour, imagination, unconventionality, liveliness, passion, perception, and synthesizing abilities. The aspect of creativity reported by Kim in Gray (2012) to have declined the most is creative elaboration

A study by kim (2011) which obtained the data set for the normative samples for the TTCT-figural through the scholastic testing service, Inc. Six samples from 1966, 1974, 1984, 1990, 1998 and 2008, consisting of 272,599 kindergartens through 12th grade students including adults. The study compared scores for fluency, elaboration, originality, title, strength and closure for the different years, pooled means and standard deviation were calculated. Independent sample t-test was used to calculate the difference in subscale scores. Effect sizes were reported to explain the increase or decrease in scores. Results showed that fluency scores increased up to third grade and remained static at fourth and fifth grade and then decreased significantly from sixth grade. Originality scores increased through fifth grade and began to decrease from sixth grade, originality scores increased for adults but the increase was not statistically significant, elaboration scores increased up to fifth grade and remained static at sixth grade. Elaboration scores increased insignificantly for seventh and eighth grade but decreased in adulthood. Scores for abstractness of titles increased up to fifth grade and remained static from sixth through eighth grade and significantly increased in adults. Closure scores increased to third grade, remained static for fourth and fifth grade and decreased in sixth grade.

The results show a decrease in creativity as children grow into adulthood. The decline begins in young children. This is a cause for concern as it is indicative of a stunting of abilities that should rather be developed. This decline is perceived by Gray (2012) to be due to continuous monitoring, evaluation, adult direction (limiting children's choices) and pressure to conform. Gardner in Kim (2011) asserted that conformity leads to a decline in artistic creativity of children. The decline in creativity as children grow into adults is a major cause for concern and is one of the motivations for this study.

The age at which decline in creativity begins at, is an age in which influence of the home is either more significant or equally significant as the influence in the school. This means that factors that inhibit creativity may be present both in school and at home. Kim (2011) suggested encouraging flexibility as opposed to standardization as a solution to increasing children's creativity. He stated that team work and collaborative work be encouraged over competition, parents should provide, receptive, acceptive and psychological support to children to enhance creativity high stake testing should be reduced and elementary recess and playtime be encouraged.

Even though there are a number of researches that support the position that restriction of choices limits creativity (Amabile & Grieskiwicz, 1987, Shalley, 1991 and Greenberg, 1992), there seems to be increasing research evidence of the fact restriction of choices may increase creativity for several reasons. Timmerman in Chua and Iyengar (2008) found that with increased options people used elimination strategy and use less information in making choices.

Iyengar and Lepper in Chua and Iyengar (2008) found that people given more choices reported more frustration and difficulty in decision making. Chua and Iyengar (2008) introduced some moderating variables into their research on the effect of choice on creativity. They introduced prior experience which has been suggested as a predictor of creative performance (Amabile 1983) and task instruction which in this instance was an explicit instruction to be creative during problem solving. The study was conducted using, a 2 (low versus high choice) x 2 (non-creativity versus creativity instruction) x 2 (low versus high prior experience in task domain) between subjects design to test hypothesis. A gift wrapping task was used in the study. A total of 100 students (38% males and mean age 21) were recruited from an east coast university through flyers posted on campus and compensated 8 dollars for their time. Results showed that only individuals with high prior experience in the task domain and explicit instruction to be creative in the task produced more creative outcomes when given more choices. People with low prior experience and non-creativity instruction did not produce more creative outcomes with more choices. From the design presented above some participants were

given a non-creativity instruction, that is, they were asked not to be creative in their task. This will certainly lower the creativity out-put of the participants.

Sagiv, Arieli, Goldenberg and Goldschmidt (2009) also carried out a study to determine the effect of structure and freedom on creativity. 165 students were recruited voluntarily to participate in the research, 60 percent of the participants were women. The participants received course credit or an equivalent of 4.50 dollars for their participation. The research design was a four within participant replications of a 2 (process structure: Function follows form, form follows function) x 2 (Cognitive style: systemic, intuitive) factorial between participants' design. Task included commercial ads and two problems from the field of new product development. The study also involved two conditions one was a highly structured procedure and another involved production of ideas due to free associations. Findings revealed that creativity was higher under structured conditions. It also revealed that intuitive individuals are more creative than systematic individuals under free conditions where structure is not externally imposed.

The current study seeks to ascertain the effect of restriction of choices on the creativity of children in an African climate, specifically in Cross River state, Nigeria.

II. Theoretical Background to the Study

Piaget's Theory of Creativity

Piaget theorised that children can make sense of the things around them by actively engaging or interacting with those things. He believed that spontaneous and unstructured play is beneficial to children in the attainment of their goals. He emphasized liberty in learning. Piaget recommended focus on the child's thinking process and not the product. He believed that voluntary and self-directed involvement in activity is beneficial. He proposed the deemphasise of readymade knowledge because it was thought to be limiting to children's creativity. Piaget emphasized autonomy and self-regulation that allows the child to construct their responses. He recognised the need to produce investors and innovators that were non conformists. This element of nonconformity is the bedrock of creativity. Piaget's theory supports the assertion that over control and restriction of choices are killers of creativity. This factors require conformity. They also provide readymade knowledge and do not allow for self-regulation and autonomy. Surveillance and evaluation limit liberty to be spontaneous and create.

Research Question

1. Is there any difference in the mean scores of the experimental and the control group?

Hypothesis

1. There is no significant effect of restricting choices on the creativity of primary school children.

Methodology

The research design was the post-test control group experimental design. Thirty-seven (37) grade four pupils from two intact classes in a primary school were purposively chosen for the study. Grade Four marigold consisted the experimental group while Grade Four Daisy were the Control group. The pupils were given a drawing and colouring exercise. The experimental group were presented with an object arranged in a particular to draw and paint. They were asked to stick with the original colours of the object. While the control group were asked to draw and colour any object of their choice, including the arranged object. They were also given the liberty to apply their imaginative powers in rearranging the arranged objects differently and sing any colour of their choice. They were also provided with a very wide range of colour pencil, crayons and even water colours from which to choose the colours used for painting. The activity took place as part of their normal creative art classes. With the Creative art teacher facilitating the process. The class work produced during the creative art class was collected and graded by two experts in the field. A mean score was derived for each participant. Scores from their class work constituted the data for the study.

Research Area

The research was conducted in Calabar Municipality, Cross River State. Lourdes Academy was used for the research.

III. Presentation of Results

Research Question 1

Is there any difference in the mean scores of the experimental and the control group?

From table 1 below it can be gleaned that the mean score of the experimental group whose choices were restricted is 6.13, while the mean score for the control group is 8.41. Since the two groups were equivalent the difference in the mean score between the experimental and the control group could be said to be as a result of the restriction of choices.

Hypothesis 1

There is no significant effect of restriction of choices on the creativity of primary school pupils.

Table 1: Group statistics of the Experimental and Control groups.

Group Statistics					
	pupil's Groups	N	Mean	Std. Deviation	Std. Error Mean
Pupils scores	experimental Group	166	6.1250	1.74642	.43661
	Control Group	168	8.4063	1.60436	.40109

From the table above the mean score for the experimental group whose choices were restricted is 6.13, while the mean score of the control group whose choices were not restricted is 8.40. The control group scored higher than the experimental group. This difference in scores can be accounted for by the restriction of choices. Hence, there is a difference in the means scores of the experimental and the control group due to restriction of choices of the experimental group.

Table 2: Independent t-test of the effect of restriction of choices on the creativity of primary school pupils.

Independent Samples Test

		Levene's Test for Equality of Variances	t-test for Equality of Means							
		F	Sig.	T	Df	Sig. (2-tailed)	(2-Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pupils scores	Equal variances assumed	.168	.685	-3.848	30	.001	-2.28125	.59287	-3.49206	-1.07044
	Equal variances not assumed			-3.848	29.787	.001	-2.28125	.59287	-3.49242	-1.07008

Sig. = .05, df = 30, t(30) = -3.848 p = .001

An Independent t-test was carried out to test the hypothesis that there is no significant effect of restriction of choices on the creativity of primary school pupils. At t(30) = -3.848, p = .001. Since p is less than .05 we reject the null hypothesis. Hence we fail to reject the alternative hypothesis that there is a significant effect of restriction of choices on the creativity of primary school pupils. The pupils' choices on what to create, what materials to use, what colours to use were restricted, this impacted on their creativity scores. This can be viewed from table 1 above the mean score of the control group(8.40) whose choices were not restricted is higher than the mean scores of the experimental group(6.13) whose choices were restricted.

IV. Discussion of results

From research question 1 hypothesis 1, it can be gleaned that there is a significant negative effect of restriction of choices on the creativity of primary school children. In the face of limited choices, the motivation of the children seems to be reduced. Children love to explore to play around with available choices and in the course of that exploration and play their creativity seems to be heightened. In the face of restricted choices, the enthusiasm of the children is reduced and this seems to reduce their perception of their performance. That is, they seem to believe they can do less with less. The above finding is in line with the findings of Sellier and Dahl (2011) who found out that both experienced and inexperienced consumers perceived the restriction of choices of creative inputs as being detrimental or limiting to their creativity or creative outputs.

Perception has a role to play in the behaviour of individuals. Elnaga (2012) in his work the impact of perception on work behaviour concluded that perception influence behaviour. Dijksterhuis and Knippenberg(1998) replicated the findings of Bargh, Chen and Burrows (1996) that perception has a direct and pervasive impact on behaviour.

The finding of the current work supports the findings of Amabile & Grieskiwicz, 1987, Shalley, 1991 and Greenberg, 1992, that restriction of choices inhibits creativity. This finding also technically supports the work of in Chua and Iyengar (2008) who found out that only individuals with prior experience and an explicit instruction to be creative produced more creative works when given more options. While the participants in this study were not given explicit instructions to be creative, they can be said to have prior experience in drawing and painting; hence participants who were given a wider range of choices in terms of what to paint, what colour to use and how to go about their painting produced works that were considered more creative by experts, were neater and also the children whose choices were not restricted displayed a greater ease and enjoyment whilst on the task.

The finding in the current study however does not support the findings of Sagiv, Arieli, Goldenberg and Goldschmidt (2009), who found individuals to be more creative in a structured condition than in conditions of freedom of choice. The difference may stem from the demographics of the participants in the two studies. Sagiv, Arieli, Goldenberg and Goldschmidt (2009) used university students in their study, while the current study used primary school pupils with an average age of 10 years old. Also the University students were recruited for reward of either cash or Kind (course credit); this factor could also have acted as a moderator of their behaviour and influenced their creativity.

V. Conclusion

There is a significant negative effect of restriction of choices on the creativity of primary school children. This implies that, restriction of choices inhibits the creativity of primary school children.

Recommendation

Based on the findings of this study, it is recommended that children's choices should not be restricted, especially in activities that require critical thinking and creativity. Children should be allowed to choose which activities they will like to participate in, including being given the freedom to make career choices. Children should also be allowed to choose the approaches they use in problem solving. They should not be constrained to stereotypical approaches.

Suggestions for further research

Based on the fact that results differ as to the effect of restriction of choices on the creativity of individuals, this study should be replicated both in Cross River State and other geographical locations.

References

- [1]. Al-Nouh1, N. A., Abdul-Kareem, M. M., & Taqi, H. A. (2014) Primary School EFL Teachers' Attitudes towards Creativity and Their Perceptions of Practice. *English Language Teaching*; 7 (9), 74 – 90
- [2]. Amabile, T. M. (1983) The Social Psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*. 45 (2), 357-376
- [3]. Amabile, T. M. & Gryskiewicz, S. S. (1987) Creativity in the RED laboratory. Greensboro, N. C.: Center for Creative Leadership
- [4]. Bargh, J. A., Chen, M. & Burrows, L. (1996) The automaticity of Social Behaviour. Direct effect of trait concept and stereotype activation on action. *Journal of Personality and Social Psychology*, 71, 230-244
- [5]. Chua, R. W. & Iyengar, S. S. (2008) Creativity as a matter of choice: Prior experience and task instruction as boundary conditions for the positive effect of choice on creativity. *Journal of Creative Behaviour*, 42(3), 164-180
- [6]. Elnaga, A. A. (2012) The impact of perception on work behaviour. *Kuwait Chapter of Arabian Journal of Business and Management Review*, 2(2), 56-71
- [7]. Greenberg, E. (1992) Creativity, autonomy and evaluation of creative work: Artistic workers in organizations. *Journal of Creative behaviour*. 26(2), 75-80
- [8]. Gray, P. (2012) As children's freedom has declined, so has their creativity. Retrieved from www.psychologytoday.com on the 16th of October 2018
- [9]. Kim, K. H. (2011). The Creativity Crisis: The decrease in creative thinking scores on the Torrance Test of Creative Thinking. *Creativity Research Journal*, 23(4); 285 -295
- [10]. Dijksterhuis, A. & Knippenberg, A. V. (1998) The relationship between perception and behaviour, or How to win a game of trivial pursuit. *Journal of Personality and Social Psychology*, 74(4), 865-877
- [11]. Wilson, L. O. (2018). Killing or fostering creativity in children: The Second Principle. Retrieved from www.thesecondprinciple.com on the 25th of July 2018
- [12]. Sagiv, L., Arieli, S., Goldenberg, J., & Goldschmidt, A. (2009) Structure and Freedom in Creativity: The interplay between externally imposed structure and personal cognitive style. *Journal of Organisational Behaviour*. Retrieved from www.interscience.wiley.com on the 17th of October 2018.
- [13]. Sellier, A., & Dahl, D. W. (2011) Focus creative success is enjoyed through restricted choices. *Journal of Marketing Research*, 48(6); 996-1007
- [14]. Shalley, C. E. (1991) Effects of productivity goals, creativity goals and personal discretion on individual creativity. *Journal of Applied Psychology*, 76; 179-185

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