

CREATIVE THINKING AS PREDICTOR OF TEACHERS' JOB PROFICIENCY IN PUBLIC SECONDARY SCHOOLS IN OHAJI, IMO STATE, NIGERIA

OPARAJI, Israel Chijiuka, Ph.D

Department of Educational Management and Policy, Nnamdi Azikiwe University,
Awka, Anambra State, Nigeria.

Email: ic.oparaji@unizik.edu.ng Mobile No : 08106429095

Abstract

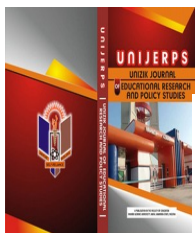
In this study, the researcher investigated the relationship between creative thinking and teachers' proficiency in public secondary schools in Imo state, Nigeria. The descriptive survey research design was adopted for the study. Two research questions and two null-hypotheses guided the study. The two null-hypotheses were tested at 0.05 level of significance. The population of the study consisted of 420 teachers randomly selected from the 240 secondary schools in Imo state. There was no sample size because of the size of the population. The instrument for data collection was "Creative Thinking as Predictor of Teachers' Job Proficiency in Public Secondary Schools in Imo State Questionnaire" (CTPTJPISQ). The instrument consisted of two sections. Section A was concerned with the relationship between creative thinking and teachers' job proficiency while section B dealt with the relationship between creative thinking and students' cognitive development. A 20 item questionnaire was designed along a modified four point rating scale; Strongly Agree (SA) = 4points, Agree (A) = 3points, Disagree (D) = 2Points and Strongly Disagree (SD) = 1 point. The item by item analysis was done using the same point scale rating. The questionnaire was validated by three experts, two in Educational Management and Policy and one in Measurement and Evaluation, all in the Faculty of Education, Nnamdi Azikiwe University, Awka, Anambra State. The reliability of CTPTJPISQ was obtained through trial testing and analysis using the split-half method of reliability. The two sets of scores derived from the pilot tests were correlated using Pearson Product Moment Correlation (PPMC). The reliability value 0.88 was obtained from the scores which indicated a high reliability of the instrument. The data collected were analyzed using arithmetic mean to answer the research questions while the Pearson Product Moment Correlation was used to test two hypotheses. The study found out that there is a significant relationship between creative thinking and teachers' job proficiency. It was also recommended that creative thinking models should be factored into classroom learning strategies in all public secondary schools in Imo State, Nigeria.

Key words: Creative thinking, predictor, teachers' job proficiency

Introduction

Creative thinking is the process of thinking rationally and logically while making some clear and independent deductions. It involves a high falluted thinking that

produces skills that cut across various discipline in education (Bomes, 2005). It is a consideration of logical connections of ideas which identifies constructs and evaluation analysis. It is thinking out of the box which locates inconsistencies and common errors



in reasoning while producing a systematic problem solving mechanism (Edumark, 2012).

Creative thinking is not the same thing as argumentative reasoning. It is rather a process or ability to evolve latent facts while revealing wrong beliefs and bad reasoning. It is also relevant in cooperative reasoning and constructive tasks. This pre-supposes that critical thinking can be helpful in accessing knowledge, enhance organised beliefs and strengthen logical argument. It is the production of the transaction of cognitive and meta cognitive consensus and the pursuit of logical structure of texts and hypothesis testing (Caroll, 2005).

In the new knowledge economy, the role of creative thinking cannot be over-emphasised; it has the potency to take care of changes with rapidity and effectiveness. This is because, it has the flexibility required by the new knowledge economy to accommodate the increasing demand on intellectual skills and the capacity to process information and integrate diverse sources of information for solving problems (Halpern, 2006).

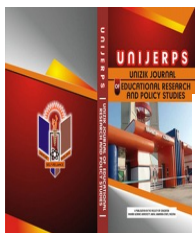
Creative thinking is regarded as the cognitive ability to transmit meaning to different concepts, thereby, empowering people for purposeful dialogue with others (Brady, 2008).

The models that make up creative thinking which are regularly suggested in the various definitions portend a multi-dimensional cognitive construct. They include inductive, deductive and creative nature that consists of multi-ferrous skills and capabilities (Facione, 2010). These models are knowledge base, motivation and cognitive operations. Though regarded in some quarters as critical thinking skills because

they are used for the strategic application of rules for good achievement, they however differ from creative thinking skills in that the interaction between them especially knowledge and cognitive operations translate into understanding, argument analysis, hypothesis testing and verbal reasoning which are established by creative thinking skills (KU, K.Y., 2009). It is a decision making and problem solving mechanism that is also concerned with probability consideration, consequent upon textual and conceptual interpretation, analysis and evaluation. It also deals with inference production, explanation and configuration of data in order to analyse and synthesis divergent issues that stretch the broad spectrum of the economy, politics and education (Stemnerg, 2003).

Creative thinking skills have dual formation. They operate as characteristics and as functions almost at the same time. As characteristics because they could be used to associate performance with creative thinking and as functions because they produce intelligence or quick mettleness (Sais and Rivers, 2010). Intelligence has been explained as a developing potential in man and it results from the transactions between genetic factors and life contexts. Such transactions explain the difference in cognitive abilities of people and their capacities for job performance. As a matter of fact, the elements for these interactions are what we call creative thinking skills. Beyond this, they manifest in the form of comprehension abilities, contextual analysis, and logical construction of texts (Edumark, 2012).

In politics, it shows up as the stimulated ideals and capacities that constitute the centrifugal and pentrifugal transactions of political gladiators. They form the mental underpinnings that power the struggle, the



fight and the manipulations of political actors and their prodigies. Creative thinking skills are the latent ideas that make one politician or leader thicker than the other. They are the non human forces that win election (Adekoya, 2016).

One major argument against creative thinking is that it is a complex type of reasoning that is characteristic of higher or elevated thinking which becomes very intricate to conduct an exact assessment or analysis leading to the use of assessment instruments that consist of items or condition that are delimited (Brachy, 2008). However, this criticism is disregarded because conventional intelligence assessment has shown that the instruments do not consider the environmental context of the performance of the person being assessed (Yauchar *et al.*, 2008). In view of the above factor, creative thinking as a model for the assessment of intelligence has been made to recognise the learning practices and environment of the intelligence of the subject or individual being assessed (Uchechukwu, 2015).

Creative thinking can be taught in school and some of the strategies that can make the teaching of creative thinking viable in schools are modelling, direct teaching, collaborative and tutorial learning. Others are the presentation of challenges to students to stimulate critical thinking. Creating curiosity and inquisitiveness in students about their environment and expecting their feedback on their performance will generate creative thinking abilities in them (Pither and Soden, 2000).

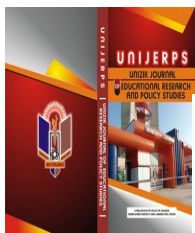
The school is the learning centre where it can be taught. The basic or primary school which is regarded as the foundation of learning could start plans to teach creative thinking. At this early stage, the child is

taught how to think clearly and reflectively. Very simple objects like the pen, pencil and school shoes of the child could be used to teach the child to think of other uses of these materials and how to keep them safe and secure (Igala, 2012).

The teaching of creative thinking in school requires time. This is because, the extent of its success depends on the degree of cognitive development of students. As a matter of fact, the social interaction and group work relationship among students in school settings appear to boost the quality of creative thinking (Phan, 2010). Teachers' proficiency can therefore be explained in terms of his capacity for quality lesson delivery which results in students' deep and reflective thinking.

Creative thinking expands the curricular and cognitivity of students and this is achieved through the teaching of the various thinking skills. It also helps students to think more efficiently and independently especially when dealing with distinct real-life situations (Noddings, 2008). It develops in students the ability to internalize what they read and increase their intuitive ability. This is possible because, it supports or encourages the development of analytical, critical and decision making skills which are needed on a daily and transversal basis. This results in increase in problem solving ability (Bruin, 2007).

The purpose of this study is to investigate the relationship between creative thinking and teachers' proficiency in public secondary schools in Imo state, Nigeria. Creative thinking is the ability to engage in profound, clear and reflective thinking. It is the process of understanding and developing logical connections between ideas. Such capacity empowers the teacher to identify and construct ideas and at the same time



evaluate arguments. The concept of creative thinking has constituents of knowledge base, motivation and cognitive activity. This connects to the job of the teacher who works on daily basis to develop the cognitive capacity of students. It is the responsibility of the teacher to impart on the students, the process and capacity to engage in creative thinking. This he does by employing creative thinking skills which are verbal reasoning, comprehension, argument analysis, hypothesis testing and problem solving. However, it is seen that many teachers in the area of the study do not perform optimally as seen in the academic achievement of students in public secondary schools in Imo State (WAEC, 2017). In addition to this, there seem to be the dearth of empirical research on the influence of creative thinking on teachers' job proficiency in Imo State. It is in view of the above situations that this study is directed at investigating creative thinking as predictor of teachers' proficiency in public secondary schools Imo State.

Research Questions

The following research questions guided the study;

1. What is the relationship between creative thinking and teachers' job proficiency
2. What is the relationship between creative thinking skills and students' cognitive development?

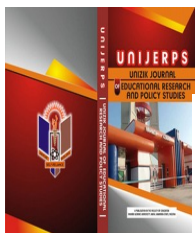
Hypotheses

The following hypotheses were adopted to aid the study

1. There is no significant relationship between creative thinking and teachers' job proficiency.
2. There is no significant relationship between creative thinking skills and students' cognitive development.

Research Method

This study investigated creative thinking as predictor of teachers' proficiency in public secondary schools in Imo state. The design adopted for the study was a correlational research design. Two research questions and two hypotheses guided the study. The population of the study consisted of 420 teachers in 240 public secondary schools in Ohaji. There was no sampling since the population. The instrument used for the study was titled creative thinking as predictor of teachers' job proficiency in public secondary school in Imo State Questionnaire (CTPTJPPSC). The instrument consists of two sections. Section A dealt with the effect of creative thinking on teachers' job proficiency while section B is concerned with the items on the effects of creative thinking on students' cognitive development. The instrument was validated by three experts, two from Department of Educational Management and Policy and One from the Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University Awka, Nigeria. The validity of the instrument was established through a pilot-testing and data analysis using Cronbach alpha which yielded 0.88 which was considered high enough for the instrument to be reliable. For the purpose of analysis, each of the items in the instrument was used in scoring the responses of the respondents. Each item was weighted and calculated as: Strongly Agree (SA) = 4points, Agree (A) = 3points, Disagree (D) = 2 points and Strongly Disagree (SD) = 1point. Data were collected by the researcher with the help of two research assistants. Pearson product moment correlation coefficient was used to answer the research questions and in testing the hypotheses at 0.05 level of significance. For the purpose of data analysis, each of the instruments used was scored. In testing the hypotheses, any hypothesis with p-value less



than 0.05 ($p < 0.05$) was rejected while a hypothesis with p-value greater than 0.05 was accepted. Data were analyzed using

Statistical Package for Social Science (SPSS) version 23.0.

Presentation of Results

Research Question 1: What is the relationship between creative thinking and teachers' job proficiency in public secondary schools in Imo State?

Table 1: Pearson Correlation analysis between creative thinking and teachers' job proficiency

Variables	N	X	SD	cal. r	Décision
Creative thinking (X)		4.36	0.83		
	411			0.89	High and positive Relationship
Teachers' job proficiency Y)		3.85	1.19		

Table I reveals a correlation value of 0.89. This shows that a high and positive relationship exist between creative thinking and teachers' job performance. This means that the more teachers think creatively, the more their job proficiency and vice versa.

Research Question 2: What is the relationship between creative thinking skills and of students' cognitive development?

Table 2: Pearson Correlation analysis between creative thinking and students' cognitive development

Variables	N	X	SD	cal. r	Decision
Creative thinking (X)		3.62	0.76		
	411			0.91	Very High and positive relationship
Students' cognitive development(Y)		3.23	0.87		

Table 2 shows a correlation value of 0.91 indicating a very high and positive relationship existing between creative thinking and students' cognitive development. This means that thinking creatively enhances students' cognitive development and vice versa.

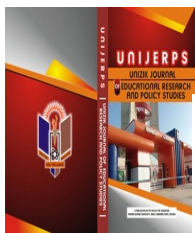
Testing of Null Hypotheses

Hypothesis 1: There is no significant relationship between creative thinking and teachers' job proficiency.

Table 3: Significant of Pearson r on creative thinking and teachers' job proficiency using probability table of r

N	cal. r	df	P-value	Decision
411	0.89	409	0.000	Significant

Table 3 indicates that at 0.05 level of significance and 409 df, the cal. r is 0.89 with P-value of 0.00 which is less than 0.05 ($0.00 < 0.05$). This means that there is a significant relationship



between creative thinking and teachers' job proficiency. Therefore the null hypothesis was rejected.

Hypothesis 2: There is no significant relationship between creative thinking skills and students' cognitive development.

Table 3: Significant of Pearson r on creative thinking and students' cognitive development using probability table of r

N	cal. r	df	P-value	Decision
411	0.91	409	0.03	Significant

Table 4 indicates that at 0.05 level of significance and 409 df, the cal.r is 0.91 with P-value of 0.03 which is less than 0.05 ($0.03 < 0.05$). This means that there is a significant relationship between creative thinking and students' cognitive development. Therefore the null hypothesis was rejected.

Discussion

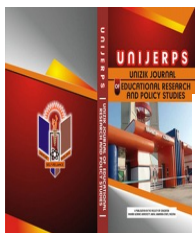
The findings of the study in Table I indicated that there is a high and positive relationship between creative thinking and teachers' job proficiency. The idea of proficiency represents a high degree of expertise or skill. Teachers' job proficiency therefore means the ability of teachers to do their work with skills or expertise in teaching or administration. Creative thinking of a teacher produces good pedagogy in him. This translates to quality of job delivery both at the classroom level and organising students into co-curricular activities (Plan, 2010).

Creative thinking makes a teacher to be thoughtful and to go beyond the ordinary by taking extra steps in imparting the skills of

logical reasoning, argumentative analysis and hypothesis testing on students. This a teacher can achieve through research, developing latent ideas that form the conceptual underpinnings of his expressed pedagogy and actual teaching. This finding agrees with the works of Igala, 2012 and Uchechukwu, 2015 which indicated that creative thinking enhances thoughtfulness, understanding and verbal reasoning. This therefore shows that thinking has a significant relationship with teachers' job proficiency.

Table 2 shows that there is a high and positive relationship between creative thinking and students' cognitive development. The cognitivity of students express their intelligibility, creative thinking models according to Facione (2010) are knowledge base, motivation and cognitive operations. Taking redundantly, creative thinking expands the knowledge base of students, creates motivation for study and stimulates the intelligibility of students.

The effects of all these on students is that their intellectual capacity is widened while their ability to develop latent ideas, engage in argument analysis and hypothesis testing



is increased. The students involved in creative thinking develops depth, becomes thoughtful and comprehends deeply and easily (Pithers and Soden, 2000). This therefore means that creative thinking has a significant relationship with students cognitive development.

Conclusion

From the findings of the study, it could be seen that creative thinking has a significant relationship with teachers' job proficiency and students cognitive development. Based on these findings, it is hereby concluded that teachers should engage in creative thinking because it improves the quality of their job. The researcher also concludes that students should be taught creative thinking because it enhances their cognitive development.

Recommendations

In view of the findings of the study, the following recommendations are hereby put forward;

1. Creative thinking models should be included in classroom learning strategies in all public secondary schools in Imo state, Nigeria.
2. Creative thinking strategies should be part of learning activities at the classroom level.
3. Assessment of students' creative thinking ability should consider their learning environment which differs from one student to another.
4. School administration in Imo state should organize training programmes or workshops on creative thinking, the models and the skills.

REFERENCES

Allen, G.D., Rubenfield, M.G., and Scheffer, B.K. (2004). Reliability of assessment of critical thinking, *Journal of Professional Nursing*, 20(1), 15-21 (links).'

Almeido, L.S., Guisande, A., and Ferreira (2009). *Inteligencia perspectivas teoricas*. Gaimbra: Almedina (links).

Barnes, C.A. (2005). Critical thinking revisited: Its past, present and future. *New Dimension for Community Colleges*, Summer 2005, 5-13. (links).

Brady, M. (2008). Cover the material: or teach students to think? *Educational Leadership*, 65. 64 – 67 (links)

Carol, R. (2005). *Becoming a critical thinker. A guide for the new millennium*, (2nd. Ed.). Boston Pearson Custom Publishing. (link)

Edumark (2012). *Critical analysis of students' learning attitude*. Edumark publication limited, 7th Ed. V.24. Ikeja, Lagos, Nigeria.

Faccone, P.A. (2010). *Critical thinking: what it is and why it counts*. Insight Assessment Retrieved from <http://www.insight-assessment.com/home.html> (links)

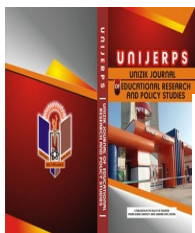
Fieldman, D.H. (2004). Piagets stages. The unfinished sympathy of cognitive development *New Ideas in Psychology*, 22, 175 – 231 (links)

Haphen, D.F. (2006). The nature and nurture of critical thinking. *En R.*, J. Stenberg, R.

Igala, F.G. (2012). *The Influence of critical thinking on students' academic achievement*. SCOA publications limited, Onitsha Anambra State.

Ku, K,Y, (2009). Assessing students' critical thinking performance. Urging for measurement using multi-response format. *Thinking skills and creativity*, 4, 70-76 (links)

Noddings, N. (2008). What does it mean to educate the WHOLE CHILD?



- Educational Leadership, 63, 8-13 (links).
- Paul, R. (2005). The state of critical thinking today. *New Directions for Community Colleges*, Summer. 2005, 27-38 (links)
- Piaget, J. (2008). Intellectual evolution from adolescence to adulthood. *Human Development* 51, 40-47 (links).
- Pithers, R.T., and Soden, R. (2000). Critical thinking in education: A review of *Educational Research*, 42, 237 – 249.
- Plan, H.P. (2010). Critical thinking as a self-regulating process component in teaching and learning. *Psicothema*, 22, 284 -292.
- Rivas, S.F., and Saiz, C. (2010). Es posible evaluar la lapacidad de pensar criticament e en la vide, cotidiana?
- Stenberg, R.I. (2003). A Broad view of intelligence: The theory of successful intelligence consulting *Psychology Journal: practice and Research*, 55, 139 -154 (links)
- WAEC (2017). West African Examinations Council; Chief examiner's report Yaba, Lagos, Nigeria.
- VanGelder, T. (2005). Teaching critical thinking: some lessons from cognitive science. *College Teaching*. 53, 43 – 46.
- Yanchar, S.C., Slide, B.D., and Warne, R. (2008). Critical thinking as disciplinary practice. *Review of General Psychology*, 12, 265 – 285. (links)

