

## ***Perceived Barriers to Creative Thinking among Tertiary Level Students in Plateau State, Nigeria***

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### **Abstract**

*The study focused on perceived barriers to creative thinking among tertiary level students in Plateau state Nigeria. The purpose of the study was to explore the barriers to creative thinking among tertiary level students to pave way for creativity, efficiency and academic excellence. Two research questions guided the study. The descriptive survey design was used for the study. Participants for the study were 345 Undergraduate students that were randomly selected from two (2) tertiary institutions in Plateau State, Nigeria. The instrument for data collection was an adapted 36-item 6-point likert-type scale structured questionnaire titled, "Barriers to Creative Thinking Questionnaire" (BCTQ). Data obtained were analysed using mean and standard deviation. The results of the study revealed that students in tertiary institutions of learning experience barriers that interfere with their creative thinking abilities which include barriers related to self-concept need for systematic analysis, task achievement and physical environment. The findings also indicated that the highest barrier to creative thinking was the physical environment barrier. It was recommended that the six barriers to creative thinking among tertiary level students should be reduced to the barest minimum to pave way for improved academic performance.*

**Keywords:** creativity, thinking, barriers, learning, students

### **Introduction**

Creativity is valuable to learning. Creativity was previously perceived as a rare gift that could be found mainly among artists, inventors and scientists (Mgboro & Eke, 2013). In recent times, creativity is conceived as universal, cutting across all disciplines (Jimba et al., 2017). Creativity has been defined as production of original ideas and high-quality products (Akintunde, 2017) or recombining known element into something new

(Jimba et al., 2017). In the same vein, Fitzgerald (2021) opined that creativity entails devising imaginative and original ideas and taking necessary actions to use the ideas in solving problems.

The significance of creativity in teacher education cannot be downplayed. Daff (2020), proposed that creativity in the classroom helps students to solve problems, feel confident, be unique and think critically. Also, creativity promotes learners' confidence, physical, social and emotional growth and fosters development of creative thinking and problem-solving skills (Techwillsaveus, n.d). These are life-long skills that can be used in any discipline for productivity and efficiency. Creative thinking learning can freely explore various ideas and possible solutions to solving diverse problems.

Creative thinking is the ability to think differently, see a problem from a new perspective and proffer plausible solutions. It is a thought process that culminates into an invention or creativity. Alhalabi (2021) corroborated this by submitting that creative thinking is the ability to free one's mind to consider, interpret and visualize possibilities. Creative thinking entails exploring ideas, generating possibilities and looking for many right answers to an issue (Harris, 2012). When learners are versed in creative thinking skills, they are empowered to use various approaches in solving problems, analyzing multiple viewpoints, adapting ideas and getting new solutions to problems (Mursky, 2011). Consequently, students are expected to have creative thinking skills to enhance academic performance.

The present education system in Nigeria is utilizing the learner-centred approach to learning. Learners are expected to actively participate in the teaching/learning process in the classroom. Students should make efforts to solve learning problems in creative ways. Also, learners are expected to use technological tools in showcasing their creative works (Akintunde & Eseyin, 2017).

However, lack of creativity in approaching academic issues, handling assignments, individual and group projects, is often reflected in students' responses when given assignments to do or to make presentation in the class. It appears students are hindered by certain barriers affecting their development and use of creative thinking for academic excellence. Since acquisition of creative thinking skills is dependent on acquisition of traits like patience, fluency, flexibility and divergent thinking, lack of these traits may pose challenges to creative thinking. Generally, there are internal and external factors like personality, perceptual, emotional, cultural and environmental barriers that can pose threat to creative thinking (Martin, 1990; Larraz-Rabanos, 2021). Scholars like Wong and Pang (2003) proposed that a person's individual personality, environment, and situation are attributes that can reduce creativity. Also, Hilal et al. (2013) submitted that Malaysian undergraduates undergo challenges that can obstruct

their creative thinking abilities. Therefore, it is pertinent to explore the barriers to creative thinking among students to pave way for creativity, efficiency and academic excellence. This is the focus of this study. Also, emphasis is on tertiary level students, specifically, University of Jos (UNIJOS) and College of Education (C.O.E), Pankshin.

### **Objectives of the study**

The following objectives were raised:

- i) To find out students' perception of barriers to creative thinking among tertiary level students.
- ii) To determine the highest-ranking barrier to creative thinking among students.

### **Research questions**

- i) What are the perceived barriers to creative thinking among students?
- ii) Which is the highest-ranking barrier to creative thinking among students?

### **Methodology**

This study adopted a descriptive survey design. The design ensures the systematic collection, organization, analysis and interpretation of data on a given population. This study was designed to describe the barriers to creative thinking among students in tertiary institutions. Undergraduate students from two (2) degree-awarding tertiary institutions in Plateau State were used as respondents, namely, University of Jos and Federal College of Education, Pankshin. 345 Education students constituted the sample, 150 (Pankshin) and 195 (Jos). The participants were randomly selected from the two (2) tertiary institutions.

The instrument used for data collection was a 36-item structured questionnaire titled, "Barriers to Creative Thinking Questionnaire" (BCTQ). The instrument was adapted from Martin (1990)'s inventory of Barriers to Creative Thought and Innovative Action (IBCTIA). Six items each were used to measure the six (6) aspects assessed by the questionnaire including (1) Self-concept barriers (2) Need of conformity barriers (3) Ability to abstract barriers (4) Use of systematic analysis barriers (5) Task achievement barriers and (6) Physical environment barriers, making a total of 36 items. Based on experts' suggestions, some items were modified to make them culturally relevant, suitable to Nigerian society and for clarity. For instance, Item six which originally stated that "I set aside periods of time without interruption" was modified as "I set aside periods of time without interruptions, while trying to solve a problem". The key variables were measured using a 6-point likert-type scale: Strongly Agree (SA) = 1, Agree (A) =2, Agree Somewhat (AS)=3, Disagree Somewhat (DS) =4, Disagree =5 (D) and Strongly Disagree (SD) =6.

To ensure validity, the instrument was subjected to the scrutiny of two (2) experts in Educational Psychology and Research Methods and Evaluation (RME) units. According to Martin (1990), the barriers to creativity inventory has a high test-retest reliability index of 0.89. The Questionnaires were distributed to participants and

collected for analysis. The descriptive analysis was used. This involved summarization, and meaningful presentation of data. It was used to describe and analyze the essential characteristics of the Barriers to Creative Thinking (BCT) dataset. Mean and standard deviation were used on the data to draw conclusions based on observed patterns and trends. Furthermore, mean scores were categorized on a scale of 6 to 36, a mean score of 6 being the least score and the criterion value by which BCT were considered minimum or absent. The interpretation scale is as follows:

- 6 – 16 (Low mean score)
- 17 – 26 (Average mean score)
- 27 – 36 (High mean score)

**Presentation of results**

**Research question 1:** What are perceived barriers to creative thinking among students?

**Table 1:** Mean ratings of students’ responses on barriers to creative thinking

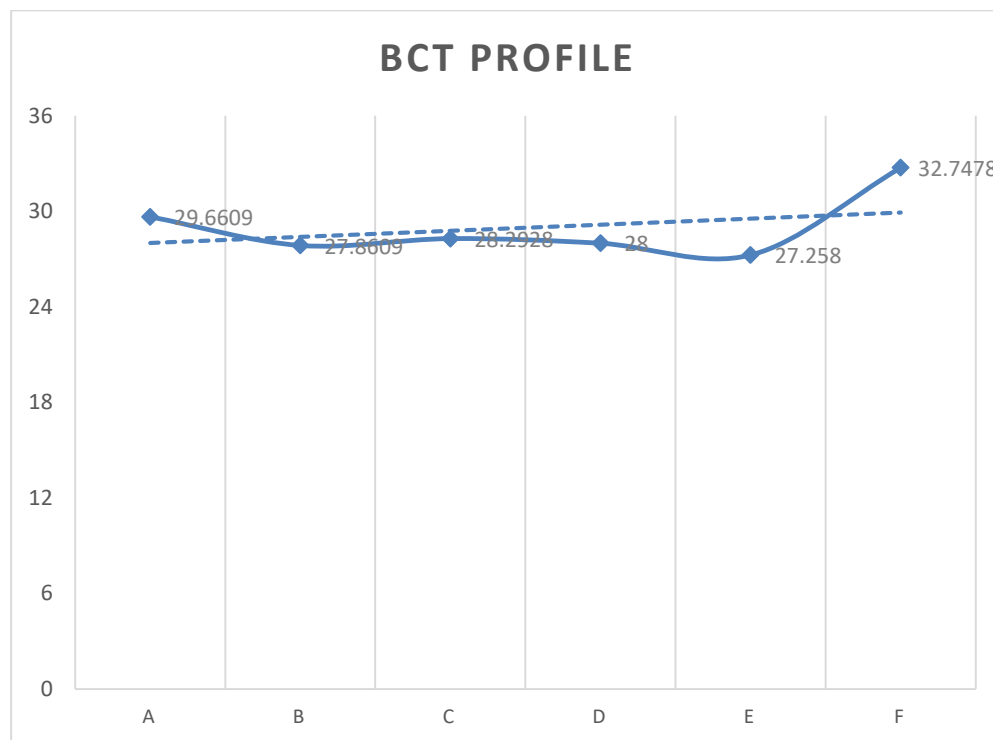
| S/N | Item Description                    | N   | Mean | SD   |
|-----|-------------------------------------|-----|------|------|
| 1.  | Self-concept barriers               | 345 | 29.7 | 3.65 |
| 2.  | Need for conformity barriers        | 345 | 27.9 | 3.93 |
| 3.  | Ability to abstract barriers        | 345 | 28.3 | 4.28 |
| 4.  | Use of systematic analysis barriers | 345 | 28.0 | 4.74 |
| 5.  | Task achievement barriers           | 345 | 27.3 | 4.61 |
| 6.  | Physical environment barriers       | 345 | 32.7 | 5.16 |

Table 1 indicated that all barriers were high in the study areas. All 6 types were barriers to creative thinking among tertiary-level students. Barriers related to the concept of self-concept recorded a mean score of 26.67, suggesting that students struggled with creative thinking due to issues relating to their self- image, self-esteem or self-confidence. Barriers related to the need for conformity had a mean score of 27.87, indicating that the pressure to conform to societal norms or group expectations also hindered creative thinking among the students. Barriers related to ability to abstract had a mean score of 28.29, suggesting that some individuals had difficulty thinking in abstract or conceptual terms, thereby limiting their creativity. Barriers related to the ability to use systematic analysis has a mean score of 28.0, implying that some students struggled with using logical or systematic approaches to problem-solving, thus hindering their creative thinking abilities. Barriers related to task achievement had a mean score of 27.3, suggesting that a significant number of students faced this barrier in creative thinking when achieving specific goals or tasks; and barriers related to the physical environment had a mean score of 32.75.

**Research question 2:** Which is the highest-ranking barrier to creative thinking among students?

**Table 2:** Rank ordered mean scores on creativity barriers

| S/N | Item Description                    | Mean | Rank            | Decision |
|-----|-------------------------------------|------|-----------------|----------|
| 1.  | Physical environment barriers       | 32.7 | 1 <sup>st</sup> | Highest  |
| 2.  | Self-concept barriers               | 29.7 | 2 <sup>nd</sup> |          |
| 3.  | Ability to abstract barriers        | 29.3 | 3 <sup>rd</sup> |          |
| 4.  | Use of systematic analysis barriers | 28.0 | 4 <sup>th</sup> |          |
| 5.  | Need for conformity barriers        | 27.9 | 5 <sup>th</sup> |          |
| 6.  | Task achievement barriers           | 27.3 | 6 <sup>th</sup> | Lowest   |



**Figure 1:** Graphical representation of mean responses to barriers to creative thinking

**Key:**

A – F = Barriers to creative thinking

0 – 36 = Mean responses

A- Barriers related to the concept of self—concept.

B- Barriers related to the need for conformity.

C- Barriers related to the ability to abstract.

D- Barriers related to the ability to use systematic analysis.

E- Barriers related to task achievement.

F- Barriers related to the physical environment.

BCT - Barriers to Creative Thinking

Table 2 and figure 1 showed the highest-ranking barrier to creative thinking. Barriers related to physical environment recorded the highest mean score of 32.7. This implies that environmental factors, such as noise, lack of good physical facilities, privacy, and undesirable environment posed the highest threat or barrier to creative thinking among students.

### **Discussion of the findings**

The findings of this study revealed that students in tertiary institutions of learning encounter barriers hindering their creative thinking abilities. These barriers are those related to self-concept, need for systematic analysis, task achievement and physical environment. These findings are in line with the submission of Wong and Pang (2003) that attributes such as person's individual personality, environment, and situation can reduce creativity. Similarly, Hilal et al. (2013) found that Malaysian undergraduates face challenges obstructing their creative thinking abilities.

Furthermore, the finding of this study indicated that the highest barrier to creative thinking was the physical environment barrier. This is in disagreement with Hilal et al. (2013)'s study that found that the most difficult type of creativity barrier to deal with, as experienced by Malaysian undergraduates, was the task achievement barrier. Generally, the findings of the study pinpoint the need to address the barriers to creative thinking in order to enhance students' creative competence.

### **Conclusion**

The study concluded that tertiary level students in Plateau state submitted that barriers to creative thinking exist among them and that physical environment barrier is the highest ranking barrier to creative thinking among tertiary level students in Plateau state, Nigeria.

### **Recommendations**

The following recommendations were made:

1. Students in tertiary institutions of learning should value creativity and seek ways of overcoming challenges hindering creative thinking.
2. The identified six barriers to creative thinking among tertiary level students should be reduced to the barest minimum to pave way for improved academic performance.
3. Boosting students' self-concept and enhancing abstract thinking skills of students will promote creative thinking and academic performance.

4. The highest-ranking barriers to creative thinking, namely, physical barriers, should be drastically reduced. Conducive learning environment devoid of noise and distractions should be provided for students to promote creative thinking and academic excellence.

## References

- Akintunde, O. O. (2017). *Essentials of Educational Psychology and Creativity*. Ibadan: A flame publishers.
- Akintunde, O. O., & Eseyin, J. (2017). Fostering creative thinking in the Nigerian school child through favourable learning environment. *Journal of Science Education and Research (International)*, 3(2), 68 – 75.
- Alhalabi, R. (2021). Creative thinking: What is it, why is it important and how to develop it? Retrieved from <https://www.potential.com/articles/creative-thinking/HI>
- Daff, C. (2020). The importance of fostering creativity in the classroom. Retrieved from <https://medium.com/canves/the-importance...classroom>
- Fitzgerald, M. (2021). Why creativity is just as important as literacy. Retrieved from <https://tinkergarten.com/blog/why-creativity-is-just-as-important-as-literacy>
- Harris, R. (2012). Introduction to crative thinking. Retrieved October 11, 2016 from [www.virtualsalt.com/crebook.htm](http://www.virtualsalt.com/crebook.htm).
- Hilal, H. M., Husin, W. H., & Zayed, T. M. (2013). Barriers to creativity among students of selected universities in Malaysia. *International Journal of Applied Science and Technology*, 3(6), 51-60.
- Jimba, D. N., Bature, J. N., & Dajot, J. D. (2017). Enhancing critical thinking and creativity in Nigerian Education or Sustainable Development. *International Centre for Science, Humanities and Education Research (ICSHER) Journal*, 3(1), 41 -48.
- Larraz-Rabanos, N. (2021). Development of creative thinking skills in the teaching – learning process. Retrieved from [www.researchgate.net>publication DOI: http://dx.doi.org/10.5772/intechopen.97780](http://www.researchgate.net/publication/DOI:http://dx.doi.org/10.5772/intechopen.97780)
- Martin, P. L. (1990). Inventory of barriers to creative thought and innovative action. In J. W. Pfeiffer (Ed.), *The 1990 Annual: Developing Human Resources* (pp. 139 – 141). San Diego: University Associates.
- Mgboro, C. U., & Eke, N. A. (2013). Stifling creativity under the Universal Basic Education: The teacher factor. *The Educational Psychologist*, 7(1), 229-233.
- Mursky, C. (2011). Creative thinking what it is. Retrieved from [https://dpi.wi.gov>fles>ince>cal>pdf](https://dpi.wi.gov/fles/ince/cal/pdf)
- Techwillsaveus (n.d). Why is creativity in education important? Retrieved from [www.techwillsaveus.com/blog/why-is-education/](http://www.techwillsaveus.com/blog/why-is-education/)
- Wong, C. K. S., & Pang, W. L. L. (2003). Barriers to creativity in the hotel industry – perspectives of managers and supervisors. *International Journal of Contemporary Hospitality Management*, 15(1), 29 – 37.