

An Evaluation of the Effectiveness Of The National Certificate In Education (NCE) Painting Curriculum In Developing Creative Thinking Skills In Kogi State Colleges Of Education, Nigeria

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ABSTRACT

Creative thinking is widely acknowledged as a critical 21st-century competency necessary for innovation, problem-solving, and effective teaching practice in the visual arts. This study evaluated the effectiveness of the National Certificate in Education (NCE) Painting Curriculum in developing creative thinking skills among pre-service teachers in Colleges of Education in Kogi State, Nigeria. Utilizing a convergent parallel mixed-methods research design, quantitative and qualitative data were gathered from 200 final-year NCE Painting students and 20 art lecturers across three purposively selected institutions: Federal College of Education, Okene, Kogi State College of Education, Ankpa, and Kogi State College of Education Technical, Kabba. Instruments included structured questionnaires, semi-structured interviews, curriculum document analysis, and student portfolio evaluations. Quantitative data were analysed using descriptive statistics, independent samples t-tests, and Pearson product-moment correlation, while qualitative data underwent rigorous thematic analysis. The findings reveal a moderate conceptual alignment between curriculum objectives and creative outcomes, though practical implementation is severely undermined by resource deficits, traditional teacher-cantered pedagogies, and inadequate studio infrastructure. The study established a statistically significant positive relationship between dynamic, resource-rich teaching strategies and students' creative thinking capacities ($r = 0.684$, $p < 0.01$). Furthermore, significant institutional disparities emerged based on learning environments ($t = 6.42$, $p < 0.01$). The paper recommends comprehensive curriculum restructuring, enhanced TETFund infrastructure allocation, and professional development programs prioritizing studio-based inquiry over rote technical reproduction.

KEYWORDS

NCE Painting Curriculum, Creative Thinking, Art Education, Teacher Preparation, Kogi State, Mixed-Methods

I. INTRODUCTION

The National Certificate in Education (NCE) framework remains the foundation of basic and post-basic teacher education in Nigeria, serving as the primary pipeline for instructional competence in vocational, technical, and creative disciplines. Within the fine and applied

arts curriculum, the NCE Painting module is explicitly structured to cultivate both technical competencies and higher-order creative thinking skills among pre-service teachers. In the contemporary educational landscape, creative thinking encompassing fluency, flexibility, originality, and elaboration is essential for fostering innovation, adaptation, and practical problem-solving in learning and cultural spaces.

However, persistent gaps remain between curriculum policy intentions and actual classroom outcomes in Nigerian teacher-training institutions. In Kogi State home to three prominent teacher-education institutions, namely the Federal College of Education, Okene, Kogi State College of Education, Ankpa, and Kogi State College of Education Technical, Kabba anecdotal and preliminary observations suggest that graduating art teachers frequently struggle with divergent concept development and independent artistic expression. Instead of exploring experimental media and conceptual framing, instructional delivery often defaults to mechanical reproduction and passive student observation.

While theoretical literature underscores the need for inquiry based learning, studio experimentation, and critical reflection, systematic empirical evaluations of the NCE Painting curriculum remain scarce. This study addresses this gap by comprehensively evaluating curriculum implementation, instructional practices, resource adequacy, and student creative outcomes across the three designated Colleges of Education in Kogi State.

II. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

A. Conceptualizing Creative Thinking in Visual Arts Education

Creative thinking ability is universally conceptualized as the capacity to generate ideas or artefacts that are both novel and contextually appropriate. In visual arts education, this cognitive construct extends far beyond technical proficiency to encompass aesthetic awareness, symbolic interpretation, and expressive competence. As Robinson (2011) asserts, educational systems must intentionally cultivate creativity rather than assume it develops incidentally.

Scholars in art education emphasize that creativity cannot thrive in rigid, examination-driven systems that prioritize technical reproduction over innovation. Eisner (2017) argues that arts education should promote qualitative judgment, interpretive thinking, and imaginative exploration. Within the NCE painting framework, this perspective implies that instructional approaches must encourage inquiry-based learning, studio experimentation, iterative critique sessions, and reflective practice.

B. Curriculum Implementation and Contextual Challenges in Nigeria

Curriculum, as a structured framework for teaching and learning, dictates educational outcomes through the alignment of objectives, content selection, instructional strategies, and assessment procedures. Effective art curricula balance theoretical knowledge, technical skills, and creative exploration. However, empirical evidence shows that where implementation is overly content-driven, opportunities for nurturing creative thinking shrink.

In developing educational systems like Nigeria, systemic issues such as inadequate funding, infrastructural deficits, and policy inconsistencies heavily hamper curriculum fidelity. Within Colleges of Education, restricted access to expansive studio spaces, modern painting pigments, and emerging digital art tools can suppress exploration and innovation. Furthermore, the persistent reliance on traditional, teacher-cantered pedagogies where lecturers emphasize direct replication rather than critical engagement stifles divergent thinking among NCE painting students. Professional development variables further complicate this ecosystem; without continuous training, art educators risk relying on outdated methods that fail to spark authentic creative inquiry.

III. METHODOLOGY

A. Research Design

This study adopted a convergent parallel mixed-methods research design, blending quantitative survey data with qualitative insights gathered from semi-structured interviews and student portfolio evaluations. This approach provides both statistical breadth and contextual depth regarding the lived realities of curriculum implementation.

B. Population and Sampling Procedures

The target population comprised all final-year NCE Painting students and visual art lecturers across the three teacher training institutions in Kogi State:

- Federal College of Education, Okene (Federal)
- Kogi State College of Education, Ankpa (State)
- Kogi State College of Education Technical, Kabba (State/Technical)

Using a stratified random sampling technique, a total sample of 200 final-year NCE Painting students and 20 painting lecturers was selected proportionately across the three institutions.

Instruments and Data Collection

C. Data were gathered using a multi-instrument approach:

- **Structured Questionnaires:** The Painting Curriculum Effectiveness Questionnaire (PCEQ) utilized a 4-point Likert scale (ranging from Strongly Disagree to Strongly Agree) to measure perceptions of curriculum alignment and instructional practices (Cronbach's alpha reliability coefficient $\alpha = 0.82$).
- **Semi-Structured Interviews:** Conducted with 20 art lecturers and department heads to uncover deep contextual perspectives regarding institutional challenges.
- **Document and Portfolio Analysis:** Curriculum layout documents and 200 student painting portfolios were evaluated using a standardized rubric assessing originality, media handling, elaboration, and concept execution.

D. Data Analysis Techniques

Quantitative survey and portfolio data were analysed using descriptive statistics (means and standard deviations) alongside inferential statistics specifically independent samples t -tests and Pearson product-moment correlation analysis calculated at an alpha level of 0.05. Qualitative data derived from interviews were transcribed and subjected to rigorous thematic analysis to identify recurring patterns.

E. Results and Data Analysis

1. Research Question 1

How well do the NCE Painting curriculum objectives align with recognized creative thinking outcomes?

Document analysis and lecturer surveys were analysed to measure the degree of curriculum alignment.

Table 1: Mean and Standard Deviation of Curriculum Objectives Alignment with Creative Thinking Dimensions (N = 220)

Curriculum Dimension	Mean ($\bar{x}$)	Standard Deviation (SD)	Decision
Promotion of Originality & Conceptual Divergence	2.85	0.64	Moderately Agreed
Integration of Experimental Media Exploration	2.42	0.79	Disagreed
Encouragement of Critical Reflection & Critique Sessions	3.10	0.52	Agreed
Balance Between Technical Skill & Creative Expression	2.68	0.71	Moderately Agreed
Grand Mean / Average	2.76	0.67	Moderately Aligned

Note: Benchmark Mean = 2.50. Scale: 1.00–1.74 (Strongly Disagree), 1.75–2.49 (Disagree), 2.50–3.24 (Agree), 3.25–4.00 (Strongly Agree).

As shown in Table 1, while cognitive elements like critical reflection rated favourably ($\bar{x} = 3.10$), practical media experimentation fell below the acceptance threshold ($\bar{x} = 2.42$). This points to a clear structural disconnect between written policy goals and operational studio realities.

2. Research Question 2

What teaching strategies are employed in delivering the Painting curriculum?

Qualitative thematic analysis of lecturer interviews and observation logs revealed that traditional, teacher-centered demonstrations dominate studio sessions. Most lecturers rely

heavily on direct still-life replication models rather than open-ended problem-solving prompts, limiting student exposure to conceptual divergence.

F. Hypotheses Testing

Hypothesis One (H_{01}): There is no significant relationship between teaching strategies employed in the NCE Painting programme and the development of students' creative thinking skills.

Table 2: Pearson Product-Moment Correlation Analysis between Teaching Strategies and Creative Thinking Skills

Variables	N	Mean	SD	R-value	p-value	Decision ($p < 0.01$)
Teaching Strategies (Independent)	200	25.42	4.81	0.684	0.000	Rejected (H_{01})
Creative Thinking Skills (Dependent)	200	28.15	5.23			

The correlation analysis in Table 2 yielded an r -value of 0.684 and a p -value of 0.000 ($p < 0.01$). Because the p -value is well below the threshold, the null hypothesis is rejected. This confirms a strong positive relationship indicating that dynamic, student-centered pedagogical strategies directly drive enhanced creative thinking capabilities.

Hypothesis Two (H_{02}): There is no significant difference in creative thinking outcomes between students exposed to resource-rich and resource-poor Painting learning environments.

Table 3: Independent Samples t -test Comparison of Creative Outcomes Based on Learning Environments

Learning Environment	N	Mean ($\bar{x}$)	SD	df	t-cal	p-value	Decision ($p < 0.05$)
Resource-Rich Environment	85	68.45	8.12	198	6.42	0.000	Rejected (H_{02})
Resource-Poor Environment	115	52.10	9.45				

Table 3 highlights a calculated t -value of 6.42 with a p -value of 0.000, which is less than 0.05. Consequently, the null hypothesis is rejected. Student teachers operating

within well-equipped studio environments performed significantly better in portfolio evaluations than those in under-resourced institutions.

IV. DISCUSSION

The findings of this study demonstrate that while the NCE Painting curriculum possesses sound foundational objectives on paper, its operational execution across Colleges of Education in Kogi State (Okene, Ankpa, and Kabba) suffers from structural impediments. The reliance on traditional, rigid, demonstration heavy models restricts the cultivation of divergent thinking, echoing observations by Oladipo and Adewale (2021) and Obanya (2019). Furthermore, resource constraints particularly across state funded institutions severely limit material experimentation. Creative capacity requires a safe, well equipped studio ecosystem wherein student teachers can take risks, execute errors, and resolve conceptual problems independently (Eisner, 2017). Without targeted interventions in instructional technology, studio infrastructure, and lecturer capacity building, pre-service teachers will remain ill equipped to foster creativity in basic education classrooms.

V. CONCLUSION

This study concludes that the effectiveness of the NCE Painting curriculum in developing creative thinking skills in Kogi State Colleges of Education is substantially constrained by pedagogical rigidity and infrastructural deficits. To optimize teacher preparation in visual arts, the following recommendations are advanced.

RECOMMENDATIONS

A. Curriculum Revision

The National Commission for Colleges of Education (NCCE) should revise the NCE Painting curriculum to explicitly mandate project-based, inquiry-driven studio hours over mechanical replication.

B. Infrastructure Enhancement

TETFund and state governments must prioritize capital allocation for modernizing art studios, supplying advanced painting media, and integrating digital art tools across FCE Okene, COE Ankpa, and COET Kabba.

C. Pedagogical Capacity Building

Institutional managements should organize regular workshops and professional development programs for art educators focusing on modern, student-cantered creative critique methodologies.

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