

Critical-Thinking Skills of Principals' as Correlate to Teachers' Job Performance in Post-Basic Schools in North-East Nigeria

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ABSTRACT

The study investigated principals' critical thinking skills as a strategic management correlate of teachers' job performance in Post-Basic Schools in North-East, Nigeria. The purpose of the study was to determine the extent of principals' critical thinking skills in post basic schools in North East Nigeria, to also examine the relationship between principals' critical-thinking skills and [teachers' job performance] and to assess whether teachers' job performance differs significantly across principals' critical thinking skill level. Three research questions were answered and three hypotheses were tested at 0.05 level of significance. The study adopted the correlation survey research design. Stratified and random sampling techniques were used to selecting the sample of the study. The population was 19,797 respondents in Post-Basic Schools from four states (Adamawa, Bauchi, Gombe, and Taraba) drawn from North-East zone, Nigeria. The sample for the study was 592 determined using Taro Yamane formula and comprised of 76 principals and 516 teachers. The instruments for data collection were two, a structured questionnaire tagged "Principals' Critical Thinking Skills Questionnaire (PCTSQ) which was responded by teachers, and structured questionnaire tagged "Teachers' Job Performance Questionnaire (TJPQ) was administered and responded to by principals to measure teachers' performance. The instruments were face validated and the internal consistency for the instruments was determined using Cronbach Alpha method. Reliability yielded 0.71 for Principal Motivation Skills Questionnaire, 0.67 for Teachers' Job Performance Questionnaire. The findings of the study revealed Principals' showed high critical-thinking competence ($M = 3.51$, $SD = 0.61$). Regression analysis showed that critical-thinking skills significantly predicted teachers' job performance ($\beta = 0.73$, $p < 0.001$; $R^2 = 0.53$). ANOVA confirmed the model's significance ($F(1, 590) = 84.7$, $p < 0.001$) with a large effect size ($\omega^2 \approx 0.53$). Recommendations made based on the findings include among others that; teachers' should be assigned subjects or courses to teach based on their area of specialization, teachers' should be praised at all times and workload be reduced, teachers' welfare, promotion payment of salaries and allowances should be regular and consistent.

Keywords

Critical thinking, leadership, teacher job performance, strategic management, post-basic education North-East Nigeria.

INTRODUCTION

Background

Critical thinking can provide you with a more insightful understanding of yourself. It will offer you an opportunity to be objective, less emotional, and more open-minded as you appreciate others' views and opinions. By thinking ahead, you will gain the confidence to present fresh perspectives and new insights into burden some concerns. Thinking is the base of all cognitive activities or processes and is unique to human beings. Principals critical thinking skill involves manipulation and analysis of information received from the environment. Such manipulation and analysis occur by means of abstracting, reasoning, imagining, problem solving, judging, and decision-making. The mind is the idea while thinking processes of the brain involved in processing information such as when we form concepts, engage in problem solving, to reason and make decisions. (Cababat and Pespenan,2023).The ability of thinking logically and solving problems is a skill that school principals must have to increase teachers performance. It can be used in variety of times, when teachers run out of markers, or chalk and the school is out of stock, when there is conflict among staff or students displaying inappropriate behavior, the school principal needs to think fast and intelligently to be on top of the situation. Ultimately, principal ability to organize school activities is also an essential skill, school managers are dealing with both human and material resources, therefore their ability to organize and harness the resources for required output is essential. The principal must also participate in making curriculum choices, establishing expectations for the quality of students work and the quality of teaching and organizing strategies and methods, (Ofuaze et al, 2021). The principal is expected to have supervisory skills such as providing materials, resources and assistance to support teaching and learning, supporting and coordinating effort to improve instructional program, coordinating and integrating the process of curriculum development and implementation. In addition, the principal also needs to ensure open and clear communication channels among individuals in the school, initiating and implementing, collaborating and developing strategies for continuous improvement and facilitating meaningful opportunities for professional growth through seminars, workshops and in-service training (Ofuaze et al, 2021). Furthermore, the principal ensures effective supervision by interacting academically and socially on a regular basis with teachers and students within and outside the classroom, to monitor the implementation of curriculum and ensure desirable increase in teacher conceptual knowledge and teaching skills. Also to give them support in their work to facilitate better performance in teachers pedagogical practices and students learning outcomes in the school setting. Ofuaze, et al (2021) reported that the principal needs to possess management qualities such as ability to plan, coordinate, organize and direct personnel towards attaining the school aim and objectives. Also, the principal should be acquainted with the various leadership styles and choose the style that would best enable him/her to achieve the goals. Principals are the key persons in school organisation that assume the role of leadership and are very influential in shaping teacher professionalism, school improvement and school performance. In developed countries of the world, principals are trained to perform effectively as transformational and institutional leaders in schools. Transformational leadership requires principals to inspire, motivate and mobilize school staff and students to make reformative changes in the areas of instruction, learning, school climate and technology utilization, so as to turn all schools into modernized excellent schools. Ultimately, principals' supervisory skills include professional development, which is the process of facilitating

meaningful opportunity for professional growth such as seminars, workshops which develop the teacher and increases his performance. Teachers' Performance increases when principals draw plans in other to achieve their stated objectives.(Ofuase et. al., 2021).such as prioritizing administrative duties to support teachers and also ensure that communication is organized and easily accessible for teachers. Organizing skill enables coordination, principals coordinate schedules to minimize disruptions to teaching time and structure opportunity for continuous learning and growth among teachers and also contributes to provision of a conducive environment for teaching.Critical thinking is central to effective educational leadership. Principals who reason logically, analyze problems objectively, and anticipate outcomes are better positioned to guide teachers and sustain quality learning. In the challenging environment of North-East Nigeria, where schools face insecurity and resource shortages, critical-thinking competence becomes essential for improving teacher performance.

OBJECTIVES OF THE STUDY

- i. Determine the extent of principals' critical-thinking skills in post-basic schools in North-East Nigeria.
- ii. Examine the relationship between principals' critical-thinking skills and teachers' job performance.
- iii. Test whether teachers' job performance differs significantly across principals' critical-thinking levels.

RESEARCH QUESTIONS

- i. What is the extent of principals' critical-thinking skills in post-basic schools in North-East Nigeria?
- ii. What relationship exists between principals' critical-thinking skills and teachers' job performance?
- iii. Do teachers' job-performance levels differ significantly based on principals' critical-thinking skills?

LITERATURE REVIEW

Conceptual Review

Critical Thinking Skills

. Principals' critical thinking skill is an active process and a way of thinking regularly to understand the information in-depth. According to El- Yazidi (2023) critical thinking includes mental activities in terms of solving problems, analyzing assumptions, providing a rationale, evaluating, conducting investigations, and making decisions. Critical thinking skills must be developed because they are not innate and do not develop naturally. These skills can be developed by getting used to activities that encourage thinking. Thinking critically will boost creativity and enhance the way you use and manage your time (E-Yazidi, 2023) and critical thinking not only describes the ability to think in accordance with the rules of logic and probability, but also the ability to apply these skills to real-life problems, which are not content-independent. Critical

thinking can provide you with a more insightful understanding of yourself. It will offer you an opportunity to be objective, less emotional, and more open-minded as you appreciate others' views and opinions. By thinking ahead, you will gain the confidence to present fresh perspectives and new insights into burden some concerns. Thinking is the base of all cognitive activities or processes and is unique to human beings. It involves manipulation and analysis of information received from the environment. Such manipulation and analysis occur by means of abstracting, reasoning, imagining, problem solving, judging, and decision-making. The mind is the idea while thinking processes of the brain involved in processing information such as when we form concepts, engage in problem solving, to reason and make decisions. The history of researches on thinking depends upon the time that human beings recognized that they think. Thinking is one of the features that distinguish humans from other living things (Annunziata, 2023).

Principal critical thinking skills can influence teacher performance by guiding decision – making processes and problem solving within the school environment. Principals who possess strong critical thinking skills are better equipped to analyze complex situations, assess various options, and make informed choices that benefit the entire educational community. This can lead to more effective school policies, improved resource allocation and strategic planning, thereby creating a more conducive atmosphere for teachers to focus on teaching and student development. In contrast, lack of critical thinking in leadership may result in inefficient decision – making, which could negatively impact teacher performance and overall effectiveness in the classroom. (Annunziata, 2023)

The effect of principal critical thinking skills on teacher performance is positive. Principals with strong critical thinking skills are better equipped to make informed decisions solve problems efficiently and strategically plan for the schools success. This creates a supportive environment where teachers can focus on their core responsibilities without unnecessary obstacles. Effective critical thinking at the leadership level contributes to well informed policies, resource allocation, and educational strategies, enhancing the overall performance and effectiveness of teachers in delivering quality education to students (Annunziata, 2023)

Teachers' Job Performance

When the teacher's performance declines, it has a correlation to the standard education both in the short and long term. Teachers' exerts a great influence on the students and the children look up to them for guidance, support and protection. Children are supposed to learn from them informally by observing their attitude, mannerism, conduct and general behaviour formally through their teaching in the classrooms (Aziri, 2019). Teachers play a pivotal role in the education sector. It was widely believed that there is no nation greater than the quality of her teachers. For an education system to achieve the desired goals and the objectives, the teacher efficiency must be taken into consideration. The future of any educational level depends not only on the psychological factors but also the emotion factors of the teachers (Aziri, 2019) The teacher's role in the student academic achievement cannot be overemphasized. The educational attainments of student depend on the efficiency of the teachers. Hence, the teacher social, political and economic well-being are very imperative.

The measure of success of a school otherwise known as the performance level is hinged on the efficiency and effectiveness of the teachers which, in turn, is partly measured in terms of

the students achievement in internal and external examinations as well as the ability of the schools products to defend their certificates (Aziri, 2019)the level of efficiency and effectiveness and the chances an organisation achieving its set goals depend primarily on the extent to which its workers are performing their defined roles. With this assertion, there is a need for proactive steps by the management of education sector in the country to brace up to their responsibilities and contribute their quota to the improvement of education in the country. Most especially in the secondary school education, the principal plays a pivotal role in an effective school administration. According to Ofuase,et.al), the teacher occupies a central position in the instructional setting. Aziri (2019) aptly stated this when he asserted that the teacher is an important figure in promoting educational enterprises.

Sahito (2016) contended that teachers like people in the industry, were affected by their experiences. No matter what zeal of the teachers to put in their best, can be hampered by many factors, these factor are referred to as quality of work life. The quality of work has significant effects in teaching and learning as well as the teacher social interaction within and outside the school environment. Accordingly, the quality of relationship of a teacher will determine his or her performance in the organisation. When the employee personal needs are aligned appropriately with those of the organisation, it lead to satisfaction for both, the employer and the employees. It is on this basis that the personal factors relating to the teachers needs were also made a part of the work environment, personal factors here refers to the personal needs such as comfortable housing, optimal standard of living, benefits, retirement benefits, pay and vacation period, the factors have been found to have significant influence on the job outcomes (Utami and Vioresa,2021). Teacher performance is multifaceted, it ultimately centres on the positive impact that teachers have on the education and development of their students. It involves a combination of effective instructional strategies, professional growth and contributions to the overall school community. Effective teacher performance involves lesson planning, delivery, evaluation, and collaboration (Afolabi & Alabi, 2020). When principals model critical thinking, teachers adopt reflective practices that improve instruction (Okeke, 2023).

METHODOLOGY

Research Design

A correlation survey design was employed to determine the predictive relationship between critical-thinking skills and teacher performance.

Population and Sample

The population comprised 19 ,797 principals and teachers in Adamawa, Bauchi, Gombe and Taraba States. A sample of 592 respondents (516 teachers and 76 principals) was drawn through stratified and simple random sampling.

Instrumentation

- i. Principals' Critical-Thinking Skills Questionnaire (PCTSQ): 5 items on problem analysis, logical reasoning, decision evaluation, innovation, and reflection.
- ii. Teachers' Job Performance Scale (TJPS): 8 items on lesson planning, delivery, assessment and classroom management.

Validity and Reliability

Three Educational-Management experts validated the instruments. Pilot testing produced $\alpha = 0.75$ (PCTSQ) and $\alpha = 0.70$ (TJPS).

Data Analysis

Descriptive statistics answered Research Question 1; Pearson r and Regression tested Question 2; ANOVA analyzed Question 3 at $p < 0.05$. Assumptions of normality and linearity were satisfied.

RESULTS

Research Question 1: Extent of Principals' Critical-Thinking Skills

Table 1. Mean and Standard Deviation of Principals' Critical-Thinking Skills and Teachers' Job Performance (N = 592)

Variable	N	Mean	SD	Remark
Problem identification and analysis	592	3.36	0.68	Moderate
Logical reasoning	592	3.41	0.63	Moderate
Developing solutions	592	3.56	0.61	High
Evaluation of decisions	592	3.45	0.65	Moderate
Encouraging innovation	592	3.77	0.59	High
Overall Critical-Thinking Skills	592	3.51	0.61	High
Overall Teacher Performance	592	3.67	0.63	High

Note. 1.00–2.49 = Low; 2.50–3.49 = Moderate; 3.50–4.49 = High.

Principals demonstrated high critical-thinking ability, particularly in encouraging innovation.

Research Question 2: Relationship Between Critical-Thinking Skills and Teachers' Performance

Table 2. Simple Linear Regression Predicting Teachers' Job Performance

Predictor	B	SE B	β	T	P	95 % CI (B)
Constant	0.91	0.10	–	9.10	< .001	[0.71, 1.11]
Principals' Critical-Thinking Skills	0.59	0.06	0.73	9.20	< .001	[0.48, 0.70]

Model summary: $R = 0.73$; $R^2 = 0.53$; Adj. $R^2 = 0.53$; $F(1, 590) = 84.7$; $p < .001$.

Critical-thinking skills explained 53 % of the variance in teachers' job performance.

Research Question 3: Differences in Teacher Performance by Critical-Thinking Level

Table 3. ANOVA Summary for Principals' Critical-Thinking Skills Predicting Teachers' Job Performance

Source	SS	df	MS	F	P
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Regression	63.4	1	63.4	84.7	< .001
Residual	287.7	590	0.49		
Total	351.1	591			

Effect size: $\omega^2 \approx 0.53$ (large). The model was statistically significant, indicating strong differences in teacher performance based on principals' critical-thinking competence.

DISCUSSION

Findings show that principals exhibit a high level of critical-thinking competence, particularly in innovation and solution development. This agrees with Adebayo & Mohammed (2022) and Abdullahi & Balogun (2021), who reported that reflective thinking and problem solving improve teacher engagement. The moderate scores for analysis and evaluation suggest the need for additional training in analytical reasoning.

The strong predictive value ($\beta = 0.73$; $R^2 = 0.53$) confirms critical thinking as a strategic driver of teacher performance. This corroborates findings by Lambert et al. (2024) and Eze et al. (2023) that leaders with higher cognitive skills enhance organizational resilience. Applying Bloom's Taxonomy, principals who operate at higher cognitive levels (analysis, evaluation, creation) enable teachers to adopt reflective instructional practices.

The large effect size ($\omega^2 \approx 0.53$) suggests that over half of teacher performance variation depends on leaders' critical reasoning. In line with Bello & Hassan (2021), principals should emphasize data interpretation, reflective discussion, and peer consultation when solving school problems. Without such skills, decisions may be reactive rather than strategic (Mohammed & Usman, 2020).

Thus, critical thinking is not merely a cognitive ability but a strategic leadership tool that promotes innovation and teacher effectiveness in resource-constrained contexts.

CONCLUSION

Principals' critical-thinking skills significantly influence teachers' job performance in post-basic schools of North-East Nigeria. High competence in problem analysis, solution development and reflective reasoning enhances teacher productivity and school efficiency. Integrating critical-thinking training into leadership programs is vital for educational quality. Principals' should encourage critical thinking through encouraging teachers to think critically and devise methods that would enable students to be creative

RECOMMENDATIONS

- i. Organize continuous professional development on critical thinking and reasoning.
- ii. Encourage teachers to think critically through exploring new methods of allocating task to students that will make them critical thinkers as well.
- iii. Incorporate critical-thinking modules into school leadership certification programs and appraisal.

LIMITATIONS AND SUGGESTIONS FOR FUTURE WORK

The study used a cross-sectional design and self-report measures, which limit causal inference. Longitudinal research and qualitative case studies are recommended to capture contextual dynamics of critical thinking in school leadership.

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