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The Role of Lecturers Innovative Assessment Strategies in Fostering Critical Thinking among Teacher-Trainees of Universities in Plateau State-Nigeria

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Abstract

This study examined the role of lecturers' innovative assessment strategies in fostering critical thinking among teacher-trainees of universities in Plateau State. The population of the study consists of all teacher trainees from two public universities in Plateau State. The study adopted a survey research design with a sample of 180 lecturers who are teacher-educators drawn from the population. Three research questions and two null hypotheses were formulated to guide the study. An instrument developed by the researcher titled: "Innovative Assessment Strategies for Critical Thinking Scale" (IASCTS) was used for data collection. The validity of the instrument was established using experts in Measurement and Evaluation from the Federal University of Lafia, Nasarawa State. The reliability of the instrument was established using the Cronbach Alpha technique with coefficient 0.76. Data analyses were done using mean and standard deviation to answer there search questions, while one-way ANOVA was used to test the corresponding null hypotheses. The findings revealed that the most used assessment strategy in teacher education was the final examination at the end of the course, while the least used is field trip. Furthermore, the major factor hindering lecturers' use of innovative assessment strategies to foster critical thinking is the high enrollment of students, while the least factor is inadequate support from fellow lecturers. Based on some of the aforementioned findings, it was recommended that there should be improved in-service training for teacher educators in the

development and use of innovative assessment strategies in Plateau State among others.

Keywords: Role of lecturers', innovative assessment, strategies, fostering, critical thinking, teacher- trainees

Introduction

The need for innovative assessment practices in today's educational system cannot be overemphasized. Society today is becoming more demanding and complex and has therefore, required that educational practices, including assessment, employ a more sophisticated, aligned, and robust approach to developing students for the future. In this way, Atisi (2021),notes that assessment should be used to support high- level learning, rather than the current focus on knowledge testing and comprehension. Therefore, assessment must evolve from traditional assessment to modern assessment as the educational system addresses the needs for modern learning outcomes such as critical thinking. Assessment is all activities that teachers use to help students learn and to measure and evaluate students' progress (Anikweze, 2016). There are different types of assessment that have been developed depending on the purposes of and the approaches to assessment for which is to be used. Generally, assessment is classified based on the time the assessment is conducted which are summative and formative assessments. Summative assessment is generally carried out at the end of a course or project for decision making as it affects promotion, selection, grouping, certification of students as well as curriculum planning and evaluation. Formative assessment on the other hand is often done during the course of the programme to guide instruction and support individual learning for improving learners' performance through remediation. Summative assessment is also regarded as *assessment of learning*, while formative assessment is referred to as *assessment for learning* (Anikweze, 2016).

However, a more recent classification of assessment is that which classifies assessment into traditional and innovative assessment strategies. Traditional assessment is a conventional method of evaluating students' knowledge and skills through tests, quizzes and written assignment. Traditional assessments are often summative, meaning they are given at the end of a learning. Traditional assessments are tests taken with paper and pencil that are usually true or false, matching or multiple choice. These assessments are easy to grade, but only test isolated application, facts, or memorized data at lower level thinking skills. Traditional refers to assessment tasks that check students' ability to recollect and reproduce the content studied during a course. These are often teacher-made or state-wide standardized tests that are at times applied to all learners under the same conditions (Coombe, Vadafar and Mohebbi, 2020). Other characteristics of traditional assessment as identified by Anikweze (2016) include an excessive focus on the final product of assessment, expecting standardized answers, having feedback based on grade computation, and lacking real-world application of the assessment process. On the other hand, innovative assessment strategies which a real so called authentic assessment strategies are designed to simulate a complex and real-life situation. Innovative assessment enables the learner to transfer knowledge, skills, competencies and dispositions between

learning and assessment. They are often designed to ascertain how students would approach, respond and resolve a problem. Atisi (2021) provided a more simplistic distinction between traditional assessment and innovative assessment as shown in the table below.

Traditional	**Innovative**
Selecting a response	Performing a Task
Contrived	Real-life
Recall/Recognition	Construction/Application
Teacher-structured	Student-structured
Indirect Evidence	Direct Evidence
Curriculum-driven	Mastery-driven

The distinction and implications between traditional and innovative assessment have continued to generate research concerns, with results showing that innovative assessment has significant advantages over traditional assessment. This is affirmed in a recent research by Ajala (2021) who indicates that integration of rubrics in the assessment of teacher-trainees in Rivers State has a significant effect on their performance in a statistics course. Innovative assessments have more valid implications than traditional tests because they require higher-order thinking skills. They are also likely to be more interesting and motivating for students as they involve more real-world tasks. Finally, they are more likely to generate useful, specific, and practical information about what students have learned, what gap in performance remains to be filled, and what needs to be done to fill such gaps (Ponciano and Yan, 2017).

Various forms of authentic assessment identified by Atisi (2021) include interviews, short stories, writing samples, group projects, public speaking and debates, experiments, app development, constructed response, recorded observations, and portfolio projects.

The concept of critical thinking has ancient roots, with great philosophers from Socrates to Aristotle emphasizing the importance of questioning, reasoning, and the pursuit of truth (Ajala., 2021). However, it was in the modern era, with the advent of the scientific method and Enlightenment philosophy, that critical thinking began to emerge as a formalized educational objective (Jones, R., and Clark, S. 2021). In the 20th century, as higher education expanded and diversified, the role of critical thinking in the curriculum gained prominence (Garrison, D. R. (2018). Critical thinking, defined as ability to analyze, evaluate, and synthesize information to form reasoned judgements and make sound decisions, serves as the bedrock of effective learning, decision-making, and lifelong intellectual growth (Halphern, 2014; Bailin and Siegel, 2016). It transcends the confines of disciplinary boundaries, imparting students with the capacity to approach problems with intellectual rigor, creativity, and skepticism (Paul and Elder, 2006; Facione, 2015).Critical thinking has received greater attention in the 21st century. Different educational authorities, including national, state, regional and local government shave recognized critical thinking as one of the skills needed for individuals to functioneffectivelyinthe21stcentury.Forexample,the Organization for Economic Co-Operation and Development (2008) stated that critical thinking is one of the fundamental skills that students need to learn in the 21st century where there is an apparent information overload. Specifically, in arguing for the relevance of critical thinking among university students, Sunday

and Iweke (2021) averred that it enables students to ask questions, define words operationally, solve problems with novelty, examine issues practically, and avoid hasty generalization. Similarly, Ponciano et al (2017) opined that critical thinking is one of the higher-order skills, believed to play a central role in logical thinking, decision making and problem-solving.

At the policy level, critical thinking as a learning outcome of21st-century education has received positive acclaim. About a decade ago, the Association of American Colleges and Universities (AAC & U, 2011) reported a survey in which 95% of academic officers in 433 institutions ranked critical thinking as one of the most important intellectual skills for their students. The survey also showed that 81% of employers surveyed out of the 400 employers reported that critical thinking should be included in the skills taught to students in school. Irrespective of this importance and the attention placed on critical thinking, there exists no clear-cut definition of what critical thinking means. Commenting on this, Anikweze (2016) stated that critical thinking continues to be a contentious skill with regular debates on its definition, its amenability to assessment, and the practicality of its impacts on academic achievement, career advancements, and personal life choices. Based on this assertion considerable evidence abounds on what critical thinking means and how best it can be assessed, as well as used for improving educational outcomes, especially at the higher education level.

The concept of critical thinking has been relatively difficult to define. This can be partly attributed to the reality that it has been employed in a variety of disciplines and concerns itself with ethical, pedagogical, and technical implications (Lorencova, Janosova, Avgitidon and Dimitriadon 2019). Critical thinking is a complex cognitive process that is purposeful and involves insightful judgment requiring multiple cognitive aspects to interpret and analyze a situation to arrive at the most suitable conclusion (Facione 2013). To Ennis et al (2005),critical thinking is a reflective thinking pattern that focuses on the rational evaluation of perspectives or alternatives to arrive at an informed and right decision. Critical thinking is the ability to actively analyze, interpret, evaluate, and question information to form informed judgments and make decisions, rather than simply accepting facts at face value. It is intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing and evaluating information gathered from observation, experience, reflection, reasoning or communication as a guide to belief and action in consideration of the various definitions provided above, it can be seen that critical thinking involves more than just compiling information or gathering facts, knowledge, or ideas. Rather it involves the rational evaluation of ideas, opinions, or information to deduce consequence from a known premise. It involves questioning assumptions, considering multiple perspectives, and applying logic to make informed decision.

The relevance of critical thinking in 21st- century education, and for 21st-century teachers has been well-documented. Zulfiqar (2016) asserted that critical thinking provides the foundation for strategic thinking and good judgment which are skills that enable teachers to identify relevant information from the abundant information. Similarly, Lorencovaetal (2019) reported that critical thinking is important in teacher education programmes as it can equip teachers and learners to be good thinkers which can further enable them to compete for educational opportunities, jobs, and recognition; and to perform effectively in the workplace, become good

citizens, and to attain an optimal state of well-being and the full expression of humanity. Furthermore, since critical thinking is relevant to the generation of new knowledge and innovation in all human fields, teachers who provide the needed education should be adequately trained on effective critical thinking (Anastasiadou and Dimitriadou, 2011).

Finally, the promotion of critical thinking is useful for the teaching of the new generation of students who are expected to exhibit a high level of flexibility in an age of massive digital revolution. Thus, teacher education programmes must provide training for pre- service teachers to acquire critical thinking skills regarding the organization, practice, and evaluation of their work at school and to turn their students into good critical thinkers, which is not possible unless the teachers are effective critical thinkers. it becomes imperative that the assessment strategies adopted by lecturers in teacher education programmes advance critical thinking among teacher-trainees in Plateau State. This study therefore, focuses on the role of lecturers' innovative assessment strategies in fostering critical thinking among teacher-trainees of universities in Plateau State.

Statement of the Problem

Higher education institutions are specially positioned to provide not only educational and economic skills, but to develop in those who pass through them the ability for self-confidence, self- respect, and self-reliance. Individuals who pass through higher education institutions are expected to possess the ability to generate new knowledge, create innovative solutions as well as promote national development. Unfortunately, the higher education system of most countries, including Nigeria is tailored towards the acquisition of knowledge and the recall of facts. Teaching and learning are often tailored towards the writing of exams and the issuance of certificates, with little or no application of knowledge gained to everyday life.

The resultant effect of this is that students lack the skills to be critical thinkers with little or no innovative strategies developed to solve real-world problems. In addition, students invest more time in trying to recall segregated knowledge rather than in processing information. While the effect of the problem is evident in students' academic and professional outcomes, it is unfortunate that most lecturers still adopt the traditional assessment paradigm which only tests for lower-order skills. In the short term, students have resorted to unethical practices to achieve a minimum standard of performance. Repeated cases of examination malpractices, with instances of staff and students' expulsion, have become a staple in social media as well as mainstream media. In the long term, employers of labour have complained about the shortage of competent manpower, irrespective of the large number of students that are turned out from higher educational institutions. The situation becomes more glooming when a teacher-education programme is considered. Teacher education programmes are geared towards providing manpower globally. In addition, graduates of teacher programmes are expected to serve as models of critical thinking in the changing educational system. Considering that the development of critical thinking ability is one of the most “universally emphasized goals” of higher education, there is a need to examine the assessment strategies used by lecturers in teacher education programmes as well as establish some innovative assessment strategies that can foster critical thinking among teacher-trainees in Plateau State. This was informed by research findings that critical thinking as well as its various components can be learned,

developed and improved through purposefully designed education. It is therefore on this basis that the current research seeks to investigate the role of lecturers' innovative assessment strategies in fostering critical thinking skills among teacher trainees towards meeting global demand.

Purpose of the Study

The purpose of this study is to identify the role of lecturers' innovative assessment strategies in fostering critical thinking among teacher-trainees in Plateau State. others are to:

1. investigate the assessment strategies that are predominantly used by lecturers in teacher education programmes in Plateau State.
2. determine factors hindering lecturers' use of innovative assessment strategies to foster critical thinking among teacher trainees of universities in Plateau State.
3. ascertain the perceived assessment strategies that lecturers can use to foster critical thinking in teacher education programmes in Plateau State.

Research Questions

The following research questions were formulated to guide this study:

1. What are the assessment strategies that are predominantly used by lecturers in teacher education programmes in Plateau State?
2. What are the factors hindering lecturers' use of innovative assessment strategies to foster critical thinking among teacher trainees of universities in Plateau State?
3. What are the perceived assessment strategies that lecturers can use to foster critical thinking in teacher education programmes in Plateau State?

Hypotheses

The following hypotheses were tested at 0.05 level of significance in this study.

1. There is no significant difference in the mean rating of assessment strategies used by humanities, social science, and science education lecturers in teacher education programmes in Plateau State.
2. There is no significant difference in the perceived assessment strategies that humanities, social science, and science education lecturers can use to foster critical thinking in teacher education programmes in Plateau State.

Methodology

The survey research design was used for this study. The survey research design was considered the most appropriate because the researcher only sampled the opinion of teacher educators on the innovative assessment strategies that can be used to foster critical thinking among teacher-trainees in Plateau State. Lecturers who were teacher educators were considered the most appropriate for this study because they were more likely to understand the changes taking place in the educational system. Furthermore, they are more likely to understand the difference between traditional and innovative assessment strategies. A sample of 180 teacher-educators was conveniently drawn from two public universities in Plateau State. An instrument developed by the researcher titled: "Innovative Assessment Strategies for Critical Thinking

Scale" (IASCTS) was used for data collection. The instrument consists off our sections: A, B, C and D. Section A is designed to gather data on the demographic characteristics of respondents, Section B to elicit responses to the assessment strategies used by lecturers, Section C to generate data on the perceived factors that hinder the use of critical thinking assessment and section D to elicit responses on the assessment strategies that foster creativity. Each section of the instrument contained 10 items each and the responses were based on the four-point Likert scale of Strongly Agree (SA), Agreed (A), Disagreed (D), and Strongly Disagreed (SD). The instrument was validated by three experts in Measurement and Evaluation from the Federal University of Lafia, Nigeria. The reliability of the instrument was determined using the Cronbach Alpha technique with coefficients of 0.76 obtained. Data analyses were done using mean and standard deviation to answer the research questions, while one-way ANOVA was used to test the corresponding hypotheses. A criterion mean of 2.50 was used to determine the decision of acceptance or rejection. The results obtained were shown in the tables below.

Results

Research Question 1

1. What are the assessment strategies that are predominantly used by lecturers in teacher education programmes in Plateau State?

Table 1: Mean rating of assessment strategies used by lecturers.

S/N	Item	Mean	SD	Decision
1	Regular Assignments	3.18	0.98	Accepted
2	Final Examination at the end of course	3.26	0.97	Accepted
3	Group Assignment	2.80	0.87	Accepted
4	Class work	2.32	0.93	Rejected
5	Oral presentation	2.61	0.98	Accepted
6	Field trips	1.80	0.98	Rejected
7	Group Practical work	2.53	0.77	Accepted
8	Unscheduled Test	2.08	1.06	Rejected
9	Class discussion among students	2.18	0.81	Rejected
10	Individual Practical works	2.66	0.92	Accepted

Table 1 shows the mean rating on the assessment strategies used by lecturers. Regular assignment(mean=3.18,SD=0.98),finalexamination at the end of the course (mean = 3.26, SD = 0.97),group assignment (mean = 2.80, SD = 0.87), oral presentation (mean = 2.61, SD = 0.98), group practical work(mean=2.53,SD=0.77),andindividualpractical work (mean = 2.66, SD = 0.92) were accepted assessment strategies used by lecturers in teacher education programmes in Plateau State. On the other hand, strategies such as classwork (mean=2.32,SD=0.93), field trips (mean=1.80,SD= 0.98), unscheduled class test (mean = 2.08, SD = 1.06), and class discussion among students (mean = 2.18, SD = 0.81), were not accepted as assessment strategies used by lecturers in teacher education programmes in Plateau State. From this result, it is deduced that the most used assessment strategy in teacher education was the final examination at the end of

the course, while the least used is field trip.

Research Question 2

What are the factors hindering lecturers' use of innovative assessment strategies to foster critical thinking among teacher trainees of Universities in Plateau State?

Table 2: Mean rating of the factors hindering lecturers' use of innovative assessment strategist of ostercritical thinking among teacher trainees.

S/N	Item	Mean	SD	Decision
1	High enrollment of students (large class size)	3.43	0.78	Accepted
2	Excessive workload for lecturers	3.10	0.71	Accepted
3	Inadequate training in innovative assessment techniques	2.81	0.80	Accepted
4	The rigid structure of university administration	2.90	0.92	Accepted
5	Inadequate support from fellow lecturers	2.37	0.67	Rejected
6	Lack of cooperation from students	2.60	0.84	Accepted
7	Rigid assessment schedule by university management	2.73	0.62	Accepted
8	The negative attitude of students towards innovative assessment	2.62	0.71	Accepted
9	Short academic calendar	2.41	0.97	Rejected
10	Incessant strike action by trade unions	2.40	0.77	Rejected

Table 2 shows the mean ratings of the factors hindering lecturers' use of innovative assessment strategies to foster critical thinking. It indicates that high enrollment of students (large class size) (mean = 3.43, SD = 0.78), excessive workload for lecturers (mean = 3.10, SD = 0.71), inadequate training in innovative assessment techniques (mean=2.81, SD= 0.80) rigid structure of university administration (mean = 2.90, SD = 0.92), lack of cooperation from students (mean = 2.60, SD = 0.84), rigid assessment schedule by university management (mean=2.73,SD= 0.62), and negative attitude of students towards innovative assessment (mean = 2.62, SD = 0.71) were accepted as factors hindering lecturers' use of innovative assessment strategies to foster critical thinking in teacher education programmes in Plateau State. On the other hand, inadequate support from fellow lecturers (mean = 2.37, SD = 0.67), short academic calendar (mean = 2.41, SD = 0.97), and incessant strike actions by trade unions (mean = 2.40, SD = 0.77) were not accepted as factors hindering lecturers' use of innovative assessment strategies to foster critical thinking. From this result, it is shown that the major factor hindering lecturers' use of innovative assessment strategies to foster critical thinking is the high enrollment of students, while the least factor is inadequate support from fellow lecturers.

Research Question 3
What are the perceived assessment strategies that lecturers can use to foster critical thinking in teacher education programmes in Plateau State?

Table3: Mean rating of innovative assessment strategies lecturers can use to fostercritical thinking in teacher education

S/N	Item	Mean	SD	Decision
1	Posing questions that require students to make their contributions	3.20	0.81	Accepted
2	Assign students and their peers to solve group problems	3.04	0.60	Accepted
3	Require students to provide an application of learned materials to real-life situations.	3.07	0.57	Accepted
4	Allow a group of students to brainstorm on the information before presenting solutions.	3.12	0.73	Accepted
5	Assessment should involve argumentative essays where students defend their positions.	3.18	0.71	Accepted
6	Administer assignments that require the application of new knowledge	3.11	0.90	Accepted
7	Provide assignments that involve the synthesis of multiple perspectives	3.21	0.76	Accepted
8	Students' should criticize a policy that is related to education	3.22	0.66	Accepted
9	Use of portfolio projects across these mester to grade students	3.03	0.77	Accepted
10	Adoption of rubrics when assessing and grading students.	3.09	0.70	Accepted

Table 3 shows the mean rating on the possible assessment strategies lecturers can use to foster critical thinking in teacher education, reveals that among the accepted strategies includes posing questions that requires students to make their contributions (mean =3.20, SD= 0.81), assign students and their peers to solve group problems (mean = 3.04, SD = 0.60), require students to provide application of learnt materials to real life situation (mean = 3.07, SD = 0.57), allow group of students to brainstorm on an information before presenting solutions (mean = 3.12, SD = 0.73), assessment should involve argumentative essays where students defend their positions (mean=3.18,SD= 0.71),administerassignmentsthatrequireapplicationof new knowledge (mean = 3.11, SD = 0.90), provide assignment that involve synthesis of multiple perspectives(mean=3.21,SD=0.76),students'should critic a policy that is related to education (mean = 3.22, SD=0.66),use of portfolio projects across the semester to grade students (mean = 3.03, SD = 0.77), and adoption of rubrics when assessing and grading students (mean = 3.09, SD = 0.70). This result showed that all the assessment strategies were considered useful in fostering critical thinking among teacher-trainees. However, the result further showed that the students'

critic of policy related to education is likely the most effective strategy while the use of portfolio projects across the semester is likely the least effective strategy.

Hypotheses 1

Table 4: ANOVA of assessment strategies used by lecturers in humanities, social science and science lecturers.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	362.574	2	189.865	0.691	.317
Within Groups	464461.811	177	277.122		
Total	464824.385	179			

Table 4 shows the calculated ANOVA on the extent of difference in the mean rating of assessment strategies used by humanities, social science and science lecturers in teacher education programmes in Plateau State. It shows that F (2, 177) = 0.691, p = 0.317. Since the p-value is greater than 0.05 level of significance, the null hypothesis is upheld. This implies that there is no significant difference in the mean rating of assessment strategies used by humanities, social science and science lecturers in teacher education programmes in Plateau State.

Hypothesis 2

Table 5: ANOVA of the perceived assessment strategies that humanities, social science, and science lecturers can use to foster critical thinking in teacher education programmes.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	481.682	2	237.691	0.759	.429
Within Groups	56223.768	177	324.789		
Total	56705.45	179			

Table 5 shows calculated ANOVA on the extent of difference in the perceived assessment strategies that humanities, social science and science lecturers can use to foster critical thinking in teacher education programmes in Plateau State, it indicates that F (2, 177) = 0.759, p = 0.429. Since the p-value is greater than 0.05 level of significance, the null hypothesis is upheld. This implies that there is no significant difference in the mean rating of humanities, social science and science lecturers on the perceived assessment strategies they can use to foster critical thinking in teacher education programmes in Plateau State.

Discussion of Findings

From the result in Table 1 on the assessment strategies used by lecturers in teacher education programmes in Plateau State, the most used assessment strategy in teacher education was the final examination at the end of the course, while the least used is field trip. This result is expected and not surprising to the researcher because most of the schools and lecturers are constrained to administer the final exams due to the limited time frame for

assessment and submission of students course grades. In addition ,the finding that revealed field trip is the least used assessment strategy might be attributed to the fact that field trip is expensive and sometimes difficult to execute. The finding of this study agreed with the findings of Atisi (2021); Coombe (2020) who reported that in most teacher education programmes in Rivers State, Nigeria and Canada respectively, summative assessment is often used at the end of the programme, with little or no effort made to integrate novel assessment strategies. Similarly, Lorencova (2019) observed that most teacher education programmes do not traditionally prepare teachers on how to plan, implement and reflect on the field trips as a form of learning and assessment.

From research question two on the factors hindering lecturers' use of innovative assessment strategies to foster critical thinking among teacher trainees of universities in Plateau State, it was found that the major factor hindering lecturers' use of innovative assessment strategies to foster critical thinking is the high enrollment of students, while the least factor is inadequate support from fellow lecturers. Other factors also identified include the excessive workload of lecturers, inadequate training on modern innovative assessment strategies and rigid assessment schedule by university management. These findings affirmed the findings of Ajala (2021) and Atisi (2021) who showed that statewide or national policy on assessment, short time in the academic calendar, and lack of specific training on assessments were the factors identified.

The final result from this study on the possible innovative strategies that lecturers can use to foster critical thinking in teacher education revealed that among the accepted strategies includes posing questions that require students to make their contributions, require students to provide an application of learned materials to a real-life situation, allow a group of students to brainstorm on the information before presenting solutions, assessment should involve argumentative essays where students defend their positions, administer assignments that require the application of new knowledge, provide assignments that involve synthesis of multiple perspectives, students' should critic a policy that is related to education, use of portfolio projects across the semester to grade students and adoption of rubrics when assessing and grading students. This finding above agreed with the views of Ajala (2021) who indicated that integration of rubrics in the assessment of teacher-trainees in Rivers State has a significant effect on their performance in a statistics course.

Conclusion

In view of the findings of this study, the following conclusions were drawn that there is no significant difference in the mean rating of assessment strategies used by humanities, social science and science education lecturers in teacher education programmes in Plateau State. This study further established that there is no significant difference in the mean rating of humanities, social science and science lecturers on the perceived assessment strategies they can use to foster critical thinking in teacher education programmes in Plateau State. Study generally concludes that the most used assessment strategy in teacher education is the final examination at the end of the course, while the least used assessment is field trip.

Recommendations

From the findings of this study, the following recommendations were drawn:

1. There should be enhanced in-service training for teacher-educators in the development and use of innovative assessment strategies.
2. University administration should encourage and provide lecturers with the opportunity to familiarize with the structure and method of assessment used in teacher education programmes.
3. There should be a reduction in the number of students admitted into teacher education programmes as this would allow for the implementation of more innovative assessment strategies in Plateau State public universities.
4. Lecturers should be stimulated to adopt assessment strategies that assess higher-order critical thinking among students.
5. Lecturers should incorporate aspects of educational policy analysis as part of the assessment framework used in developing critical thinking among teacher- trainees in Plateau State.

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