EFFECTS OF ASSURE AND TRADITIONAL CURRICULUM DESIGN MODELS ON ACADEMIC PERFORMANCE AND RETENTION OF SECONDARY SCHOOL HISTORY STUDENTS IN KATSINA

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Abstract
This study investigated the effects of ASSURE and traditional curriculum design models on academic performance of secondary school History students in Katsina state. The study was guided by the objective: to examine the effects of ASSURE and traditional curriculum design models on academic performance of secondary school history students in Katsina state; and to determine the effects of ASSURE and traditional curriculum design models on retention of secondary school history students in Katsina state. Quasi-experimental research design was adopted for the study. The population of the study comprised 3,572 senior secondary II History students. Sample of 124 intact classes was used for the study. History Performance Test (HPT) instrument validated by experts in curriculum, history and test and measurement was used for data collection. The instrument yielded a reliability coefficient of 0.81 obtained using Kuder-Richardson formula – 20 (KR-20). Mean and standard deviation were used to answer the research questions while, t-test was used to test the hypotheses. Findings revealed that students taught History using ASSURE curriculum design performed and retained experience significantly better than those taught using the traditional curriculum design. The study recommended ASSURE curriculum model should be adopted in History at secondary schools level.

Keywords: ASSURE and Traditional Curriculum Design Models, Academic performance, Retention, History.

Introduction

The concept of curriculum entails the whole situation the school may select and organize exclusively for the purpose of imparting to learners relevant skill, attitude, values and knowledge in order to bring about positive changes in them. These changes may be cognitive, affective or psychomotor which translates into behaviour. The concept of curriculum is as dynamic, flexible and innovative as the changes that occur in the society. In its narrow sense, curriculum is viewed merely as a listing of subject to be taught in school. In a broader sense, it refers to the total learning experiences an individual acquire within and outside the school. It is on this premise that Okafor and Adeyemi (2025) described curriculum as an organized plan of academic subjects, co-curricular activities and guidance services that are intentionally arranged to help learners develop the knowledge, skills, attitudes and values needed to meet the country's educational and developmental objectives. It includes the teacher, subjects,

contents, methods of teaching and evaluation as well as the physical and psychological dimensions of the experiences. Curriculum emerges from the application of curriculum design models, which serves as blueprints for transforming educational vision into practical, sequenced learning experiences.

The rapid evolving educational landscape of the 21st century, there is an increasing emphasis on cultivating higher-order thinking skills, problem-solving abilities, and other cognitive competencies among students. These skills are essential for learners to navigate complex information, make informed decisions, and adapt to the dynamic demands of the modern world (Saavedra & Opfer, 2019). In this context, the ASSURE curriculum design model provides a comprehensive structure for enhancing instructional effectiveness and learning outcomes, similar to foundational model like ADDIE (Smaldino, Lowther, Mims & Russell 2015). Its application in history education offers significant potential for advancing critical analysis and knowledge retention (Reisman, 2025). Central to ASSURE is its focus on learner analysis, which enables the practicalisation of instruction to address diverse cognitive and cultural needs (Darling-Hammond, Flook, Cook-Harvey & Osher, 2021). By diagnosing students' prior knowledge, learning preferences, and cultural contexts, educators establish SMART objectives (Specific, Measurable, Achievable, Relevant, Time-bound) that scaffold reliable historical inquiry tasks (Reisman, 2025). This alignment facilitates the selection of appropriate methods and materials that resonate with learners, thereby enhancing engagement and comprehension (Adedapo & Opoola 2021). In History education, this could translate to the use of learner centered instructional strategy such as concept mapping, multimedia resources, primary source documents, and interactive timelines that bring historical events to life. For designing curriculum that is technology enhanced, the ASSURE model according to Heinrich and Smaldino (2015) offers a practical framework. Recent research often highlights its utility in guiding technology integration in blended and online learning environments (Lim & Morris, 2022).

The ASSURE model is a six steps approach, developed by Robert Heinich, Michael Molenda, James Russell, and Sharon Smaldino in 1982 and refined in 1999, is a model which provides educators with a practical, six-step framework for designing effective curriculum plan across diverse learning environments, making it highly applicable for designing instruction in both traditional and digital learning environment (Smaldino et al., 2019). The acronym ASSURE stands for analyze learners, state objectives, select methods and media, utilize materials, require participation, and evaluate. It provides a systematic approach to designing, delivering, and evaluating curriculum content. Unlike traditional design models, which often focus on content delivery, the ASSURE model emphasizes a learner-centered approach, ensuring that educational processes cater for the needs of the students and achieve measurable outcomes (Sezer, Karaoglan Yilmaz, & Yilmaz, 2013). It aligns closely with constructivist learning theories and emphasizes the integration of technology to enhance instructional delivery (Peterson & Koehler, 2020). Constructivism represents a paradigm shift from

knowledge transmission to knowledge construction. Rooted in the work of Jean Piaget, Lev Vygotsky, and Jerome Bruner, constructivist theories posit that learners actively construct their own understanding based on experiences, prior knowledge, and social interaction. Curriculum design models derived from constructivist perspectives emphasize learner-centered approaches, collaborative learning, authentic tasks, and problem-based learning environments (Jonassen & Land, 2020). Models like the ASSURE Model embody constructivist principles. The ASSURE model places strong emphasis on the learner as an active participant in the curriculum process. It encourages curriculum designers to consider societal need, learners' prior knowledge, learning preferences, and sociocultural contexts when planning (Molenda, 2020).

Several investigations highlight the efficiency of the ASSURE model in improving teaching, learning and digital literacy. For instance, a study conducted by Zahran (2023) on EFL in-service preparatory teachers and found that the ASSURE model significantly enhanced their teaching competencies and digital literacy skills. This suggests that the ASSURE model's structured approach to integrating technology and media into instruction can be instrumental in developing educators' capacities to deliver content effectively. The application of information technology-based learning media using the ASSURE model positively impacts student learning processes and outcomes. Overcoming infrastructural and logistical challenges is necessary to enhance its effectiveness in classrooms. Eliana, Wati, and Rahmadona (2024) posits that the application of information technology-based learning media using the ASSURE model positively impacts student learning processes and outcomes. Overcoming infrastructural and logistical challenges is necessary to enhance its effectiveness in classrooms. In the context of history education, where digital archives and virtual simulations are increasingly prevalent, such competencies are invaluable. Furthermore, the ASSURE model's requirement for learner participation aligns with active learning strategies that promote higher-order thinking. By engaging students in discussions, debates, and problem-solving activities, educators can foster critical analysis and synthesis of historical information. Active learning has been shown to reduce academic risk and improve performance, particularly among students with non-formal reasoning skills (Lagubeau, Tecpan & Hernandez, 2019). In modern educational contexts, particularly with the integration of digital tools and online learning environments, curriculum design models have evolved to incorporate flexibility, responsiveness to learner needs, and integration of technology. For instance, contemporary curriculum design places a strong emphasis on personalized learning, competency based education, and the application of learning analytics for instructional improvement (Al-Azawei, Serenelli & Lundqvist, 2020).

These model help educators anticipate and meet diverse learner needs by ensuring that curriculum development process are both inclusive and adaptive. Furthermore, curriculum design models are grounded in established learning theories like behaviorism, cognitivism, constructivism, and connectivism which influence the choice of strategies and media in

instruction. For example, the ASSURE model integrates multimedia and active learner participation, resonating with constructivist principles (Martin, Budhrani & Wang, 2020). In the Nigerian secondary school context, the application of curriculum design models such as ADDIE and ASSURE has shown promise in enhancing the teaching and learning of complex subjects like History. These models help educators move beyond rote memorization toward fostering higher-order thinking, historical inquiry, and student engagement through well-structured lesson delivery and media integration (Okonkwo & Nwankwo, 2021). They allow for the thoughtful selection of instructional strategies and assessment methods that align with cognitive goals, learner diversity, and curriculum standards.

Curriculum models can be categorized in various ways:

1. Classroom-oriented and systems-oriented: Some models are designed for single programme models for example Gagne's nine events, while other models such Dick and Carey, Morrison, Ross & Kemp, ASSURE as are geared towards designing complex curricula or training systems.
2. Prescriptive and descriptive: prescriptive models for example, ADDIE, Dick and Carey, provide specific steps to follow. Descriptive models such as ASSURE model, rapid prototyping models, some constructivist models, describe processes more fluidly or focus on the nature of the learning environment.
3. Objectivist and. Constructivist: Reflecting their underlying theory, some models focus on transmitting structured knowledge (objectivist), while others focus on facilitating learner-centered experiences (constructivist).

No single curriculum design model is universally accepted. Selection depends on the context: programme or project scope, timeline, budget, delivery mode, organizational culture. Learning goals: complexity of skills and knowledge, desired level of learning. For example, recall and problem-solving. Learner characteristics: audience size, diversity, prior knowledge, motivation. Designer expertise: familiarity and proficiency with specific models. Resources: availability of tools, technologies, and personnel.

Statement of the Problem

The contemporary educational goals are characterized by an imperative to equip learners with 21st-century skills, like digital literacy. These competencies are essential for learners to navigate the complexities and demands of modern society and the global competitiveness. In the context of history education, fostering such skills is particularly relevant, as the discipline fundamentally demands critical engagement with past events, interpretation of diverse perspectives, and the ability to draw informed conclusions. Despite this, traditional curriculum design in history instruction often rely heavily on rote memorization and passive learning strategies, which may not effectively promote deep understanding or long-term retention of historical knowledge and concepts (Falasi 2024, Willingham, 2015). 3,486 History students enrolled for WAEC between the years 2019 – 2023. The result showed performance of credit and above at 28.62%, while below credit at 71.37%. The general performance fluctuated across

the years with 2020 having the best performance of 54.45% for credit and above, while 2021 showed the weakest with 11.18% for credit and above. This study on this premise seeks to research on effects of the ASSURE model on academic performance and retention of secondary school II history students. By addressing this research gap, the study seeks to provide insights into the effectiveness of ASSURE curriculum design models in teaching and learning history.

Objectives of the Study

The study was guided by the following objective to:

1. examine the effects of ASSURE and traditional curriculum design models on academic performance of secondary school history students in Katsina state.
2. determine the effects of ASSURE and traditional curriculum design models on retention of secondary school history students in Katsina state.

Research Questions

The study answered the following research question:

1. What is the effects of ASSURE and traditional curriculum design models on academic performance of secondary school history students in Katsina state?
2. What is the effects of ASSURE and traditional curriculum design models on retention of secondary school history students in Katsina state?

Hypotheses

The following hypotheses was formulated and tested at level 0.05 level of significance:

HO_1. There is no significant difference in the academic performance of secondary school history students when taught using ASSURE curriculum design model and those taught using traditional curriculum design model in Katsina state.

HO_2. There is no significant difference in the retention of secondary school history students when taught using ASSURE curriculum design model and those taught using traditional curriculum design model in Katsina state.

Methodology

The study employed the use of quasi-experimental research design. This design was adopted because it was not possible to have complete randomization of the subjects to avoid the disruption of school organization (Gray 2023). Consequently, intact classes were assigned to experimental group and control group. The population of the study comprised 3,572 senior secondary school students. A sample size of 124 was randomly selected. History performance test (HPT) was used as instrument for data collection. These questions were adapted from past West African Examination Council (WAEC). Each question was made up of four options A – D. A table of specification developed by the researcher guided the construction of this instrument, while the objectives as specified in the National Curriculum for History using ASSURE curriculum design model and Traditional curriculum design model guided the construction of questions. Pilot test was conducted to determine the instruments reliability and usability. The statistical tool used for the internal consistency was the Kuder-Richardson formula - 20 (KR - 20). A reliability coefficient of 0.81 was obtained. Mean, Standard

Deviation and t-test was used to analyze the data. Mean and Standard deviation score was used to answer the research questions, while independent sample t-test was used to test the hypotheses at 0.05 level of significance.

Results

Research question one: What is the effects of ASSURE and traditional curriculum design models on academic performance of secondary school history students in Katsina state?

Table 1: Performance mean and standard deviation for experimental group and control group

	Groups	N	Mean	Std. Deviation	Mean Difference
Posttest	Experimental group (ASSURE)	48	27.375	3.3366	6.48
	Control group (Traditional)	44	20.886	2.2122	

Table 1 shows the posttest performance of students taught History using ASSURE curriculum design model and those taught using traditional curriculum design model. The mean scores showed that students taught History using ASSURE curriculum design model at posttest performed better with means score of 27.37 which exceeded the posttest performance of those taught using traditional curriculum design model with mean score of 20.88 with corresponding standard deviation of 3.33 and 2.21 respectively which yielded mean difference of 6.48.

Research question two: What is the effects of ASSURE and traditional curriculum design models on retention of secondary school history students in Katsina state?

Table 2: Delayed posttest mean and standard deviation for experimental group and control group

	Groups	N	Mean	Std. Deviation	Mean Difference
Delayed Posttest	Experimental group 2 (ASSURE)	48	29.479	2.4407	9.11
	Control group (Traditional)	44	20.364	1.7926	

Results in table 2 indicates that the students taught using ASSURE curriculum design model had a retention mean score of 29.47, while students taught using traditional curriculum design model had a retention mean score of 20.36 with corresponding standard deviation of 2.44 and 1.79 respectively This implies that students taught using ASSURE curriculum design model had a higher retention mean score and retention mean difference of 9.11 over those taught using traditional curriculum design model. To find if mean differences was significant, the retention mean scores were subjected to t-test statistical analysis.

Hypotheses

HO_1: There is no significant difference in the academic performance of secondary school history students when taught using ASSURE curriculum design model and those taught using traditional curriculum design model in Katsina state.

Table 3: Summary of independent samples t-test analysis of experimental group and control group on performance

Group	N	Mean	Std.D	M.D	df	t– cal	P-value	Outcome
Experimental	48	27.37	3.336					
				6.48	90	10.889	.000	Significant
Control	44	20.88	2.21					

$\alpha \leq 0.05$

Table 3 indicates that experimental group has a mean score of 27.37 and standard deviation of 3.336 while the control group has a mean score of 20.88 and standard deviation of 2.21. Table 13 reveals that there is significant difference between the mean performance scores of senior secondary students taught History using ASSURE curriculum design model and those taught using traditional curriculum design model. This was because the P-value .000 is less than 0.05 alpha level of significance and df at 90. It was established that ASSURE curriculum design model increased student's performance more than the traditional curriculum design model. Therefore, the null hypothesis which states that, there is no significant difference between the mean performance scores of senior secondary students taught History using ASSURE curriculum design model and those taught using traditional design model, was rejected.

HO_2: There is no significant difference in the retention of secondary school history students when taught using ASSURE curriculum design model and those taught using traditional curriculum design model in Katsina state.

Table 4: Summary of independent samples t-test analysis of experimental group and control group on retention

Group	N	Mean	Std.D	M.D	df	t– cal	P-value	Outcome
Experimental 2	48	29.47	2.44					
				9.11	90	20.26	.000	Significant
Control	44	20.36	1.79					

$\alpha \leq 0.05$

Table 4 above shows that experimental group has a retention mean score of 29.47 and standard deviation of 2.44 while the control group has a retention mean score of 20.36 and standard deviation of 1.79. Table 4 reveals that there is significant difference between the mean retention scores of senior secondary students taught History using ASSURE curriculum design model and those taught using traditional curriculum design model. This is because the P-value .000 is less than 0.05 alpha level of significance and df at 90. It was found that students taught using ASSURE curriculum design model retained more than those taught using traditional curriculum design model. Therefore, the null hypothesis which states that, there is no

significant difference between the mean retention scores of senior secondary students taught History using ASSURE curriculum design model and those taught using traditional design model was rejected.

Discussion of Findings

The findings of the study revealed that there is significant difference between ASSURE curriculum design model and Traditional curriculum design model on academic performance of History students in Katsina state. This is in agreement with Eliana, Wati, and Rahmadona (2024), which revealed that integration of information technology-based learning media using ASSURE showed positive effects on student engagement and performance. This study concluded that the application of information technology-based learning media using the ASSURE model positively impacts student learning processes and outcomes. Also Zahran (2023) and Arriyani and Pratama (2021) in relation confirmed that in the integration of technology and learning media in English virtual instruction, ASSURE model was effective in increasing students' English achievements.

In relation to retention, Neneng, Unik and Sisca, (2024) and Kim, Misrita and Zulkarnain, (2024), revealed a 50% increase in student engagement and a 21.43% improvement in student performance. These findings highlight the effectiveness of the ASSURE model in designing practical and engaging curriculum. In consonance, Stavinibelia, Affandy, Nur, Nofriza, Ika, Saman and Yona (2023) conducted a study on the development of learning design using ASSURE model at elementary schools. Result of the study show validity at 90% in the very valid category. The practicality of the results of the ASSURE model learning design model with a percentage of 93%. While the effectiveness of the implementation of lesson plans, activities and learning outcomes of students with a percentage of 90%.

Conclusion

This study investigate the extent to which ASSURE curriculum design model affect the academic performance and retention of History students in Katsina state. The findings indicate to a high impact of ASSRE design model on student performance and retention after implementation at the secondary level.

Recommendations

1. Using the ASSURE curriculum design model to design and develop curriculum framework, it is recommended to study the perceptions of curriculum designers who are familiar with only one curriculum design process. In this study, the curriculum designer had experiences with the ASSURE curriculum design processes. Exploring the perspectives of curriculum designers familiar with ADDIE only, Taba only, Tyler only, or a different curriculum design framework might reveal new views and opinions.
2. Future research should focus on testing ASSURE curriculum design model across multiple arts and science fields to gain empirical evidence of its effectiveness and usefulness.

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