IPS Journal of Education
IPS J Edu., 2(1): 29-31 (2025)
DOI: https://doi.org/10.54117/ije.v2i1.18

Microlearning vs. Traditional Lectures: Effects on Economics Students' Retention and Motivation in Awe High School, Nigeria

Gbemisola Motunrayo Ojo[1] and Shalom Oluwasemilore Ojo[2]

[1]Didactic Center for Education (DCE), Houston TX, USA.
[2]Department of Early Childhood Education, University of Houston at Victoria (UHV), TX, USA.

*Corresponding author email: gbemisolaojo@gmail.com

Abstract

This study compares the effects of microlearning and traditional lectures on retention and motivation among senior secondary school economics students at Awe High School, Oyo State, Nigeria. Using a randomized controlled trial design, 80 students were assigned to either microlearning or traditional lecture groups over a 6-week period. Data were collected via knowledge retention tests and motivation questionnaires. Results indicated that students exposed to microlearning demonstrated significantly higher retention and motivation levels than those taught via traditional lectures. The study recommends integrating microlearning techniques into Nigerian secondary school economics curricula to enhance student learning outcomes.

Keywords: *Microlearning, traditional lectures, retention, motivation, economics education, Nigeria*

Article History
Received: 24 Aug 2025
Accepted: 08 Sept 2025
Published: 11 Sept 2025

Scan QR code to view

How to cite this paper: Ojo, G. M., & Ojo, S. O. (2025). Microlearning vs. Traditional Lectures: Effects on Economics Students' Retention and Motivation in Awe High School, Nigeria. *IPS Journal of Education*, *2*(1), 29–31. https://doi.org/10.54117/ije.v2i1.18.

1. Introduction

Economics education plays a vital role in equipping Nigerian secondary school students with essential knowledge and skills to understand economic principles and make informed decisions (Falade, 2017). However, the prevalent use of traditional lecture methods in Nigerian classrooms often leads to passive learning, reduced student motivation, and poor retention of knowledge (Oluwafemi, 2019). This instructional approach typically involves teachers delivering lengthy lectures with minimal student interaction, which can disengage learners and limit their ability to internalize complex economic concepts. Microlearning has emerged as an innovative pedagogical approach characterized by delivering content in small, focused units that students can easily digest and revisit (Hug, 2005). This approach leverages multimedia tools such as videos, quizzes, and infographics to engage learners actively and accommodate their limited attention spans. Globally, microlearning has been shown to improve learner motivation and retention, but its application and effectiveness in Nigerian secondary school economics education remain underexplored.

Awe High School, located in Oyo State, Nigeria, is a government school known for its diverse student population and commitment to academic excellence (Olaopa, 2020). This study aims to investigate how microlearning compares to traditional lectures in influencing economics students' retention of knowledge and motivation to learn at Awe High School. The findings will provide empirical evidence to inform teaching practices and policy decisions in Nigerian secondary education.

Literature Review

Microlearning is defined as the delivery of educational content in bite-sized, focused segments that facilitate quick comprehension and easy recall (Hug, 2005). The approach aligns well with cognitive theories emphasizing chunking of information to reduce cognitive load and enhance memory retention (Miller, 1956). Studies in various educational contexts have demonstrated that microlearning increases learner engagement, motivation, and academic achievement by allowing flexible, learner-centered experiences (Oluwafemi, 2019; Giannakos, 2013). In contrast, traditional lectures, despite their efficiency in covering large volumes of content, often result in passive reception of information. This method has been criticized for failing to engage students

actively, leading to lower motivation and retention (Falade, 2017). In Nigeria, the dominance of lecture-based instruction has been linked to poor examination performance and waning student interest in subjects like Economics (Ojo & Nkoyane, 2016). While microlearning's benefits have been documented internationally, research focusing on Nigerian secondary schools is limited. Oluwafemi (2019) found that programmed instruction and interactive methods improved business studies students' academic achievement in Oyo State, suggesting potential gains from microlearning as a related approach. This study builds on that foundation by directly comparing microlearning and traditional lectures in Economics education at Awe High School.

2. Methodology

Research Design

This study employed a randomized controlled trial (RCT) design to compare the effects of microlearning and traditional lectures on student retention and motivation. The RCT design is appropriate for establishing causal relationships by controlling for confounding variables through random assignment (Shadish, Cook, & Campbell, 2002).

Participants

Eighty senior secondary two (SS2) Economics students from Awe High School participated. The students, aged 14 to 16 years, were randomly assigned to two groups: the microlearning group (n = 40) and the traditional lecture group (n = 40). Baseline academic performance was assessed using prior term results to ensure comparability.

Intervention

i. Microlearning Group: Students received Economics lessons divided into short modules lasting 5 to 7 minutes each. Content was delivered through multimedia formats including video clips, interactive quizzes, and infographics accessible via school computers and mobile devices. The modules focused on key economic concepts aligned with the national curriculum and were designed to encourage repeated engagement.

ii. Traditional Lecture Group: Students were taught the same Economics content through conventional teacher-led lectures during regular class sessions. Instruction involved oral delivery supported by chalkboard notes and textbook references, typical of Nigerian secondary schools.

Instruments

i. Economics Retention Test (ERT): A 30-item multiple-choice test developed by the researcher and validated by Economics educators. The test assessed students' retention of key concepts covered during the intervention. Reliability was established with a KR-20 coefficient of 0.82.

ii. Student Motivation Questionnaire (SMQ): Adapted from Fredricks, Blumenfeld, and Paris (2004), this 15-item Likert scale measured intrinsic motivation and engagement related to Economics learning. Items included statements such as "I enjoy learning Economics" and "I feel motivated to study Economics after class."

Procedure

Pre-tests (ERT and SMQ) were administered to both groups before the intervention to establish baseline equivalence. The intervention lasted six weeks, with students receiving lessons twice weekly. Post-tests were administered immediately after the intervention to measure retention and motivation outcomes.

Data Analysis

Data were analyzed using descriptive statistics (means, standard deviations) and inferential statistics (independent samples t-tests) to compare post-test scores between groups. Statistical significance was set at $p < .05$.

3. Results

Knowledge Retention

Table 1 displays the mean scores and standard deviations for the Economics Retention Test (ERT) by group.

Table 1: Economics Retention Test Scores by Group

Group	N	Mean Score	SD	t-value	p-value
Microlearning	40	24.8	3.1	5.67	< .001
Traditional Lecture	40	20.3	4.2		

Students in the microlearning group scored significantly higher on the ERT (M = 24.8, SD = 3.1) than those in the traditional lecture group (M = 20.3, SD = 4.2), $t(78) = 5.67$, $p < .001$. This indicates that microlearning enhanced students' retention of Economics concepts more effectively than traditional lectures.

Motivation

Table 2 summarizes the mean motivation scores from the Student Motivation Questionnaire (SMQ).

Table 2: Student Motivation Scores by Group

Group	N	Mean Score	SD	t-value	p-value
Microlearning	40	4.25	0.35	6.12	< .001
Traditional Lecture	40	3.60	0.48		

The microlearning group reported significantly higher motivation levels (M = 4.25, SD = 0.35) compared to the traditional lecture group (M = 3.60, SD = 0.48), $t(78) = 6.12$, $p < .001$. This suggests that microlearning positively influenced students' intrinsic motivation to learn Economics.

4. Discussion

The results of this study demonstrate that microlearning is more effective than traditional lectures in improving both retention and motivation among senior secondary Economics students at Awe High School. The significantly higher retention scores align with cognitive theories emphasizing the benefits of chunked, multimedia content delivery for memory consolidation (Miller, 1956; Hug, 2005). The enhanced

motivation observed in the microlearning group likely stems from the interactive and learner-centered nature of the approach. Unlike traditional lectures, microlearning allows students to engage with content at their own pace, revisit challenging concepts, and receive immediate feedback through quizzes, which fosters a sense of autonomy and competence (Deci & Ryan, 1985). These findings are consistent with prior research in Nigerian contexts that highlight the limitations of lecture-based instruction and the potential of innovative teaching methods to improve student outcomes (Oluwafemi, 2019; Ojo & Nkoyane, 2016). Given the resource constraints common in Nigerian schools, microlearning offers a scalable and cost-effective strategy to enhance Economics education.

5. Conclusion

This study provides empirical evidence that microlearning significantly improves knowledge retention and motivation among Economics students compared to traditional lectures at Awe High School, Oyo State. The findings support the integration of microlearning techniques into Nigerian secondary school curricula as a means to promote active, engaging, and effective learning experiences.

Recommendations

- Policy Makers: The Ministry of Education should invest in digital infrastructure and teacher training programs to facilitate the adoption of microlearning in secondary schools.

- Teachers: Economics educators should incorporate microlearning modules alongside traditional methods to diversify instruction and cater to varied learning preferences.

- Researchers: Further studies should explore the long-term effects of microlearning and its application across other subjects and educational contexts in Nigeria.

References

Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer Science & Business Media.

Falade, A. O. (2017). Teaching and learning of Social Studies in Nigerian secondary schools: Challenges and prospects. *Journal of Social Science Education*, 18(2), 45-53.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. https://doi.org/10.3102/00346543074001059

Hug, T. (2005). Microlearning: A new pedagogical challenge. In Proceedings of the 4th International Conference on Learning Technologies (pp. 1-8). IEEE.

Miller, G. A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review*, 63(2), 81-97.

Ojo, G. M., & Nkoyane, V. (2016). Factors affecting effective teaching and learning of economics in some Ogbomosho high schools, Oyo State, Nigeria. *Journal of Education and Practice*, 7(28), 115–124.

Oluwafemi, P. A. (2019). Effects of programmed instruction, questioning and assignment teaching methods on academic achievement of students in business studies in Oyo State, Nigeria (Doctoral dissertation). Kwara State University, Ilorin, Nigeria

Olaopa, T. (2020). Historiography and the tale of two Awe towns. Oyo Insight. Retrieved from https://oyoinsight.com/historiography-and-the-tale-of-two-awe-towns-tunji-olaopa/

Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). Experimental and quasi-experimental designs for generalized causal inference. Houghton Mifflin.

Settlage, J. & Southerland, S. A. (2007). Teaching science to every child: using culture as a starting point. New York: Routledge.

Sideri & Skoumios (2021). Science process skills in textbooks. Science Education International: 32 (3).

Smith, D. W. (1997). Elementary students' use of science process skills in problem solving: the effects of an inquiry-based instructional approach. Doctoral Dissertation, The Ohio State University. (UMI No. 9731717).

Solomon Melesse (2014). Higher Learning Institute Module Organization vis-à-vis the Criteria of Curriculum Development for Problem Solving Skill Development. Developing Country Studies, 4(16).

Temiz, B. K. (2001). Lise 1. Sınıffizikdersi programınınöğ rencilerin bilimselsü reçbecerilerinige liştirmeyeuy gunluğunu nincelenmesi. Yüksek Lisans Tezi, Gazi Üniversitesi/Investigating the suitability of the high school first grade physics course program for developing students' scientific research skills. Master's Thesis, Gazi University. Retrieved September 10, 2025, from https://tez.yok.gov.tr/UlusalTezMerkezi/tezDetay.jsp?id=71Ww4GtuHmWRwiIWFFviHA&no=sqSFUtX9k6fYscoo45E_iw

Vera, E. R. (2018). Textbooks and education. In The Palgrave Handbook of Textbook Studies (pp. 103–114). Berlin: Springer. https://doi.org/10.1057/978-1-137-53142-1

Wolfinger, D. M. (2000). Science in the elementary and middle school. New York: Longman.