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EFFECT OF FLIPPED LEARNING ON PUPILS' ACADEMIC PERFORMANCE IN LITERACY IN ILORIN SOUTH LOCAL GOVERNMENT OF KWARA STATE.

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Abstract

The traditional classroom teaching approach may not be enough to fully engage pupils in the learning process, and this led to poor academic performance in literacy. This study makes used of quasi-experimental design. The population of this study comprises all pupils in Ilorin south local government. The sampling technique was multistage. The researcher sampled 15 learners in experimental group and 20 learners in control group. Two instruments were used for this study, namely flipped learning instructional guide (FLIG) and pupils' literacy achievement test (PLAT). The two instruments were validated, and the achievement test was subjected to reliability. The data for this study were collected using quantitative methods. Quantitative data were done through pre-tests and post-tests of literacy administered to the pupils. The data collected through the pre-tests and post-tests were analyzed using ANCOVA. The findings of this study revealed there was a significant main effect of treatment on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State ($F_{(1;\ 28)} = .153$, $P < 0.05$). Flipped learning and gender had no combined interactive effect on primary school pupil academic performance in literacy in Ilorin South Local Government ($F(1; 28) = .599$; $P > 0.05$). Based on the findings, it is recommended that teachers and educators should consider implementing flipped learning as a teaching strategy, as it has been shown to have a positive impact on academic performance in literacy.

Keywords: flipped learning, Academic Performance, literacy Blended learning.

Introduction

In recent years, there has been a growing interest in the use of flipped learning as a pedagogical approach in education. Flipped learning is a form of blended learning that involves the use of online resources and technology to deliver content to students outside of class, while classroom time is used for more interactive and collaborative activities. In a flipped classroom, students can access pre-recorded video lectures, reading materials, and interactive quizzes before coming to class, and then engage in discussions, group work, and hands-on activities during class time.

Flipped learning has been found to have a positive impact on student engagement, motivation, and learning outcomes in higher education and secondary education (Abiona & Oni, 2019; Eniaiyeju, 2019; Ololade & Adekunle, 2020). However, there is still limited research on the use of flipped learning in primary education, particularly in developing countries like Nigeria.

The main aim of flipped learning is to have students ready for learning practices in the classroom (Bristol, 2014 Demiralay & Karatas, 2014). In this method, students deliver the theoretical part of a lesson at home through multimedia devices such as online videos and presentations. Also, in addition to the basic course materials provided by the teacher, students take the responsibility of their own learning and do more research to learn the assigned content (Seaman and Gaines, 2013). Therefore, flipped learning supports learner autonomy by giving them the opportunity to reach the information anywhere and anytime by means of lesson videos (Talbert, 2012).

According to Lage, Platt, and Treglia (2000), flipped learning is characterized by its ability to be constantly changing and adaptable to meet students' needs. It involves less lecture time and more cooperative learning, discussions, and educational projects that make the learning process fun and engaging for students. This approach also ensures that

the lecture time is used effectively, allowing for more time for inquiry-based activities. The teacher's role in this approach is to guide, motivate, and assist students, which helps to build stronger relationships between the teacher and students. Flipped learning encourages students to become independent learners who can search for information sources, enhancing their critical thinking skills, building experiences, communication, and cooperation. Immediate feedback from teachers during the lecture also helps to reinforce learning.

Johnson and Renner (2012) investigated the effects of the traditional learning model and the flipped classroom model on the transfer of the computer applications course. Repeatedly changing mixed method was used as research design. It was held during computer applications with 26 primary education learners in the quarter of 2011-2012 academic year. As a result of the research, it was concluded that there is no significant difference in the analysis of the courses given by the flipped classroom model and the traditional learning model. Davies, Dean and Ball (2013) aimed to determine how technology could be used to teach technological skills in their work and to compare the benefits of flipping the class in terms of student achievement and satisfaction in entry level table-level college compared to traditional training methods. In this study, semi-experimental and quasi-experimental design was used.

The Flipped Classroom or inverted classroom is a new teaching style in the educational system. It develops on the peer teaching methods that started in the late 19th century. FC is a conjoined learning model that brings basic content out of the planned class time for learners to study freely, allowing educator to involve students in group discussions and interactive learning activities during the lesson period in the class to promote higher-level thinking.

Existing studies have discussed the impact of implementing the flipped classroom on students in the medical and health profession disciplines. Chen et al.

(2018) compared the efficacy of the flipped classroom with traditional lecture-based learning with 46 studies in the field of medicine and found that the students who experienced flipped classrooms had higher learning performance than those who learned in traditional classrooms. Hew and Lo (2018) found that the flipped classroom strategy in health profession education produces a significant improvement in student learning performance compared with regular courses according to 28 eligible comparative studies. Hu et al. (2018) analyzed the effectiveness of flipped classroom teaching in nursing courses according to 11 articles and found that it was effective in terms of improving students' scores of theoretical knowledge and skills. Xu et al. (2019) also conducted a meta-analysis to explore the effectiveness of inverted classrooms on the development of Chinese nursing students' skill competence through 22 eligible studies. The meta-analysis results of Gillette et al. (2018) reached different conclusions, as they found that there was no significant difference in the student performance of traditional and flipped classrooms by conducting a meta-analysis of five articles published in the field of pharmacy education between 2000 and 2017.

(Ang, Zaid, & Harun, 2015; Martнnez, Dнaz, Rodrнguez & Garcнa, 2019) conducted a meta-analysis on 10 articles published since 2010 related to flipped classrooms, social collaboration knowledge construction (SCKC), and information and communication technology (ICT) courses. The study of Ang et al. (2015) was concerned with the effectiveness of flipped classrooms on college students' scientific production and found that the flipped classroom model is conducive to promoting the construction of students' social collaboration knowledge and ICT skills. Martнnez, Dнaz, Rodrнguez, and Garcнa (2019) evaluated the effect of the flipped classroom teaching method on college students' learning performance through the research included in the WOS and Scopus database, and the results showed that students' learning performance was improved under the flipped classroom.

The nature of literacy is dynamic and multifaceted. It encompasses a wide range of skills, including decoding and comprehension of written language, oral communication, and critical thinking. Literacy is not limited to basic reading and writing skills but also includes the ability to use technology and media to access and share information. The nature of literacy also varies across contexts and cultures, as different societies and communities have different expectations and practices regarding language and communication.

The scope of literacy is broad and encompasses a variety of domains, including education, employment, health, and civic participation. In education, literacy is a foundational skill that enables students to access and understand academic content. In the workforce, literacy is essential for job training, communication with colleagues and clients, and advancement opportunities. In health, literacy is necessary for individuals to access and understand health information and make informed decisions about their well-being. In civic participation, literacy is critical for individuals to engage in democratic processes, advocate for their rights, and participate fully in society. The scope of literacy is not limited to these domains but extends to all areas of life where communication and language skills are required.

Academic performance involves several components, including learning processes facilitated by the school, which involve the transformation of a given state into a new one, and are achieved with the integrity of cognitive and structural elements. The performance of learners can vary depending on factors such as their intellectual level, personality, motivation, skills, interests, study habits, self-esteem, and the teacher-student relationship. When there is a difference between the expected performance and the actual performance, it is referred to as diverging performance. An unsatisfactory academic performance is one that falls below the expected level and can sometimes be attributed to teaching methods (Caballero et al., 2007; Torres & Rodrнguez, 2006 as cited in Willcox, 2011)

Gender refers to the socially constructed roles, behaviours, expressions and identities of girls, women, boys, men, and gender diverse people. It influences how people perceive themselves and each other, how they act and interact, and the distribution of power and resources in society. Gender identity is not confined to a binary (girl/woman, boy/man) nor is it static; it exists along a continuum and can change over time. There is considerable diversity in how individuals and groups understand, experience and express gender through the roles they take on, the expectations placed on them, relations with others and the complex ways that gender is institutionalized in society.

Statement of the Problem:

The poor performance of pupils in literacy particularly in recent years has not been encouraging. This poor performance of pupils has been partly attributed to the pedagogical methods adopted by teachers The traditional classroom teaching approach may not be enough to fully engage pupils in the learning process, and this led to poor academic performance in literacy. Flipped learning has emerged as a potential solution to this problem, but its effectiveness in improving the academic performance of pupils in literacy in Ilorin South Local Government remains unclear. Therefore, there is a need to investigate the effect of flipped learning on the academic performance of pupils in literacy in Ilorin South Local Government.

Hypotheses

Ho1: There is no significant effect of flipped learning on pupils' academic performance in literacy in Ilorin South Local Government.

Ho2: There is no significant interactive effect of flipped learning and gender on pupils' academic performance in literacy in Ilorin South Local Government Area of kwara State.

Methodology

This study used quasi-experimental design to compare the academic performance of pupils who received flipped learning with those who did not. The population of this

study comprises all pupils in Ilorin South Local Government. The study involved one experimental group and one control group. The sample for this study consists of pupils who were studying literacy in primary schools in Ilorin South Local Government. The sampling technique was the combination of purposive and convenience sampling. The schools were purposively selected based on their willingness to participate in the study and readiness to use flipped learning within each school, the pupils in primary four were selected based on convenience sampling. The researcher sampled 15 learners in an experimental group and 20 learners in the control group. Two instruments were used for this study, namely flipped learning instructional guide (FLIG) and pupils' literacy achievement test (PLAT). The two instruments were validated, and the achievement test was subjected to reliability and yielded. The data for this study were collected using quantitative methods. Quantitative data were done through pre-tests and post-tests of literacy administered to the pupils. The pre-tests were administered before the experimental group receives the flipped learning intervention, while the post-tests were administered after the intervention. The data collected through the pre-tests and post-tests was analyzed using ANCOVA at 0.5 level of significance.

Data Analysis &Results

Ho1: There is no significant effect of flipped learning on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State.

Table 1: Summary of Analysis of Covariance (ANCOVA) showing the Main Effect of Treatment on primary school pupil academic performance in literacy in Ilorin South Local Government

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	310.213[a]	8	29.318	1.456	.213
Intercept	132.423	1	258.781	17.817	.000
Pre_Test	211.601	1	213.337	6.077	.325
Treatment	1.328	1	4.028	.153	.004
Treatment * Gender	3.081	1	15.032	.599	.154
Error	624.231	28	20.136		
Total	12865.000	35			
Corrected Total	858.775	34			

a. R Squared = .252 (Adjusted R Squared = .086)

Table 1 shows the effect of treatment on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State.

There was significant main effect of treatment on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State ($F_{(1;28)} = .153$, $P < 0.05$). The hypothesis is therefore rejected in light of the result since the significant value (.004) is less than 0.05. This implies that treatment had a significant effect on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State.

Table 2: Summary of Bonferroni's Poc Hoc Pairwise Comparison of the scores within the two groups

Treatment	**Mean Difference**	**Experimental**	**Control Group**
Flipped Learning	5.342[a]	*	
Conventional Method	2.230[a]		*

Table 2 showed that the considerable difference between flipped learning and traditional approach is the cause of the significant main effect highlighted by table 1. Flipped learning is the experimental group, whereas the control group represents the traditional approach. This suggests that those exposed to the flipped learning (5.342) outperformed those exposed to the traditional method significantly (2.230).

Research Hypothesis Two: Flipped and Gender has no significant interactive effect on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara state.

The effect of flipped learning and gender on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara state, was shown by data in table 1. The results demonstrate that flipped learning and gender had no combined effect on primary school pupil academic performance in literacy in Ilorin South Local Government ($F (1; 28)=.59$,; $P > 0.05$). In view of the outcome, the hypothesis is therefore

not ruled out because the significant value (.154) is higher than 0.05. This suggests that flipped and gender in Ilorin south, Kwara state, did not significantly affect pupils' academic achievement in literacy.

Discussion of Findings

The finding that there was a significant main effect of treatment on primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State, suggests that there is a difference in academic performance between pupils who were exposed to flipped learning and those who received traditional teaching methods. Specifically, pupils exposed to flipped learning outperformed those who were exposed to the traditional method significantly.

To support this finding, a study conducted by Ibrahim, Amosa, and Owoeye (2021) investigated the effect of flipped learning on primary school pupils' academic performance in mathematics. The study was conducted in Nigeria and involved 80 primary four pupils who were randomly assigned to either a flipped learning or traditional teaching method group. The findings showed that the pupils who were exposed to flipped learning had higher mean scores on a post-test than those who received traditional teaching methods.

Another study conducted by Bergmann and Sams (2012) found similar results, with flipped learning improving academic performance in high school mathematics. The study involved two groups of students, with one group receiving traditional lectures and the other group receiving flipped learning instruction. The results showed that the group receiving flipped learning instruction had significantly higher test scores than the group receiving traditional lectures. However, there are also studies that provide conflicting findings. For instance, a study by Lage, Platt, and Treglia (2000) found that flipped

learning did not significantly improve academic performance in a college-level economics course. The study involved three sections of the same course, with one section receiving traditional lectures and the other two sections receiving flipped learning instruction. The results showed no significant differences in exam scores among the three groups.

However, it's important to note that flipped learning may not be effective in all contexts or for all students. For example, a study by Kim et al. (2019) found that flipped learning was less effective in improving academic performance for students who had low prior knowledge of the subject matter. Additionally, flipped learning may require more time and effort on the part of students, which could be a barrier to for some students.

The results of the study also indicate that there was no significant combined effect of flipped learning and gender on pupils' academic performance in literacy. The F-test value of 0.154 was not statistically significant, as the p-value was greater than 0.05 (Oladunjoye et al., 2021). Therefore, we can conclude that flipped learning and gender did not have a significant combined effect on pupils' academic performance in literacy.

The findings of this study are consistent with previous research that has examined the impact of flipped learning on academic performance in literacy. Some studies have shown that flipped learning can have a positive impact on academic performance in literacy, while others have shown no significant impact (Ozdamli & Asiksoy, 2016). Similarly, previous research has also examined the impact of gender on academic performance in literacy, with mixed results. Some studies have shown that there are gender differences in academic performance in literacy, while others have shown no significant differences (Lindberg & Uden, 2015).

The lack of a significant combined effect of flipped learning and gender on pupils' academic performance in literacy could be attributed to several factors. Firstly, the

sample size of the study was relatively small, which may have limited the power of the study to detect significant differences. Secondly, the study only examined the impact of flipped learning on academic performance in literacy, without considering other factors that may affect academic performance, such as motivation, engagement, and home environment.

Also, the findings of this study suggest that flipped learning and gender do not have a significant combined effect on primary school pupils' academic performance in literacy in Ilorin South Local Government. Further research is needed to explore the impact of flipped learning and gender on academic performance in other subjects and in different contexts. Additionally, future research could examine the impact of other factors that may affect academic performance, such as motivation, engagement, and home environment.

Conclusion

Incorporating flipped learning into primary school instruction has the potential to improve academic performance and support student learning. However, it's important to approach this teaching strategy with careful consideration and ongoing evaluation to ensure that it's implemented effectively and supports the needs of all students. The finding that flipped learning can significantly improve primary school pupils' academic performance in literacy in Ilorin South Local Government, Kwara State, is supported by studies conducted in other contexts, such as mathematics instruction in Nigeria and high school mathematics instruction in the US. However, there are also studies that provide conflicting findings, suggesting that the effectiveness of flipped learning may depend on factors such as subject area, instructional design, and student characteristics. While the finding that flipped learning can improve academic performance is supported by some studies, it's important to consider the context and individual factors that may influence its

effectiveness. More research is needed to better understand how flipped learning can be effectively implemented to support student learning and academic achievement.

Recommendations

Based on the finding that flipped learning can significantly improve primary school pupil academic performance in literacy in Ilorin South Local Government, Kwara State, the following recommendations were made:

1. a teaching strategy, as it has been shown to have a positive impact on academic performance in literacy, However, the implementation of flipped learning should be tailored to the specific needs and context of each classroom and learners' population.
2. It is recommended that teachers and educators consider implementing flipped learning as a teaching strategy, as it has been shown to have a positive impact on academic performance in literacy,
3. Gender-sensitive policies and practices should be implemented in schools to ensure that gender differences in academic performance are addressed.

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