

Teachers' Pedagogical Competence as Determinants of Students' Academic Performance in Secondary Schools in Ekiti State

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Abstract

This study investigated teachers' pedagogical competence as determinant of students' academic performance in secondary schools in Ekiti State. The study further examined variables of pedagogical competence- knowledge of the subject matter and classroom management and their relationship with students' academic performance. The sample comprised of 400 respondents and 40 school principals selected from forty schools in 16 local government area using multistage sampling procedures. The instruments adopted for data collection were, questionnaire tagged Teacher Pedagogical Competence Questions (TPCQ) and a Proforma tagged Proforma for Students' Academic Performance (PSAP). PSAP was validated and has a reliability co-efficient of 0.79. All hypotheses were tested using Pearson Product Moment Correlation at 0.05 level of significance. The findings revealed that there is significant relationship between teachers' pedagogical knowledge variables such as teacher knowledge of subject matter, classroom management and students' academic performance. Based on the finding, it was recommended that; teachers should endeavor to update themselves with new skills and knowledge in their diverse subject area by attending refresher courses and engaging in professional development. They are also advised to improve their skills in classroom management so as to influence students' academic performance positively and equally important teachers should strive to develop their pedagogical skills with a view to deliver even the most complex and abstract concepts seamlessly. This study will most likely provide insight to the government and other stakeholders on the importance of teachers' pedagogical competence as a determinant to students' academic performance.

Keywords: Pedagogical, Competence, Knowledge, Professional, Development

INTRODUCTION

Secondary education is a level of education that serves as the link between the elementary and the tertiary education. This level of education is broadly saddled with two main responsibilities, namely: production of low-level manpower and preparation of students for tertiary institutions. It is important to note that school efficiency to a great extent is determined by the interaction that ensued between the teachers and the students. This implies that, excellent principal leadership style, availability of all forms of resources coupled with other school factors are no substitutes for teacher's pedagogical competence while measuring students' academic performance. Teachers' roles in the attainment of educational goals cannot be undermined. They are the interpreters as well as the implementers of the school curriculum.

Pedagogy can be defined as the art of teaching. It involves being able to convey knowledge and skills in ways that students can understand. It could be generally divided into classroom management skills and content-related skills. Pedagogy, taken as an academic discipline, is the study of how knowledge and skills are imparted in educational context and it considers interactions that take place during learning. Therefore, teachers' pedagogical competence is the ability of a teacher to adopt diverse suitable strategies

and teaching methods while impacting knowledge of the subject matter in a manner that makes sense to the students. It therefore becomes essential to underscore the fact that teaching methods and pedagogical competence appear similar but have a thin line of difference. A teacher might be vast in the use of various teaching methods in the classroom but still could not get the students to assimilate the subject matter. This is where strategy otherwise known as pedagogy comes in. The inability of a teacher to identify the difference between teaching method and pedagogy could lead to students losing interest in the subject which will eventually culminate in poor academic performance.

Students' academic performance on the other hand could be defined as the display of knowledge attained or skills developed in school subjects designated by test and examination scores or marks assigned by the subjects' teachers (Adediwura & Bada, 2007). In the opinion of Young, Klemz, and Murphy (2003), learning performance can be defined as students' self-evaluation of acquired knowledge, understanding and skills developed, and their desire to learn more. Essentially, the primary purpose of teaching at any level of education is to bring a fundamental change in the learner (Tebabal & Kahssay, 2011). Unfortunately, many of the teachers now prioritize

finishing the whole curriculum before the end of the term without a recourse to student's assimilation let alone application of the subject matter in real life. Several studies have shown that pedagogical content knowledge, especially at senior secondary school level remains overwhelmingly teacher-centered with greater emphasis being placed on lecturing and textbook than on helping students think critically across subject area and applying their knowledge to real world situations (Butty, 2001). However, evidences available from researches suggest that teachers' intellectual resources coupled with pedagogical competence to a great extent affect students' learning experiences (Odumosu, Olusesan & Abel, 2016).

The Nigeria policy on education broadly states the objective of secondary education as preparation of students for institutions of higher learning and production of low-level manpower. It has become a common practice in Nigeria secondary education system that students sit for external examination for more than once or twice to pass 5 subjects as prerequisite for gaining admission into institutions of higher learning. It was equally observed that majority of Secondary School education products do not adequately fit into the society as low-level manpower. These students are deficient in solving basic problems that require more than simple recall of facts or performance of rudimentary skills. This deficiency can be attributed to teachers' inadequate or outright lack of pedagogical competence. It is against this background that this paper intends to investigate the level of teacher pedagogical competence and the possible relationship between teacher pedagogical competence and students' academic performance in secondary schools in Ekiti state.

Various scholars (Adediwura & Bada, 2007; Odumosu, Olusesan & Abel, 2016) have worked on some other variables different from the ones to be considered in this study but the variables mentioned in this study have been empirically tested.

LITERATURE REVIEW

Teachers Pedagogical Competence

Teacher pedagogical knowledge is the ability of a teacher to get students to understand a subject matter and his ability to apply the knowledge or skill (as the case may be) to solve problems in real life. In their views, Odumosu, Olisama, Areelu, and Fisayo (2018) describe teacher pedagogical competence to connote knowledge of subject, knowledge of teaching and knowledge of curriculum. The importance of displaying pedagogical knowledge and skills cannot be over emphasized. It helps teachers to think about the best possible methods, strategies, materials, and resources to be utilized for the learning situation. Furthermore, it enables teachers to know how to

utilize various forms of teaching methods, different strategies for grouping learners, different types of media and materials to enhance learning. Pedagogical knowledge and skills turn teachers into facilitators, coaches, models, evaluators, managers, and advocates. Effective pedagogy helps teachers display skills at creating curricula designed to build on learners' present knowledge and understanding and move those learners to more sophisticated and in-depth abilities, knowledge, concepts, and performances (Amosun & Kolawole, 2015).

Teacher Pedagogical Competence is otherwise referred to as pedagogical content knowledge (PCK) by some scholars. It is the knowledge that teachers develop over time, and through experience and about how to teach a particular content in particular ways to lead to enhanced student understanding. PCK is not a single entity that is the same for all teachers in a given subject area. However, a particular expertise with individual idiosyncrasies and significant differences that influenced by (at least) the teaching context, content, and experience. (Koehler, 2011). Hence, teachers' pedagogical competence is a win-win situation for both the teacher and the student in that both parties are beneficiaries of an improved process of learning where the outcome leads to sound and well-informed students.

Teachers Knowledge of Subject Matter and Students' Academic Performance

Content knowledge generally refers to the facts, concepts, theories, and principles that are taught and learned, rather than to related skills such as reading, writing, or researching. Teacher comprehends all the dimensions of content; its objectives, theories, principles, laws, hidden meaning, themes, etc., then teach students by using multiple methods and techniques. In that way, students are able to comprehend better what they have learnt (Kishwarnaz, 2016). A teacher's understanding of subject facts, concepts, principles, methodology, and important generalizations determine his/her pedagogical thinking and decision making. Similarly Jadama (2014) argues that the in-depth knowledge of subject matter which teachers are going to teach enables them to use various methodologies suited to deliver it. The full understanding of content makes them confident about selection of teaching strategies and skills, which are best for students' understanding.

Teacher's ability to teach effectively depends on the teachers' knowledge, and knowledge occurs in a variety of forms. Teacher effectiveness is impeded if the teacher is unfamiliar with the body of knowledge taught and that teachers' effectiveness is subject specific. The teacher whose understanding of topic is thorough use clearer language, their discourse is more connected, and they provide better explanation than

those whose background is weak (Adediwura and Bada, 2007). Baumert, Kunter, Blum, Brunner, Voss, Jordan and Tsai (2010) investigated teachers' mathematical knowledge, cognitive activation in the classroom, and student progress. The result showed that teachers with a higher pedagogical content knowledge have made positive impact on the students, which reflected on their academic performance. It will not be wrong therefore to conclude that students' academic performance is a product of teachers' knowledge of the subject matter, or better put as students' academic performance is dependent on teachers' knowledge of the subject matter.

Teachers Classroom Management Skills and Students' Academic Performance

Classroom management (CM) is concerned with a course of action of teachers' behavior and activities that are basically anticipated that would develop student co-operation and consideration in classroom (Brannon, 2010). Williams (2008) described classroom management as, how the teacher works, how the class works, how the teacher and students work together and how teaching and learning takes place in the classroom. CM thus requires specific skills such as planning organizing, as well as an aptitude for teamwork. Classroom management encapsulates maintenance of discipline, control, motivational teaching methods, leadership styles, use of instructional materials and communication management. These are the variables that impact students' academic performance (Marzono, 2008). Umoren (2010) contends that classroom management is broader than mere student control and discipline, it includes teachers' effort to foster students' involvement and participation in classroom activities with a view to maintain a conducive learning environment and also achieve assimilation of subject matter. On the contrary, Boluwaye (2007) argued that teachers classroom management is a weak predictor of students' academic performance of students, rather he suggested that teachers' professional quality is more crucial in the teaching-learning process.

There is a consensus among researchers that classroom management have direct relationship with students' academic performance. Ndiyo (2011) asserted that the best predictor of students' academic performance is excellent classroom management. Similarly, Baker (2000) posits that effective classroom management techniques support and facilitate effective teaching and learning, in so doing enhancing students' academic performance. Yasir, (2018) in a study also found out that excellent classroom management positively affects students' academic performance. It can therefore be inferred that all these expertise facilitated leaning and enhanced good students' academic performance.

Pedagogical Competence and Students Academic Performance

In a bid to achieve the set educational goal, there is a need for school administrators to connect teachers' pedagogical competence with students' academic performance. In the same way, a growing body of research shows that students' performance is more heavily influenced by the teacher's professional quality in terms of content knowledge and pedagogy knowledge (Ishola & Udofi, 2017). Pedagogical content knowledge depends on an understanding of a particular topic and how to explain it in a way that it will make sense to the students. Pedagogical content knowledge implies, an understanding of ways of representing the subject that make it comprehensive to others and an understanding of what makes the learning of specific topics easy or difficult (Adediwura and Bada 2007). Consequently, students' success depends on the in-depth knowledge of the teacher about a subject matter and how he or she can disseminate the knowledge to the students.

Tebabal and Kahssay (2011) highlighted five components of pedagogical competence as knowledge of students' thinking about science, science curriculum, science specific instructional strategies, assessment of students' science learning and orientations of teaching science. According to Beyer and Davis (2011) these components work together to help teachers present specific subject matter in ways that make it comprehensible to students thereby impacting on their overall academic performance. If classrooms are well managed with demonstration of good pedagogical skills by the teacher, it is most likely that it will enhance students' academic performance.

Purpose of the study

1. To examine the level of students' academic performance in secondary schools in Ekiti state
2. The purpose of this study is to examine teachers' pedagogical competence as a determinant of students' academic performance in secondary schools in Ekiti state.

Research Hypotheses

1. There is no significant relationship between teachers' knowledge of subject matter and students' academic performance
2. There is no significant relationship between teachers' classroom management skills and student academic performance
3. There is no significant relationship between teachers' pedagogical competence and students' academic performance.

METHODOLOGY

The study adopted descriptive design of the survey type. The rationale for adopting survey design describes the fact that the study hinges on eliciting

data from students that would be randomly selected across five local governments. The sample comprised of 400 respondents, selected from forty schools within 16 local government area of Ekiti state using multistage sampling procedures. The instruments adopted for data collection were, questionnaire tagged Teacher Pedagogical Competence Questions (TPCQ) and a Proforma tagged Proforma for Students' Academic Performance (PSAP) was used to obtain the students' results from year 2014/2015 academic Session to 2015/2016 Academic Session. PSAP instrument was validated and had reliability co-efficient of 0.79. The research question was answered using frequency counts and percentage score while hypothesis 1-3 were tested using Pearson Product Moment Correlation. All hypotheses were tested at 0.05 level of significance.

RESULTS

Research Question 1

What is the level of students' academic performance in secondary schools in Ekiti State?

Table 1: Students' Academic Performance in Ekiti State

Session	No of Students Enrolled	5 Credits and Above		4 Credits		Less than 4 Credits	
		N	%	N	%	N	%
2014/2015	9731	2789	28.66%	1930	19.83%	4598	47%
2015/2016	7255	1747	24.07%	1558	21.47%	3750	51.68%

Source: Field Work

Table 1 presents the level of students' academic performance in Ekiti state over a period of 2 years. The result shows that 28.66% of the total enrolment in 2014/2015 session has 5 credits and above, 19.83% had four credits while 47% had less than 4 credits. In 2015/2016 session, 24.07% of the students who enrolled had 5 credits and above, 21.47% had 4 credits while 51.68% had less than 4 credits. This implies that the level of students' academic performance in Ekiti state was average over the period of years under study.

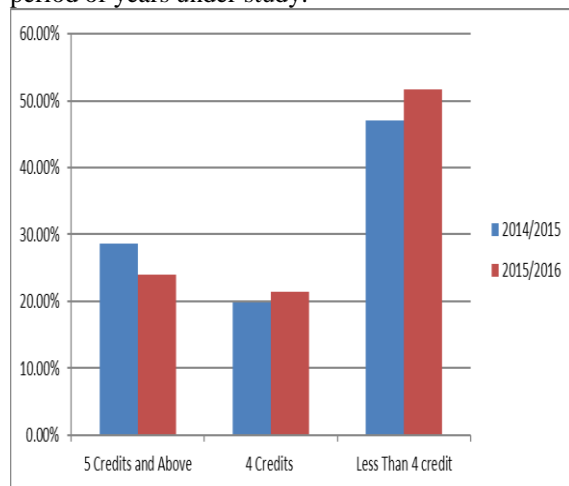


Figure1: Level of Student Academic Performance

Hypothesis 1: There is no significant relationship between teachers knowledge of subject matter and students' academic performance

Table 2: Correlation of Teachers' Knowledge of Subject Matter and Student Academic Performance

Variables	N	Mean	SD	r _{cal}	r _{table}
Teachers' Classroom Management	40	103.74	3.75	0.710*	0.088
Student Academic Performance	40	39.07	6.50		

*p ≤ 0.05

Table 2 shows that r_{cal}(0.623) is greater than r_{table}(0.088) at 0.05 level of significance. Hence, the null hypothesis is rejected. This implies that there is significant relationship between teachers' knowledge of subject matter and student academic performance. The relationship between management of teachers' knowledge of subject matter and students' academic performance is moderate and significant in a positive direction.

Hypothesis 2: There is not significant relationship between teachers' classroom management skills and student academic performance

Table 3 : Correlation of Teachers' Classroom Management and Student Academic Performance

Variables	N	Mean	SD	r _{cal}	r _{table}
Teachers' Classroom Management	40	103.74	3.75	0.710*	0.088
Student Academic Performance	40	39.07	6.50		

*p ≤ 0.05

Table 3 shows that r_{cal}(0.710) is greater than r_{table}(0.088) at 0.05 level of significance. Hence, the null hypothesis is rejected. This implies that there is significant relationship between teachers' classroom management and students' academic performance. The relationship between teachers' classroom management and students' academic performance is high and significant in a positive direction.

Hypothesis 3 There is no significant relationship between teachers' pedagogical competence and students' academic performance.

Table 4: Correlation of Teachers' Pedagogical Competence and Student Academic Performance

Variables	N	Mean	SD	r _{cal}	r _{table}
Teachers' Pedagogical Competence	40	103.74	3.75	0.823*	0.088
Student Academic Performance	40	39.07	6.50		

*p ≤ 0.05

Table 4 shows that r_{cal}(0.823) is greater than r_{table}(0.088) at 0.05 level of significance. Hence, the null hypothesis is rejected. This implies that there is

significant relationship between teachers' pedagogical competence and students' academic performance. The relationship between teachers' pedagogical competence and students' academic performance is high and significant in a positive direction.

DISCUSSION

The study revealed that the level of students' academic performance in secondary schools in Ekiti state was moderate. It implies that the students were not totally doing bad in their academics but there is still room for improvement for both the teachers and the students vis a vis their input.

The result of the study also showed that there is a significant relationship between teacher's knowledge of the subject matter and students' academic performance. This implies that understanding of subject facts, concepts, principles, and methodology positively had impact on students' academic performance. This agrees with the findings of Baumert et.al (2010) which showed that teachers with a higher pedagogical content knowledge score created better lessons, which had positive effects on the students' content knowledge and test results.

It was also revealed that there is significant relationship between teachers' classroom management and students' academic performance. This implies that excellent classroom management skill that ensures discipline, firmness, participatory instructional method among others enhanced students' academic performance. The finding resonates with Ndiyo (2011) findings whose study result revealed that the best predictor of students' academic performance is excellent classroom management. Boluwaye (2007) had a contrary view, as he asserted that, teachers' classroom management have very little significant relationship on the academic performance of students, rather he argued that teacher's professional quality is more vital in the teaching-learning process.

This paper concludes that there is a significant relationship between teachers' pedagogical competence and student academic performance. This implies that teaching strategies are very germane to successful instructional delivery, assimilation and students' academic performance. The finding agrees with the view of Beyer and Davis (2011) who stated that pedagogy components work together to help teachers represent specific subject matter in ways that make it comprehensible to students thereby impacting on their overall academic performance.

SIGNIFICANCE OF THE STUDY

This study will provide government and other educational stakeholders with the knowledge of how important teachers' pedagogical competence is in

determining students' academic performance in secondary schools in Ekiti State and therefore make it a priority to provide teachers with refresher courses, further training, workshop, and seminars, conferences in order to update their knowledge so that academic goals will be achieved in the secondary schools.

LIMITATION OF THE STUDY

This result of this study is likely to be limited in significance due to some difficulties encountered with the secondary school teachers as some of them were not willing to participate in the survey (i.e., the sample size could have been greater) and some did not return the survey.

CONCLUSION

Based on the result of this study, it was concluded that pedagogical competence variables such as teachers' knowledge of the subject matter and classroom management exert influence on student academic performance. On the final analysis, teachers' pedagogical competence was found out to be a good predictor of student academic performance.

RECOMMENDATIONS

- Teachers should endeavor to engage in continuous professional development to improve their knowledge base in their subject areas by attending refresher courses seminars and conferences.
- Teachers are advised to be skilled in classroom management so as to influence students' academic performance positively.
- Teachers should endeavour to learn pedagogical skills with a view to deliver even the most complex/abstract concepts seamlessly.

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