

AN EMPIRICAL ANALYSIS OF THE IMPACT OF SIMULATION TECHNIQUES ON BUSINESS STUDIES STUDENTS' ACADEMIC PERFORMANCE IN UPPER BASIC SCHOOLS

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ABSTRACT

Teaching methods are regarded as processes and tasks designed to transfer knowledge, skills, and understanding at all levels of the education system from kindergarten to the university level. This study, therefore, examined the impact of the dynamics of the simulation and lecture method on students' performance in Upper Basic schools in Ilorin. The study used both the Simulation role-play method and the lecture methods for teaching at the basic level of education in the teaching/learning environment. The study aims to determine the best predictor between the two variables. Using quasi-experiments in the design of the study, a sample of ninety students was intentionally sampled across all 3 levels of upper basic schools. A tool called the business studies achievement test (BUSAT) was used as a guide to assess the academic performance of Business Studies students at the basic levels in both the assessment and control groups. Using t-tests of independent variation, the study found a more important simulation method as the normal performance of a student taught in a simulation role-playing game was much higher and better than that taught using a lecture method that resulted in the presentation of a lesson in their class. It was recommended, among others, that the teacher should make effective use of the simulation role-play approach in delivering lessons as it shows great promise in improving the academic performance of students at the basic level of education at Model Secondary School, Ilorin. Kwara State, Nigeria.

Keywords: Simulation role-play, Lecture Method, Basic Education, teaching method

1.0 INTRODUCTION

The Nigerian education system aims to produce people who will not only be able to solve their problems but also contribute to the development of their community. Several subjects can be seen in the curriculum of our schools at all levels of Nigerian education: these subjects are incorporated with the expectation that if properly taught, they will result in effective learning and this will lead to the realization of the Nigerian education policy. As stated in the National Education Policy (2014), at the Basic level and in other education systems.

Some subjects are classified as core subjects and others are known as electives (National Education Policy (NPE) 2014). The most important subjects are those subjects that students are forced to offer while the electives include subjects that students can choose freely, based on their interests and future career. At the highest level of primary school, Business Studies is

one of the core subjects, which, if taught effectively, according to Osuala (2004) in Dauda (2020), has the potential to contribute to intellectual, social and personal development and students probability of employment Osuola, (2004) further stated that the advent of business education emphasizes the need to provide young people with information that will equip them with the skills and skills for sale. He added that business studies is a pre-vocational course taught in basic schools in Nigeria which aims to provide students with the necessary skills that will enable them to be useful to themselves and the community in which they live. It has also been noted by Osuala (2004) that schooling will be equally characterized by educational experiences that will give them the benefit of comparative performance in the workplace.

To achieve these goals, practical teachers use a variety of teaching methods in performing their tasks. According to Bartolj, & Polanec,(2021), teaching is the art of helping one to learn. Feasibility and the science of teaching involve the use of acquired knowledge from a natural and moral perspective to help inform the student's personality, while the "artistic" aspect of teaching involves the use of creative and demonstrative skills in teaching. Educationally, to achieve a good and desirable learning outcome during teaching and learning, appropriate teaching methods should be adopted by the teacher, who is considered to be knowledgeable in the subject or topic to be taught.

Approaches to teaching skills lessons largely determine whether students will learn or not. It means that if the right teaching methods are not used effectively, learning will not happen and student performance will be poor. Okon (2006) noted that the teaching methods used by business teachers in different schools fail to produce students with the skills needed to get a job and succeed in their chosen profession.

Barko and Duktur (2013) describe teaching methods as processes and activities designed to transfer knowledge, skills, and understanding at all levels of the education system from kindergarten to university level. It is the way a teacher conveys information, instruction, and training to students that will stimulate learning in the student. As far as possible, the methods should be effective. Aliyu (2013) also described teaching methods as to how a teacher influences a student's mind, starting with his or her interest and problem and setting conditions that help him or her to progress and achieve the goals he or she has set for himself or herself. The teaching method does not work if at the end of the training the students have not yet learned. Before students can use the right skills and attitudes, teaching should have an impact. Effective teaching, according to Suleiman, Mustapha B, & Ibrahim B.B (2016), consists of four components:

- Meaningful and systematic teaching,
- Topic art,
- Demonstration of mental skills, as well
- Educational materials.

In today's world, information technology plays an important role in designing new teaching methods (Aranda, 2007). Traditional methods, such as face-to-face and test-based assessment, are limited in two ways; first, students often see that standard decision frameworks can be applied to any industry and situation. Second, it gives students the impression that strategic decision-making is a consistent process that mainly involves the active role of senior

management (MacKay & McKiernan, 2004). These limitations of traditional teaching methods can now be overshadowed by new approaches such as event studies and computer simulations that incorporate real-life features to expose students to real situations (Adobor&Daneshfar, 2006; Aranda, 2007). Real-life case studies have been used to teach business lessons as their multidimensional nature requires a thorough analysis of students.

Simulation-based learning is both about the learning process and the result. The process typically involves dialogue, competition and cooperation and is driven by the participant's action. Simulation as a method of teaching/learning based on imitating a system, business, object, or process. Students participate in the situation and are expected to use their knowledge to develop the best response to solve the problem(s) identified in the imitation of Leaning, Moizer, Towler, and Abbey (2006). Simulation helps to close the gap between theory and practice. Using a case study as an educational tool to fulfill corporate expectations of hiring graduates with critical thinking skills, especially in dealing with difficulties and uncertainties in the business world.

Simulation According to Sulaiman, Mustapha & Ibrahim (2016) is the teaching environment in which the student is placed in the "world" described by the teacher. They represent the truth in which students engage. The teacher controls the boundaries of this "world" and uses it to achieve the desired teaching/learning goal. Students participate in the scenario's realism and derive meaning from it. A simulation is a type of hands-on learning. It's an approach that aligns with constructivist and student-centered learning and teaching ideas. Simulations come in a variety of shapes and sizes. They could include aspects from:

- a game
- a role-playing game, or
- an action that serves as a metaphor for anything else.

The non-linear nature of simulations, as well as the controlled ambiguity in which students must make decisions, distinguishes them. The success of a simulation is usually determined by the participants' creativity and commitment. A simulation is when students utilize a model of behavior to obtain a better understanding of that behavior. Consider the following scenario:

- When students are assigned roles as buyers and sellers of some goods and asked to strike deals to exchange the goods, they are learning about market behavior by simulating the market.
- When students take on the roles of party delegates to a political convention and run the model convention, they are learning about the election process by simulating a political convention.
- When students create an electric circuit with an online program, they are learning about physics theory by simulating an actual physical setup.

Students often use simulations to make predictions about the social, economic, or natural world which in diverse enrich student with learning interest. However, simulation game may come into play when learning situations appears to be cumbersome, create concern, impede progress and hinder the achievement of the stated goal within a particular period (Umoru, 2015).

Effective teaching methods stimulate students' interests that form the basis for achieving desirable curriculum objectives in a school setting. Teacher-centered teaching methods are considered outdated; a heavy burden that has little to do with improving a child's learning; the general education system places great emphasis on those teaching methods that willfully and actively engage a child in learning rather than viewing him or her as idle, ignorant or just a recipient of knowledge. It is believed that engines believed students in teaching and learning through teaching methods and teaching methods of questioning games will make teaching and learning interesting, enrich the classroom environment, stimulate students' interest and maintain their interest and attention during teaching and learning. . In Suleiman B, Mustapha B, & Ibrahim B.B (2016) Student exposure to early education is considered to be the basis, where the success or failure of a future education system lies

The effective use of teaching strategies at the basic level of education is essential to the survival of the Educational system. Teachers in this context promote child-centered education and their ideas have had a profound effect on modern education professionals. Bello, Bukar and Ibi (2016) emphasized that students have a certain level of ability to develop and that it is the teacher's responsibility to develop these skills instead of setting them on the external measures.

It's generally observed that teachers at various levels of education were accustomed to traditional teaching methods, especially lecture and didactic methods. Studies by Bello, Bukar&Ibi (2016), Suleiman. B, Mustapha B, & Ibrahim B.B (2016) and Saba B.K.(2021) have confirmed that students' negative attitudes toward the basic education level regarding a particular subject are the result of poor teaching practice. It was also argued that teachers do not support the effective management of their learning to improve the quality of their students' learning. The role-playing teaching method is certainly one of the most widely used methods among other student-centered approaches to promote effective communication between teachers and students.

Simulation games are mostly based on peer interaction and students are forced to share their ideas with others. Communication skills are developed as students are compelled to obey the rules of the game and work with classmates to achieve team goals. The difficulty of this study lies in determining the dynamic impact of the role-play model and method of study

Furthermore, the growing interest in student academic performance needs to be explored in its teaching methods, which is why the researcher rises to explore the impact of Simulation role-play and lecture techniques on business Studies students in Upper Basic Schools, specifically, in Model Secondary School, Ilorin. Kwara State.

2.0 OBJECTIVE

The objectives of this study is to explore the impact of simulation play games on business studies students' academic performance in upper basic schools in Ilorin, Kwara State, Nigeria.

And also tries to determine the effectiveness of lecture techniques in teaching business studies in upper basic schools in Ilorin, Kwara State.

2.1 Research Questions

1. What is the impact of simulation game methods on students' academic performance among Business Studies Students in Model Secondary School, Ilorin Kwara state?
2. What is the effect of lecture technique on Students' academic performance among Business Studies Students in Model Secondary School, Ilorin Kwara State?

2.2 Hypothesis

HO: The academic performance of pupils who are taught with simulation method is not much different from the performance of students taught with lecture method approach at Model Secondary School, Ilorin.

3.0 METHODS

The study includes upper Basic 1-3 at Model Secondary School, Ilorin as the teaching subject selected for testing was Business Studies. It also used an unequal comparison group that is believed to be most commonly used in quasi-experimental formulation (Mohammed2015). The researcher chose this method because of its relevance to the needs of the study. The study used targeted samples to select the participating class for the same test. However, Olayiwola (2007) states that 30 participants in each group (assessed and controlled) were considered sufficient for this type of study. Each level is represented by 30 participants, consisting of 15 experiments and 15 of the Upper Basic 1-3 control group that provides a total of 90 students with sample samples respectively.

3.1 Instrumentation

The teacher-made test known as the business studies achievement test (BUSAT) was used as an instrument to test the academic performance of business studies students across the levels both in experimental and control groups. The study used a table of specifications to determine the content validity of the test items. Yerima (2007) view a table of specification as a two-way-dimensional table that defines as clearly as possible the scope and emphasis of the test items and relates the objective to the content, to certify the most important criteria of the test and that content validity.

The data for this study were the scores of the teacher-made test (BUSAT) obtained from the pre-test and post-test administered to the control and experimental groups. The study used mean and standard deviation to answer the questions raised by the study. A T-test was used in testing the research hypothesis

3.2 Results

The quantitative and qualitative answers provided below are for the questions raised by the study. The frequency table, definition and standard deviation used as mathematical tools to answer the questions raised.

3.3 Research questions:

Table 1:1

Descriptive statistics on the academic performance of learners who are taught with simulation and those who are taught using a lecture teaching methods.

Techniques	N	Mean	Standard deviation
Simulation games	90	66.2333	7.07195

Table 1.1

The above highlights the academic effectiveness of students who are taught using the simulation method and those who are taught with the lecture method. The academic performance of the simulation team was 66.23 and that of the study group was 46.60. This means of those students who were trained with simulation role-playing games had higher performance than their counterparts who were taught. With lecture method

3.4 Hypothesis:

The hypothesis developed in the study was mathematically tested using an independent t-test sample. The results of the statistical analysis are presented below

Ho: The academic performance of pupils who are taught in the form of simulation role-plays is not very different from the performance of pupils taught with lecture method at the Model Secondary School, Ilorin.

Table 1.2 t-test mean performance of students thought using simulation games and lecture methods

Variable groups	N	Mean	std. dev	Df	Adjusted R R.sqr	f. chang.	Df	sig.
Academic simulation Performance games	90	66.23	7.07	118	12.86	1.97	321	Rejected
Lecture Method	90	46.60	9.48					

SPSS t-test of the mean difference.

Table 1.2 the connection between the academic performance of students who are taught in the form of simulation role-plays and those who are taught in the form of teaching method. The results from the t-test showed a significant impact on the academic performance of students who are taught with role-playing games and those who are taught-lecture style. The reason for this is the fact that the calculated p-value of 0.001 is below the 0.05 value level while the calculated value of 12.86 is above the critical value of 1.96 in Df 118. However, their calculated performance was 66.23 and 46.6 students. They were taught the tricks of the drama and those who were taught how to speak in sequence. The null hypothesis is therefore rejected.

4.0 FINDINGS

Research has found that the Simulation (role-playing game) has a very positive impact on the performance of students at Model Secondary School, Ilorin, Kwara State, Nigeria.

5.0 DISCUSSION

The results from the study show that the greater impact of student performance on a role-playing game (simulation) is better than that of a teaching method. The role-playing game has a positive impact on student performance at Upper Basic School at Model Secondary School, Ilorin. The findings of this study confirm the studies of Dauda (2015) and Saba (2021), that examined the impact of role-playing games on students' performance and found that the role-playing game method was more effective compared to other teaching strategies, especially teacher training methods.

The lecture technique is considered ineffective because, it has little effect on students' academic performance due to the subject domination by the teacher, speaking to students where students are always just listening for the learning process. There was little or no use of student resources, a level of student skills that the teacher ignored. It is believed that the use of a student-centered approach makes teaching and learning interesting, enriches the classroom environment, stimulates students' interest, and maintains their interest and attention during learning, due to the inclusion of all students in the lesson in pairs. With group work, all the students get a chance to think, contribute and involve while the teacher focuses on understanding by the students and not just by memorizing and remembering the lesson (Bukar, Bello & Ibi 2016).

A student-centered approach to teaching and learning (role-playing games) is supported by a learning theory. As Brookfield (1983) in Muhammed (2015) points out, writers in the field of experimental reading often use the term with two distinct senses. On the other hand, the term is used to describe the type of learning that learner's do who are allowed to acquire and apply knowledge, skills, and feelings in a fast and appropriate environment. So, experimental learning involves interacting directly with the material rather than just thinking about what is happening, a student-centered approach to teaching and learning provides a second form of learning and assessment. Which occurs as direct participation in life events (Houle, 1980).

Simulation can be used as part of a learning process instead of taking a measure of it. Use follow-up activities to gain a sense of comprehension and a way to summarize as students return to the field (e.g. use process thinking as an integral part of the task, rather than participating in the simulation itself). Simulation encourages the use of critical thinking and analysis. They encourage students to think about the consequences of a particular situation. The situation sounds real and thus leads to a much more interactive with student engagement. It also promotes mental attainment through practice. They help students to understand the nuances of the concept. Students often find themselves more involved in other activities, as they experience the work for themselves, rather than hearing about it or seeing it.

Simulation helps students develop a deeper understanding of environmental, political, social, and cultural management. For example, by participating in resource-sharing work, students can gain an understanding of social inequality. Simulation can reinforce other skills indirectly, such as debate, the method associated with large-scale imitation, and research skills.

6.0 CONCLUSION AND RECOMMENDATION

Based on the findings of this study, it was concluded that the simulation role-playing game is most effective for students at the Upper Basic School. The implication, therefore, is that the lecture method that is predominantly used in teaching Business Studies is not as effective as

the other methods. Hence, if the predominant use of the conventional teaching method of Business Studies persists without effort to incorporate Simulation (role-playing) method, improvement in the performance of Business Studies students would be difficult and their overall academic performance will be negatively affected.

In light of the above, the study recommends among other things the use of a business model to imitate business teachers in teaching and learning in both Elementary, Basic, and Upper Basic Schools in Ilorin, Kwara State, Nigeria. As it promotes effective communication and interactions between teachers and the learners. This improves student academic performance.

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