

Effect of Using Edmodo on Students' Retention in Financial Accounting in Secondary Schools

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Abstract

Student academic retention in financial accounting depends partly on the use of an instructional approach whose activities target most learning sense. Edmodo Learning Management System (ELMS) has been claimed to be one of such approach. This study sought to determine if (ELMS) would facilitate students' academic retention of financial accounting concepts more than the lecture method. Guided by two research questions, this study was a quasi-experimental design. A purposive sample of 257 SSII students was selected. A researcher developed EDMODO Financial Accounting Retention Test (EFART) was used to collect data. The study, which lasted for 6 weeks, utilized the ELMS for the experimental group, and lecture method [LM) for control group. Data was analyzed using mean, standard deviation and gain score. Finding indicated that ELMS approach is more effective for enhancing student's academic retention of financial accounting concepts irrespective of gender, than the LM. This implies that ELMS could be effectively used in intact classes to enhance the retention abilities of students in financial accounting concepts among male and female students. Based on findings, it was recommended that innovative activity-based instructional approaches such as ELMS should be adopted by secondary school financial accounting teachers for teaching.

Keywords: Financial Accounting, Edmodo and Retention.

Introduction

Financial accounting is part of the business studies curriculum in group of vocational subjects. The aim of financial accounting in secondary curriculum is to build on the work that has been done in bookkeeping at the junior secondary and also to provide the teachers with the framework

within which the teaching is to take place (Ishaq, 2011). Generally, financial accounting aims at providing specialized instruction to prepare students for career in instruction to help students assume their economic role as consumers, workers and citizens, background instruction to assist students in preparing for other professional careers requiring advanced studies in financial accounting; and financial accounting skill for personal use in future. (Enwere, 2012).

A cursory look at these aim indicate that are laudable. Accordingly, in order to achieve these aims, financial accounting teachers employ various conventional teaching methods which lecture methods is one of them. The lecture method appears to be inadequate to bring about desired motivation, competences and academic retention (Obunadike, 2012). The essence of employing these methods is to enhance students' academic retention. Enhancing or improving student retention constitutes the major role of teacher. The ability of a student to recall and apply knowledge acquired in school to similar situation outside the school indicates the student academic retention (Pintrich, 2011). Retention in school is all about mastery of learning contents and remembering of facts which form framework on which more complex concepts depend (Ebenebe&Unachukwu, 2015). Retention is therefore a preservation of the after effects of experience and learning that makes recall or recognition possible, also a persistence of learned behaviours or experiences during a period when it is being performed or practiced. (Enwere, 2012). Retention in financial accounting class is therefore of great importance because concepts are hierarchy in nature meaning students build on already known financial accounting concepts to establish an unknown concept. Financial accounting concepts need to be presented to the learners in a way that make recalling of concept fast and easy.

It is generally observed that teachers can help students retain information, and avoid confusing if they vary their method of presentation for different materials. In teaching financial accounting variation in teaching methods are also well recognized still being recognized. Despite the recognition and application of different method, students' poor academic retention in financial accounting is still being recorded.

Evolving a more effective strategy for teaching the subject in secondary school so that the students will exhibit high academic retention, therefore, becomes imperative. The strategy that comes to mind at this juncture is what is called Edmodo Learning Management System (ELMS).

Edmodo is a free and secure learning platform designed by Jeff O' Hara and Nick Borg in 2008 for teachers, students, parents, schools, and districts, and is available at www.edmodo.com (ChadaKongcham,

2013).Edmodo is a free and secure educational learning network used to provide a simple way for teachers to create and manage an online classroom community as well as enables students to connect and work with their classmates teachers anywhere and anytime (Jarc,2010). This website looks similar to Facebook, but is much more private and safe because it allows teachers to create and manage accounts and only for their students, who receive a group code and register in the group, can access and join the group; no one else can participate or spy on the group (Jarc, 2010). The site provides a simple way for teachers and students in a virtual class to connect and collaborate. Borg and O'Hara believed that a social networking geared towards the needs of students could have a profound impact on how students collaborate and learn in their world, rather than the school setting their teachers grew up in (Gushiken, 2013). Teachers have noted that Edmodo even strengthened the relationships between students, and led to a stronger classroom community (Mills, 2011). Students can also share content, submit homework, assignments and quizzes, receive their teachers feedback, notes and alerts as well as voting on polls (Jarc, 2010). Hence Edmodo can be seen as Learning Management System (LMS) which can facilitate teachers to set up and manage their online classes easily (Witherspoon, 2011). Edmodo was recognized by the American Association of School Librarians in 2011 as one of the top 25 websites that fosters the qualities of innovation, creativity, active participation and collaboration (Enriquez, 2014).) in the category entitled "Social Networking and Communication". Edmodo has more than 6.5 million users and host online conferences called Edmodocon with thousands of attendees (Flanigan, 2011).

The use of Web-based learning technologies has increased dramatically over the past decade providing new opportunities and avenues for students to interact with their professors virtually using computer-mediated communication technologies (Li & Pitts, 2009). Online communities provide an increased choice for people to choose to contact with anyone, especially those with common interests, values, beliefs or passions (Baym, 2002). Social networking sites such as "Facebook" and "MySpace" have been subject to much recent debate within the educational community. Whilst growing number of educators celebrate the potential of social networking to (re)engage learners with their studies, other fear that such applications compromise and disrupt young people's engagement with traditional education provision. (Selwyn, 2009). On-line social networks are also an excellent communication tool for knowledge construction based on social relations, conversation, collaboration and shared work. Therefore the

networks can be used as an extension of a physical classroom to help students stay in touch with their teachers, while the teachers and educational institutions to update their knowledge and learning methodologies as well as developing collaborative working (Arroyo, 2011). The social networking can benefit the students who are shy and do not participate in class can communicate with their teachers and classmates (Miller, 2011).

Edmodo, has reached more than 58 million users. Among the reasons for such a large spread of Edmodo throughout the world is the fact that it is totally free of charge; that membership is easy; that it provides multi language support; that besides its educational features, it has many of the features of an Social Networking Site (SNS); that it has a design similar to SNSs in terms of use; and that students, teachers and parents can easily register to the system. In addition to the capability SNSs to allow free sharing and to act as a source of news, Edmodo has such features found in Learning Management Systems (LMSs) as lesson planning tool, assignment, examination, questionnaire applications and teacher's account.

There are several studies demonstrating that effective and productive online cooperative learning environments contribute as much to students' success as face-to- face cooperative learning environments do (Khalid, Joyes, Ellison, &Daud, 2014; İnel-Ekici, &Delen, 2016). Social networks provide students in different places with the opportunity of social and active learning and support cooperative learning (Hossain, &Wiest, 2013; Hatch, Shuttleworth, Jaffee, &Marri, 2016). Enriquez (2014), in their study, reported that students' success increases when Edmodo learning plat form are supported with cooperative learning. In addition, it was pointed out that these educational benefits of social networks were due to cooperative learning resulting from the sharings and interactions among students (Fabian, Topping, & Barron ,2016; Kartal, 2012). In a study conducted on the use of Edmodo learning plat form in education, it was found that university students believed reading their classmates' comments contributed to their learning (Mills, 2011).

Furthermore, Cohen, Kulik and Kulik (2016) found that Edmodo as a teaching method enhanced students performance in mathematics. Many researchers among whom are Good and Brophy (2013) have observed that although boys generally receive more praise than girls from their teachers, they also receive more criticism and perform high than girls in class. This therefore becomes the motivation for the study.

Research Questions

The following research questions guided the study.

1. To what extent does the mean retention scores of students' taught financial accounting lesson using ELMS differ from those of other students taught the same lessons using lecture method?
2. To what extent does gender affect students' mean retention scores in financial accounting?

Method

This study adopted the quasi-experimental design specifically, the non-equivalent control group design was used. Gay and Airasian (2003) describes a non-equivalent control group, quasi-experimental study as a type of experimental study that determines the effects of a treatment paradigm in a non-randomized sample. The non-equivalent control design group involving six intact streams of classes was adopted. These classes were assigned into two groups by a toss of a coin. One of the groups was the experimental group to receive ELMS method of teaching while the other was the control group that was exposed to the lecture method.

The population for this study comprised of 1887 senior secondary school class two (SSII) students' enrolled in 31 private secondary schools in Awka South, Awka North and Njikoka which offer financial accounting.

Six co - educational secondary schools that offer financial accounting is SSII were purposively selected from the three L.G.A as had one experimental group (school) and one control group (school). The experimental and the control groups had 133 and 134 students respectively, making a total sample of 267 senior secondary schools students. Also the total sample of male and female in experimental group comprised of 60 and 73 respectively.

The research instrument was Edmodo Financial Accounting Retention Test (EFART) comprising of 30 multiple questions drawn from past Senior School Certificate Examination (SSCE) financial accounting question papers already standardized by WAEC. Thus, the psychometric properties of the question have been issued by WAEC. This EFART consisted of pre-test and post test questions. Test construction principles of item analysis were strictly adhere to and covered the process objectives of Bloom's taxonomy of educational objectives.

The psychometric of JIFART have already been established by WAEC and as such need not to be re-validated.

The regular financial accounting teachers in the selected schools were used for the study. Teachers who participated in the experimental treatment were subjected to rigorous training regimen for a period of three weeks at two hours per week. The teachers were trained on how to conduct instructions in financial accounting using ELMS method. This was done to ensure uniformity and mastery of the teaching strategy. In addition each teacher in the experimental schools was given a copy of the validated lesson plan and a copy of the instrument to be used for data collection. The teachers in the control school did not receive any training. They were required to teach the financial accounting concepts using conventional lecture method of teaching. The researcher vetted the lesson plans prepared by the teachers in the control schools to ensure that the lesson plans followed the conventional lecture method. In additions each teacher in the control schools was given a copy of the instruments to be used for data collection. Pre-EFART was administered to experimental and control groups before treatment commenced to assess the students' knowledge of financial accounting concepts.

The experimental group were taught using the ELMS materials and procedures. The ELMS materials were posted to ELMS students through internet. As ELMS demands, they were also encouraged to enhance their classroom learning activities by retrieving the materials posted in the internet by their teacher and answering the question attached.. The ELMS materials were given to them in form of "Warm-ups". Warm-ups are lesson materials like notes or assignments given to the students to read few days before the class. The students were required to complete the warm ups (assignments) individually at their own pace and submit them few days to the teacher before the class sessions. The teacher read through the students' response, adjusted and organized the classroom lessons accordingly in response to students' submissions. Thus, for the experimental class, the teacher ensured that each lesson was preceded and informed by an assignment made from library resources. The entire class session was characterized by clarification of any confusing concept identified in the students' responses, class discussion of the materials given (warm-ups), questioning, and assignment of the next warm-ups. This activity continued for six sessions that the experiment lasted.

On the other hand, the control group was taught the same course contents covered in the ELMS class session using model lesson plans vetted by the researchers. They were taught the lessons using conventional lecture method. After wards, post-EFART was administered to all the students and their scores were recorded.

The data collected from pre-EFART and Post-EFART were analysed statistically. In answering the research questions, mean value each score was found and standard deviation from the mean determined.

Presentation of Results

Here, the data collected from the field for this study were analyzed and presented thus:

Research Question 1

To what extent do the mean retention scores of students taught financial accounting lesson using ELMS differ from those of other students taught the same conventional lecture method?

Table 1: Pretest mean and Retention Mean Ratings and Standard Deviation of Students in Experiment & Control Groups.

Source of variation	N	Pretest Mean	Retention Mean	SD	Gained Mean	Remark
Treatment group	133	0.88	5.00	1.26	4.12	Positive Effect
Control group	134	3.53	4.00	0.54	0.92	

Data in Table 1, revealed that with gained mean of 4.12, the ELMS has a high positive effect on the retention abilities of the experimental group. The retention mean of 0.92 for control group is therefore insignificant. It is very low.

Research Question 2

To what extent does gender affect students' mean retention scores in financial accounting?

Table: Pretest Mean, Retention Mean and Standard Deviations of Male and Female Students taught with ELMS

Source of Variation	N	Pretest	SD	Retention	SD	G	Remark
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		Mean		Mean		Mean	
Male students	60	0.20	2.00	471	3.09	4.51	Positive Effect
Female students	73	1.13	1.98	4.92	2.88	3.79	Positive Effect
Difference in their mean retention						0.72	

Table 2 indicates that the mean gain of 4.5 and 3.79 for male and female students who were taught using ELMS respectively with a difference of 0.72. ELMS has very high positive effects on male students' retention ability in financial accounting than in females.

Discussions

Effect of ELMS on Retention Abilities of Students

The results in Table 1 show the effects of ELMS on the retention abilities of students. The findings indicated that the mean retention scores of students taught financial accounting using ELMS are greater than those taught the same lesson with conventional lecture method. The experimental groups had mean retention gain of 4.12 and the control group had a mean retention difference of 3.2 in favour of the experimental group.

The above findings are supported by the earlier reviewed literature. For instance; Fitz Gibon (2010), found that the mean retention of students who were taught mathematics using ELMS significantly exceeded those of students taught the same lesson using lecture method.

Effect of Gender on the use of ELMS

The result in Table 2 also indicates that gender has significant effect on the use of ELMS in teaching financial accounting. According to the results in the table, the use of ELMS has a very high effect on male students with mean gain of 4.51. Thus, the method has a very high effect on the male students with mean difference of 0.72 against female students.

Salami (2003) corroborated the above findings when he found that male students have more retention mean scores in economics than their female counterparts.

Conclusion

Based on the findings of this study, a number of conclusions could be drawn, namely that ELMS is a powerful innovation in the teaching and learning of financial accounting which is capable of improving the mean

retention scores of students. These findings agree with the findings made overseas in favour of ELMS method of instruction. It implies that environmental factors (be it a developed or non-developed) do not form any obstruction in the application of the ELMS. Such factors were never also found to be a distractor in the application of this relatively new method in instruction. As such it strongly recommended for instruction in business studies and other related areas, at all levels of education.

Recommendation

Based on the findings of this study, the following recommendations were made:

1. Teacher should constantly use ELMS in order to enhanced students' retention abilities
2. There should be a remedial programme for female students in the use of ELMS method to enable them operate at the same level with their male counterparts.
3. Several workshops and seminars should be organized for teachers on ELMS method in order to make it popular among the teachers.
4. Secondary school libraries should be upgrade electronically to give students access to electronic data-based in order to fully utilize ELMS in teaching and learning processes.
5. Secondary school teachers should undergo training in computer application so that they can fully utilize ELMS method in teaching their students.
6. When utilizing ELMS method, teachers should act as facilitators of knowledge in order to maintain the students-centered nature of the method.

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