

# **Quality and Equity in learning: A Comparative Study on Students Performance In Masai Technical Training Institute**

## **Abstract**

Education is facing drastic change, with open, distance and flexible learning taking the centre stage. The increased demand of education among the adult learners and the learners in informal sector is changing the way education is perceived and accessed; and learning in institution is no longer the usual business with the teacher being the sage in the podium, disseminating knowledge. This paper compared the training using open, distance and flexible learning with traditional approaches in order to determine the students' performance. Various case studies were analyzed to ascertain the performance of learners in open, distance and flexible learning and traditional learning approaches; A document review to investigate and compare the performance of students in four classes trained by different lecturers on national examinations is considered at Masai Technical Training Institute; drawing results from the analysis of case studies by various authors, and document review from Masai Technical Training Institute, the study showed that learners who used open, blended learning approach performed better as compared to those who used traditional methods. The research concluded that the training approach in open, distance and blended learning environment enabled learners/facilitators to engage in discussions, collaborations among others and thus improved in the content masterly leading to lifelong learning hence better livelihood. The paper advocates for more research to be done to ascertain its finding.

## **1.0 Introduction**

### **Background Information**

Masai Technical is a government institution in Kenya which uses the conventional teaching (traditional) method with the textbook/ trainer prepared printed and written notes as the main teaching tool.

Less effort has been made to effect a fundamental change to ensure effective learning. It seems like the trainers and the students are contented with the traditional class room instruction.

Although there are trainers who have created PowerPoint presentation materials for classroom presentations, these presentations are developed individually without complying with the ODFL policy developed recently and on draft form. In addition, other trainers have developed materials and uploaded on Moodle platform, unfortunate the students do not engage fully in discussion and forums. Surfing the internet for learning materials is an issue in Masai Technical due to low bandwidths, student learning culture, lack of enabling technology among others. Due to the rigidity in the current curriculum in the country, it becomes hard for trainers to decide on the standard to follow in content development. As a result, majority of the instructors are hesitant to employ flexible and blended learning approaches in training.

This study hopes to shed some light on the following question; Is the performance of students learning through flexible and blended approaches better than the performance of students learning through the traditional approach?

The rest of this paper is organized as follows: part 2 discusses literature review, part 3, discusses the purpose of the study; part 4 describes the research method; part 5 discusses the summary, conclusion and recommendations.

## 2.0 Review of Literature

For better learning and production of lifelong learners, Rovai and Jordan, (2004), says that the trainers' role has to change in order to support students by attending to their intellectual growth and self autonomy, and by instilling awareness of important issues. A paper presented in the world economic forum placed Finland among the best world's most competitive economy (Sahlberg Pasi, 2007). This was due to its educative systems that encouraged trainer/student to try new ideas and methods, learn through innovation, and use creativity in schools (Sahlberg, 2007). The report on New York times (2009) showed that students in online learning conditions performed better than those receiving face-to-face instruction. The study was of twelve year span and used 99 studies in which quantitative comparisons of online and classroom performance for the same courses. The study showed that students who learned using online were ranked in the 59<sup>th</sup> percentile in performance compared to 50<sup>th</sup> percentile average classroom student.

On the other hand, Ni Ann Ya (2003), identifies performance has a multidimensional concept; i.e successful completion of a course, grades, added knowledge etc. Car (2000) reported dropout rates as high as 80% in online classes and hence concluded that dropout rate in online course is higher than face to face though the paper didn't give much on performance. A research done to compare online and traditional education in 1992 to 2002 showed that distance learning out performed face-to face training (Johri, A. and Islam, K (2015). On the empirical study done by Johri and Islam, (2015) to determine the student outcomes of face to face and distance learning on telecommunication course noted the following; the classes were taught by same instructor and the learners were given the same learning materials and assessment measures. The study showed a significant difference between course grades of face to face and distance learning (Johri and Islam, 2015). Bernard et al on the other hand brings out the two types of distance learning; synchronous and asynchronous classes. These researchers argue that face to face students out perform synchronous group but asynchronous group out perform face to face group. When asked, academic readers to rate the performance of the two groups; 77% believed that distance learning out perform face to face education (Johri and Islam, 2015). They also identified the

difference in a survey done by Allen and Seaman, (2013) that showed academic leaders who rated distance learning at 57.2% as compared to face to face.

Since the researcher is doing a comparative study on open distance and flexible learning with face to face learning, it would be wise to narrow the scope and consider blended learning approach other than the broad ODFL.

Blended learning is a design approach whereby both face to face and online learning are made better by presence of of each other (Varnadakis et al, 2014). These researchers describe it as a model that combines different advantages of face to face education and e-learning to ensure an effective learning (Varnadakis et al, 2014). Sadeghi et al, (2014) describes blended learning as an application of more than one method strategy, technique or media in education. It combines the best practices of online and face to face learning.

A case study by Sadeghi et al (2014) showed that blended learning approach is effective in increasing the students learning rate. Vanadakis (2014) ascertains that blended learning had shown the potential of promoting learner centered, active and constructive learning. Though Sadeghi exclaims that face to face is the common training method in TVET institutions (Sadeghi et al, 2014) because of its simplicity, fast and cheapness, he recognizes that the learners under this method are inactive, get tired in long lectures leading to fast forgetting of learned issues. Safari M et al. (2006) further ascertains this fact by saying that 80% of presented trainings are forgotten within 8 weeks.

Due to limitations of face to face training, many experts emphasized on blending it with technology (Sadeghi et al. 2014). He exclaims that whenever multimedia, seminars, e-learning is used in face to face training, then it becomes blended learning. He suggests that combination of face to face training with e-learning education method is more flexible than other methods.

A research done by Varnadakis , (2014) in Melton, Craff and Chopak – Foss (2009) showed that students achievement in blended learning health course was higher in final course

grades. Varnadakis, (2014) in MC Farlim (2008) reaffirms that a research done indicated that students who were taught by hybrid format scored 9.9% higher than those who used traditional format. Another research done by Varnadakis on a physical education course in early child hood to determine the student performance showed that students in blended learning were more successful than those who learned using traditional methods.

As noted, several studies have been done to compare the performance of traditional learning with blended technique of teaching and different results obtained. In this study, the researcher aims to compare the performance with that of flexible and blended approach in Masai Technical Training Institute, a government technical institution in Kenya offering diploma, certificate and artisan courses.

### **3.0 Purpose of the Study**

The purpose of this study is to compare the performance of students in national examinations as a result of instructing using flexible and blended approach and the traditional face to face method. The research compares student performance in information communication Technology subject in business courses i.e human resource management, supply chain management and business management trained by the different instructors in Masai Technical Training Institute for examinations done between July 2014 to November 2015.

### **4.0 Research Method**

The purpose of this study is to compare student performance in flexible and blended learning approaches in terms of performance. The information and communication subject done by diploma students in human resource management, supply chain management and business management is considered.

The study uses student performance records for the last four national examinations results. To provide comparable learning experiences, across the two modes, the content of learning materials is deemed to be the same. The student in flexible and blended approach could access the information in the Moodle LMS and the same time attend face to face classes.

The other group could attend face to face classes. The classes were not taught concurrently. Since admission of the groups are different, the number of students is not controlled.

Teaching of both groups was performed by different instructors and educational content were prepared using the national syllabus provided by the ministry of education. Therefore, the researcher assumed that the educational content was similar in both groups. The learning resources were presented by teaching in two groups using face to face lecture method and the other one group the materials were also uploaded to the Moodle Learning Management System, where the students could access it during their free time and in their convenience; links, discussion forum, interactive assignments were also included in the Learning Management System. In the blended class, the students could share their comments and questions at class forums with other students and the instructor.

In this study there were no questionnaire presented but the researcher used the national examinations performance from the registrar's office.

#### **4.1 Results**

Table 1 represents the performance of the students. In the Kenya National Examinations Council, the results are given as Pass with Distinction, pass with Credit, pass with Pass, Refer or Fail. This study uses the word PASS to mean that the student successfully completed the subject without refer or fail; the word FAIL is used to refer to either REFER or FAIL.

| <b>YEAR</b> | <b>NO OF STUDENTS</b> | <b>PASS</b> | <b>FAIL</b> | <b>% PASS</b> |
|-------------|-----------------------|-------------|-------------|---------------|
| NOV. 2015   | 17                    | 8           | 9           | 47.06         |
| JULY 2015   | 18                    | 6           | 12          | 50.00         |
| NOV. 2015   | 9                     | 8           | 1           | 88.90         |
| JULY 2014   | 10                    | 7           | 3           | 70.00         |

**Table 1**

## 4.2 Discussion

This study compared the performance of students enrolled in business courses (i.e diploma in human resource management, supply chain management and business administration) in National examination of module one.

Many studies have been done before with the aim of comparing students' performance when taught in face to face and blended approaches and different results have been obtained.

Sadeghi et al (2014) study showed that the performance in flexible and blended learning approach is better than face to face lecture method, though the difference were not statistically significant. The results of this study appear to be consistent with the results of a number of studies that have previously been reviewed as noted by Vanardakis (2014) in El-Deghaidy and Nouby, 2008; MCFarlin, 2008; Pereira et al, 2007, Vernadakis et al, 2011. This study has shown that open distance and flexible learning approaches gives quality flexible training which translates to better results.

According to Vanardakis et al (2011), the study highlighted the effectiveness of blended learning in improving students' achievement, however some scholars argue that there is no significant difference between the achievement of both.

The main findings of this study suggests that implementation of blended learning instruction has practical significance in improving learner achievement in information communication technology subject in business classes.

The results are promising in that it enables the learners to work and engage in discussion even when the trainer is not around. This may minimize students strikes especially when the trainers go on strike. The limitations in this study is that; one, only small sample was picked and performance used as the only factor to consider, two, the groups were evaluated with different national examinations series, which gives different environments, third, the examiners in this series might not be the same hence a different view of performance, four,

currently the marking in Kenyan National Examinations Council uses conveyer belt system which might have some implications on the results.

Other than using one group in the whole institution there is a need to inspect other subjects in other departments and levels in order to give more generalization. This study's findings though not tested shows that blended approach supports development of life-long learning by providing a learner-centered environment.

## **5.0 Summary, conclusion and Recommendation**

This study compared the performance of blended learning and classroom (face to face) learning,

Although blended learning class offers a comparably effective learning alternative, it should be recognized that blended learning has its unique advantages and disadvantages.

The findings have several implications for student learning, course development, and curriculum design. Online interaction can be used to enhance learning, especially for students who tend to be reserved in the classroom setting.

The major limitation of this study is that it is based on the practice of a single institution; single department and single subject. The study recommends that trainers to use e-learning methods to supplement face to face lecture methods in training. It further recommends a cross research on more technical institutions and higher institutions of higher learning in Kenya. The sample taken should also be large enough to give better comparison.

## References

Russell, T. L. (1999). The no significant difference phenomenon: a comparative research annotated bibliography on technology for distance education: as reported in 355 research reports, summaries and papers. North Carolina State University.

Bernard, R. M., Abrami, P. C., Lou, Y., Borokhovski, E., Wade, A., Wozney, L., ... & Huang, B. (2004). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of educational research*, 74(3), 379-439.

Urtel, M. G. (2008). Assessing Academic Performance between Traditional and Distance Education Course Formats. *Educational Technology & Society*, 11(1), 322-330.

Allen, I. E., & Seaman, J. (2013). *Changing Course: Ten Years of Tracking Online Education in the United States*. Babson Survey Research Group and the Sloan Consortium. Available: <http://files.eric.ed.gov/fulltext/ED541571.pdf>

Safari, M., Yazdanpanah, B., Ghafarian, H., Yazdanpanah, S. (2006). Comparing the effect of lecture and discussion methods on students' learning and satisfaction. *Iranian Journal of Medical Education*.2006;6(1):59 –64. Persian.

Sadeghi, R., Mehdi, M. S., Ahmadi, F.S (2014), Comparison of the effect of lecture and blended teaching methods on students' learning and satisfaction: Retrieved from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4235559/#B7>