

An exploration of experiences in using the hybrid MOODLE approach in the delivery and learning situations at the University of Education, Winneba, Ghana

Ruby Hanson & Joyce Nsiah Asante
University of Education, Winneba, Ghana
rhanson@uew.edu.gh, jnsiahasante@yahoo.co.uk

Abstract

This article summarises experiences in using the hybrid approach in delivering courses online in a teaching university in Ghana. The rationale for moving face-to-face classes online was in response to a University strategic plan to encourage lecturers to use educational technologies to enhance teaching and learning. The design and implementation of the hybrid approach were based on Salmon's (2002) five-stage model for e-moderation as well as Gagne's (1965) nine events of instruction. The study used qualitative methods to gather information from six lecturers and 168 students who were all conveniently sampled. Students were of the opinion that the use of the hybrid approach enhanced their ICT competencies as well as their engagement with their course content. Lecturers also had a positive opinion about the hybrid online teaching approach. It was recommended that more courseware be deployed to enable students access as many courses online as possible to enhance their learning and also to help solve the problem of Massification in our Universities,

Keywords: *Modular Object-Oriented Dynamic Learning Environment (MOODLE), e-moderation, Virtual Learning Environment (VLE), Learning Management System (LMS)*

Introduction

Tertiary education has experienced a large influx of students all over the world. UNESCO (2003), reports that many countries with higher education systems that are at critical development phases have experienced high rates of expansion and increase in student enrolments than anticipated. The phenomenon of globalization, has changed various sectors of world economy, and has also had some remarkable impact on education as students' option for tertiary education has increased. This has subsequently led to Massification of higher institutions in Ghana. "Massification of higher education" refers to the movement towards increasing access for university-age students, which is one of the key developments in higher education globally (Altbach, 2005). Massification has been used in the context of higher education systems to describe the rapid increase in student-enrolment in the latter part of the twentieth century (Scott, 1995). In the light of the changing face of higher education, and especially the role of education, there has been the need for reform and change through innovative strategies such as online learning for increasing student numbers.

Learning online has become a popular way of learning for most people, especially workers who cannot make time to sit in regular lessons in classrooms for various reasons. Such online learning, also known as virtual learning environments (VLEs) has become a hub of electronic teaching and learning activities now. The VLEs or Learning Management Systems (LMS) are web-based applications that run on a server and accessed by using a browser. The evidence to date is that the spaces for these electronic activities are mainly used as content repositories for notes, links to journals and supplementary material (Seery, 2012).

In a review of the student learning experiences in chemistry by the Higher Education Academy Physical Sciences centre in the United Kingdom (UK), students ranked e-learning as both the least effective and the least enjoyable from a range of teaching options (Gagan, 2008). According to Seery (2012) reasons for this could be attributed to inexperience on the part of staff as to how to efficiently use the various platforms and the fact that these could be overloaded for both staff and students. Kamaruddin (2010) also reports on work overload and added requirements such as knowledge in technological skills and finances as hindrances to the successful implementation of online courses. Dublin Region Higher Education Alliance DRHEA (2009) reports that staff may deliberately not patronise its use as it might diminish or remove their roles.

An explorative study carried out by Unwin, Kleessen, Hollow, Williams, Oloo, Alwala, Mutimucuo and Muianga (2009) in the use of Learning Management Systems in Africa education systems revealed that while there are some enthusiastic advocates of LMS, the reality is that most African educators as yet have little knowledge about, or interest in, their usage. In their recommendation, they advocated for a massive introduction of educational technology into the African educational curriculum. This informed the University of Education's (UEW) incorporation of educational technology into its 5-year Strategic Plan for the years 2009-2013. This led to a partnership between UEW and Partnership for Higher Education in Africa Educational Technology Initiative

(PHEA ETI) to meet a world-wide drive for to enhance teaching and learning skills. In view of this ten lecturers were initially trained to design and mount their courses online in a hybrid mode. The over-riding goals of UEW under the Initiative were to:

- Encourage academics' and students' use of available ICT facilities for academic purposes to ensure relevant and quality education, and optimal use of ICT to enhance management information systems, thereby justifying the huge investment by UEW in ICTs.
- Address challenges posed by large class sizes and inadequate teaching and learning facilities through the adoption of:
 - hybrid instructional delivery mode for residential programmes;
 - online learning strategies for distance learners; and
 - Pedagogical practices and instructional strategies that meet the diverse learning needs and styles of 21st Century learners.

This study by the researchers sought to find out if the goals and intentions for the introduction and implementation of the hybrid Moodle in UEW were achieved.

Rationale for the study

This paper presents a review of personal experiences of faculty and students' impressions about the transfer from a face-to-face teaching approach to a hybrid approach. The objective for this study was to explore the challenges of lecturers and students after four semesters of practice with the hybrid online Moodle courseware. Some pertinent reasons for the move were to address in-class deficiencies, to address the issue of Massification (Scott, 1995; Trow, 2003; UNESCO, 2003), for students to review the entire course content in their own time and at their own pace and work through problems independently and gain expertise in studying with technology. Flexibility in assessment was also one other reason for the move. A review of Salmon's (2002) objectives for online learning gives these reasons and others as some of the pedagogic intentions for which institutions may move some of their classes or modules online.

The objective for this kind of review research rested on the assumption that there is always an essence in sharing of experiences with and in new situations for improvement. Since the transfer was done in a hybrid mode lessons were partly delivered online and partly face-to-face –that is, in a blended mode. The reasons of the innovation were to encourage students to be able to work in groups, solve problems, demonstrate critical thinking, develop their online research skills, and reflective abilities. It is evident that though these are always some of the basis for infusion of technology into the curricula, they may not be always achieved. Kanuka (2005) reports some disappointing data in the use of technology in achieving such goals. In her reports, a survey from North America did not report a positive impact on learning. Laurillard (2002) adds that achieving higher levels of learning through internet remains an elusive goal. It is in view of these discussions or context that this research on the experiences of online teaching in UEW was undertaken.

Purpose of the study

The main purpose of the study was to find out about the reality of the implementation of the hybrid Moodle in the UEW learning environment. It was specifically to;

- explore the impact of the hybrid approach on students' learning.
- find out some of the challenges students faced in their learning as they used the hybrid approach.
- examine lecturers' views on the implementation of the hybrid Moodle.

The following **research questions** guided the study:

- How did the hybrid Moodle influence students' learning?
- What were students' challenges in the use of the hybrid approach?
- What were lecturers' views on the implementation of the hybrid Moodle?

Methodology

An exploratory research design using phenomenology method was considered appropriate and was adopted for the study. Phenomenology is a theoretical point of view that advocates a study of direct experiences taken at face value; and one which sees behaviour as determined by the phenomena of experience rather than by external,

objective and physically described reality (English & English in Cohen et. al. 2000). This method rests on an assumption that there is a structure and essence to share an experience that can be narrated (Pratt, 1992). Here, students' engagement with their online course and learning experiences as well as lecturers' experiences after each lesson were studied using qualitative methods. This was to gather views of participants in the Moodle approach effectively.

A total of 168 students, who were members of the Researchers' classes participated in the hybrid course and out of this number, 48 were purposely selected and interviewed over a 12-week period. Ten lecturers were involved in this study, out of which six were conveniently interviewed. Semi-structured interviews and observation were used to collect data for the study and the results from the interview and observation made were descriptively analysed.

Design and Implementation of the Hybrid Moodle

Materials for various courses were prepared for topical or weekly dissemination. Lesson notes, weekly assignments and quizzes as well as all other activities were prepared before mounting the course. To avoid course/work overload, the total number of hours available for use online and as face-to-face were worked out. Gagne's instructional design and Salmon's e-moderation principles were used as guidelines to produce high quality online instructional courseware.

An entire lesson/course was drawn over a total of 30 hours. Each course was originally three (3) hours a week for 10 weeks. Online, students worked for 20 hours only as one hour a week was used for face-to-face discussions. Out of the 20 hours, students used six (6) hours to collaborate with their colleagues on chat and forum platforms. Fourteen (14) hours were used for personal research and reflection. Ten hours was used for lecturer-student face-to-face interactions.

The courseware design followed Gagne's (1965) principles of teaching in the preparation of the topical lessons and Salmon's (2002) 5-stage model for online learning presented below.

Gagne (1965) nine events of learning are:

1. Gain attention
2. Inform learner of objectives
3. Stimulate recall of prior learning
4. Present stimulus material
5. Provide learner guidance
6. Elicit performance
7. Provide feedback
8. Assess performance
9. Enhance retention and transfer

Salmon's (2002) 5-stages of e-moderation are:

1. Access and Motivation
2. Online Socialisation
3. Information exchange
4. Knowledge Construction
5. Development

Students were provided with clear directives on what to do each day and where to get academic and technical support from. Weekly assignments, tutorials and lesson notes were made available online. These were presented in different styles to avoid monotony. Some of the different presentation modes were word documents, power point presentations, online demonstrations and audio presentations. Information about web and course ethics were all provided. Simple chat was used to initiate interaction and to arouse students' interest in the Moodle platform. A navigation pane was provided as an additional input to enable students to find their way easily on the new platform. A course manual was provided online as a further incentive. It was ensured that all activities were

linked to the learning objectives. Provision was made in a chat forum platform for students to present any kind of difficulties encountered at a specified time each day for one hour. Students could also ask questions related to the Moodle format or lessons. They could however send emails on very personal issues such as asking for permission to be out of class/online or to be late in submitting time-line assignments.

Results/Findings

Responses from participants in the study indicated that almost all of them accessed the Moodle for their lecturer's notes. A few however did not do all the online activities as expected. Students' assessments about the hybrid Moodle were quite positive. They said that the Moodle 'enhanced their ICT competencies'. They added that it increased learner engagement with the course content, exposed them to a variety of learning and teaching skills and increased collaboration with their colleagues. More importantly, it enhanced their cognition and reflective capabilities.

The following responses were given by some of the students:

The introduction to the online course increased my access to learning. It made it possible to get closer to my lecturer than before.

The hybrid course increased my awareness and demand for educational technology. It introduced me to various ICT techniques

The new course exposed me to great opportunities for improving my reflective capabilities and learning skills. I never did any reflection before.

It has been very worthwhile considering the in-depth skills gained and prospects in the future with course development. Learning was livelier. Interaction with my course mates was higher than could have been in the usual way.

Because we could go online to do a lot of research and add new materials to what we were given in class, I got more learning materials which helped me to understand my course very well this semester. My scores on tests were all very high. I am so happy.

What even intrigued me was the part where our quizzes were readily marked which enabled me to see how I fared in an exercise.

Students encountered a few challenges, upon observations and responses gathered from interviews conducted. Majority of participants complained about the poor supply of internet. It sometimes delayed the submission of assignments which had timelines attached. A few had access to their own personal computers. The ICT laboratory was mostly used by the Information Technology Department for lectures and was not available for use. Some said that their initial poor ICT skills posed a problem in accessing the Moodle platform.

Lecturers also expressed their views on their online course deliveries. Some of their views are as follows:

As a courseware designer the part I played was more challenging than I presumed. However, it paid off in the end. I would like to build more online courses.

Very enriching, I gained a deeper understanding of issues of being an implementer of a university wide project.

It was quite challenging to make time to work with students for the achievement a novel teaching approach

Developing an online course is really good because it gives you so much free time for research, once school resumes. You do not have to worry about day to day activities such as quizzes and assignments as they are all built up in advance.

There were a few adverse comments.

James said, 'Building an online course is so demanding. You spend so much time gathering materials before you start to make inputs onto the Moodle platform template.'

Akoto also added, 'The balance between technical demands and pedagogical goals is so bothersome. Sometimes I didn't know which was to take precedence;

Jane complained about time constraints. 'One has to battle between time to build a course and yet attend to other faculty demands.'

Problems encountered

A few problems were observed by the Researchers during the move from the face-to-face to online hybrid tuition. Students had problems with access to computers so could not do simultaneous assignments when they were required. Connectivity to the internet was not regular so there were several interruptions during scheduled periods for online activities. Student activities could not be submitted on time due to these interruptions. Others failed to read preceding or prelude information for student activities due to internet failure or sheer negligence. It was noted that some students were used to being told what to do by their teachers all the time, as a result they found it difficult to read instructions provided to guide them in the online course. It was obvious that such students had poor reading skills and culture.

Recommendations

It is recommended that more courseware should be deployed by other lecturers to make the University's Strategic Plan of integrating educational technology more successful. Again, for students and lecturers to have the full benefit of this innovation more computers are to be provided by the University. The internet bandwidth provided by the University should be expanded to increase access and connectivity. Finally, since the implementation of this innovation involves the application of basic computer skills, the university will have to step up literacy in technological skills in order to prepare students to access its online courses.

Conclusion

The objective of this research was to gain an insight into the benefits and challenges of moving a face-to-face class/ module partly online from practitioners' experiences. Data gathered showed that there was exposure to and gain in enormous amount of knowledge as well as technological skills when the hybrid approach was used in UEW. In addition the hybrid approach enhanced the teaching and learning styles of both the lecturers and learners.

The Researchers agree with Kamarrudin (2010) that moving a course online has challenges for both lecturers and students. However, findings from this research attest that online teaching and learning addresses more learning outcomes which override challenges which may be encountered in its practice. The hybrid approach to teaching and learning was appraised as an effective teaching mode by all participants.

References

- Altbach, P. G. (2005). Patterns in higher education development. In P. G. Altbach, R. O. Berdahl & P. J. Gumpert (Eds.), *American higher education in the twenty-first century* (pp. 15-37). MD. The Johns Hopkins University Press.
- Cohen, L., Manion, L., & Morrison, K., (2000) *Research Methods in Education* (5th ed.). London, RoutledgeFalmer.
- DRHEA. (2009). *Enhancement of Learning: Enabling-Learning and Blended Learning*. http://www.drhea.ie/enhancement_audit.php
- Gagan, M. (2008). Review of the Student Experience in Chemistry. Higher Education Academy Physical Sciences Centre.
- Gagne, R. (1965). *The Conditions of Learning*. New York, NY: Holt, Rinehart & Winston.
- Kamaruddin, N. (2010). Challenges of Malaysian Developers in creating good interfaces for interactive courseware. *The Turkish Online Journal of Educational Technology*, 9(1), 37-42.
- Kanuka, H. (2005). An exploration into facilitating higher levels of learning in a text-based internet learning environment using diverse instructional strategies. *Journal of Comput-Mediated Communication*, 10(3), Article 8.
- Laurillard, D. (2002). *Rethinking University Teaching* (2nd ed.). London: Routledge Falmer.
- Partnership for Higher Education in Africa Educational Technology Initiative (PHEA ETI) (2013) Summary Evaluation Report, UEW, Winneba
- Pratt, D. O., (1992). Conceptions of Teaching, *Adult Education Quarterly*, 42(4), 203-220.

- Salmon, G. (2002). *E-moderating; The Key to Teaching and Learning Online*. London, Kagan Page.
- Salmon, G. (2002). *E-tivities*. London. Kagan Page.
- Seery, M. K. (2012). Moving an in-class module online: a case study for chemistry. *Chemistry Education Research and Practice*, 13, 39-46.
- Scott, P. (1995). *The meanings of Mass Higher Education*, Buckingham SRHE, Open University Press
- Trow, M. (2000). *From Mass Higher Education to Universal Access: The American Advantage*. Research and Occasional Paper Series, Centre for Studies in Higher Education. UC Berkeley.
- UNESCO (2003). *Higher Education in Asia and the Pacific 1998-2003*. Regional Report on progress in implementing recommendations of the 1998 World conference on Higher Education. Second session of the regional follow-up committee, 25-26 February, Bangkok
- Unwin, T., Kleessen, B., Hollow, D., Williams, J. Mware Oloo, L. Alwala, J. Mutimucuo, I. Eduardo, F. Muianga, X. (2009). *Digital Learning Management Systems in Africa, rhetoric and reality*. University of London, Egham, Surrey, TW20 0EX.

APPENDIX A

Semi-structured interview for Lecturers who practised the use of the Hybrid MOODLE

1. How did you, in general find the use of the Hybrid MOODLE approach in your lectures?
2. Did you find the e-activities appropriate for use?
3. How did your students' reactions towards the hybrid MOODLE and its accompanying activities?
4. In your own view, do you think that the MOODLE helped to promote students' cognitive processes and concept formation?
5. Was there an indication of shift of focus from face-to-face teaching to student-centred learning with the use of the MOODLE?
6. Did you in any way find preparation of MOODLE courseware tedious and time consuming?
7. Did students make any comments of interest that you would want to share?
8. Is there anything that you would want changed or introduced? Why?

APPENDIX B

Semi-structured interview for students who were taught through the use of the hybrid MOODLE

1. What impressions do you have about the Hybrid MOODLE approach and lessons?
2. What did you like best?
3. What did you like least?
4. How different is this new approach from the traditional face-to-face approach that you are used to?
5. How do you rate the interaction between you and your teacher with respect to this new approach?
6. Did the Hybrid MOODLE approach in any way affect the way you understand concepts? How?
7. Would you say that the MOODLE broadened your cognitive processes so that you could identify your former misconceptions or other wrong scientific beliefs?
8. Did you see the MOODLE approach as shifting focus from teaching to learning?
9. Did you have problems with timelines, if any were set? How did you resolve that?

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

