E-learning and equal access to quality education

Dineva Snejana, Nedeva Veselina

Faculty of Technics and Technology - Yambol, Trakia University of Stara Zagora, “Graf Ignatiev” str. 38, Yambol 8600, BULGARIA
E-mail: sbdineva[at]abv.bg, veselina.nedeva[at]gmail.com

Abstract

The article discusses the opportunity of e-learning to provide equal access to high quality education. Based on scientific publications and our observations the review of possibilities offered by the distance education to those willing to study have been made; the reasons to impose distance in front of traditional training also; and the Moodle’s advantages as a platform for the development of e-learning. The conclusions are that e-learning has a great potentiality for acquiring high quality education under different forms of training. The one of positive side of e-learning is that it allows applying DL and can be recognized as a tool for equal access to education. The DL allows to be realized in practice the right for anyone to be educated. The existed barriers to learning in DL can be overcome in future.

Keywords: Moodle, e-learning, blend learning, equal access to education

1. Introduction

Education perhaps is the most important function of government (Shields et al., 2017). The access to quality education is not a privilege – it is a basic human right (Noorani, 2011). The education is extremely important for the growth of a country; it brings political, economic and health advantages. Educating young people can achieve their full potential and help further society (Zoe, 2017). Therefore the equal access to education is one of the main goals of society.

2. The advantages of using Moodle and Distance learning (DL)

2.1. The advantages of using Moodle

Moodle is Modular Object Oriented Dynamic Learning Environment, available under the GNU public license. The creation, maintenance and development of this VOC is a prerequisite for the development of distance learning and an example of creating equal opportunities for access to training.

Moodle is a well-known and successfully utilized e-learning platform; widely used in various purposes, for blend learning, distance education, and e-learning projects in private or public institutions, for both in full-time and part-time learning (Oproiu, 2015; https://en.wikipedia.org/wiki/). Moodle is in the top list of the 20 most popular LMS (Learning Management System) in the world. The main reasons are listed as follow:

- it’s a free, open source software and developer can make modifications based on their needs;
- it’s a cost-effective - absolutely free with no license fee, only maintenance costs;
- user-friendly - has simple interface of three distinct columns based on HTML5;
- designed to be responsive; can be access it on any mobile device;
- easy to be customize with offline access (Dudhagundi, 2018).
According to Oproiu (2015), the advantages of using Moodle are:

- Teaching staff have a more facile contact with the students that applied for the course, by the virtual classes created;
- It may constitute an environment where courses, to pics of laboratories and seminars or necessary bibliography can be posted;
- A space where students’ data can be easily dealt with (virtual secretariat) may be constituted;
- It provides knowledge assessment and self-assessment opportunities by online testing;
- It enables good communication and socializing by means of chat or forum, both between trainees and with the teaching staff. Individual communication with the teaching staff can be achieved or topics can be debated on by all members that access the platform.

The mentioned disadvantages of using Moodle are the fact that Moodle is not fully developed to cope with big projects; and that the system might not work efficiently with larger schools or serve as a great way to conduct all classes in a city (Yorkshire, 2010).

2.2. Distance learning (DL) and equal access to quality education

Distance learning (DL) lets to gain useful skills remotely with less cost than a full-time degree; set own pace of study; study when and where want; and obtain a degree from anywhere in the world without being in regular face-to-face contact with a teacher in the classroom. The objective of e-learning in developing countries is to provide basic education to a large number of poor students (Bhuasiri et al., 2012). However, according to Midgley (2018) the main advantage of DL is that it permits to fit learning around every day work and home life.

Distance learning (DL) is an excellent method of teaching adult learners, students with disabilities, or learners living in isolated regions. Nonetheless, there are some academic problems with that mode of study, such as easy loss of motivation because of face-to-face contact absence with teachers and lack of faculty support. Learners involved in DL have insecurities about the learning, not correct self-evaluation, and feelings of isolation. Faculty barriers to DL include lack of technology and training in course development, lack of support for distance learning. Organizational barriers include infrastructure, lack of technology, course curriculum, and student evaluation (Galusha, 1998).

The ways in which one can complete their studies through DL (SACOB, 2017) are:

- **Online Learning**: Students complete their studies online, where they have 24/7 access to their studies via an online portal, what is offered would be dependant on what the specific institution is providing;
- **Part time Learning**: This is where students combine face to face and distance learning together by attending classes in the evening or weekends while still completing studies out off campus;
- **Blended Learning**: This combines face to face learning with online learning;
- **Self Study**: This is when students complete studies solely on their own without the support of a tuition provider.

Nevertheless, according to Gal-Ezer and David Lupo (2002) based on their study, the Web cannot substitute entirely for face-to-face learning, but it can serve as a reasonable alternative when the latter is unavailable.

Today, organizations are increasingly adopting distance learning methods to train and develop their employees (Burgess & Russell, 2003). The increase in the use of VLE by universities and other institutions is a reality and will definitely have an important impact on the learning process (Oproiu, 2015). Using the Web to its full pedagogical potential requires a high level of self-study ability (Gal-Ezer & Lupo, 2002). E-learning is based on ideas of self-determining learning, active learning, self-directed learning, problem-based education, virtual
reality, and work-based learning (Martens, 2004). Most of these models are based on constructivism in which, learners become responsible for regulating their own learning process (Reiser, 2001). The outcomes widely mentioned as factors of the efficiency of DL are perceived learning outcomes and student satisfaction (fig.1) (Alavi et al., 1995; Graham & Scarborough, 2001; Sean et al., 2006).

![Figure 1. Students achievement grade report – Moodle statistics](image)

The design of Moodle is based on socio-constructivist pedagogy (Brandl, 2005). The Moodle become more and more used, provided a set of tools that support online learning, and comes as a support for the educators (fig.2).

![Figure 2. Moodle development, teacher support and educational institutions](image)
Teachers aim to increase the quality of online courses, students’ intention is to facilitate their learning (Oproiu, 2015). According to Kotzer & Elran (2012), the students’ perception of web-based homework testing using Moodle LMS was very positive when they implemented to a fully online program without any hardcopy booklets.

3. Materials and methods – Trakia e-University

The virtual learning environment (VLE) in Trakia University, and in FTT - Yambol has been created using Moodle software platform and has been applied since 2008. The open source software MOODLE is used. The checkup of the opinion of students enrolled in e-learning supported courses, showed that 80% of students support the idea of blend learning supported by Web-based e-learning materials, and they found e-learning more interesting in comparison with traditional classroom face to face study. Approximately 80% of students gave positive answer about the e- quizzes for self-preparation, followed by 70% for video materials and the same range of 70% for lecture presentations (Dineva & Dicheva, 2011).

Self-regulated learners are more motivated, independent, and meta-cognitively active learners in their own learning (Wolters 1998; Bastiaens & Martens 2000; Herrington & Oliver 2000). According to Oproiu (2015), benefits of using MOODLE identified by students are:

- they get the course and the topics, a virtual library they can access any time, according to their study availability;
- they can collaborate with their colleagues in doing homework;
- they are familiar with the e-environment, they find that learning method easy, at hand;
- they can create information and post it on the forum or blog;
- they can contact the professor directly;
- online assessment is more objective than the traditional one;
- self-assessment can be easily completed.

Students contributed in e-Learning environments often complain about the lack of feedback that is available in traditional classroom settings (Kotzer & Elran 2012). In Moodle, almost all modules are designed to allow teachers to provide feedback (Kotzer & Elran 2012). In our e-courses using Moodle platform, the questions in quizzes of self-assessment are evaluated automatically using the instant feedback feature and that is great for the students, and they like it that possibility indeed (Fig. 3).

![Figure 3. Moodle platform and instant feedback feature in test for self-evaluation](image-url)
4. Barriers to learning in distant education

Nevertheless, there are some barriers in applying DE in learning yet, as lack of technology, training and support from the faculty; lack of developed infrastructure and etc., shown on fig. 4. In addition to that in many countries the main obstacles of obtaining education at all is low-income students that needs financial aid availability (De La Rosa et al., 2006).

Figure 4. Barriers to learning in distant education

Conclusion

The conclusion is that one of the positive sides of e-learning is that it allows applying distant learning in different forms of training and can be recognized as a tool for equal access to education. That with the existence of e-learning students have opportunity to obtain high quality education and in practice to accomplish the right for anyone to be educated. The barriers to learning in distant learning can be overcome in future.

References

Bastiaens, Th. & Martens, R., 2000. Conditions for web based learning with real events. Instructional and cognitive impacts of web-based education (ed. B. Abbey), pp. 1–32.

Alavi M., Wheeler B. C., Valacich J. S., 1995. Using IT to reengineer business education: An exploratory investigation of collaborative telelearning. MIS Quarterly, 19(3), 293–312.

Bhusiri W., O. Xaymoungkhoun, H. Zo, J. J. Rho, A. P. Ciganek, 2012. Critical success factors for e-learning in developing countries: A comparative analysis between ICT experts and faculty. Computers & Education, Volume 58, Issue 2, February 2012, p. 843-855.

Burgess J.R.D., J.E.A. Russell, 2003. The effectiveness of distance learning initiatives in organizations. Journal of Vocational Behavior 63 (2003) 289–303.

Braham M., Scarborough H., 2001. Enhancing the learning environment for distance education students. Distance Education, 22(2), 232–244.

Herrington, J. & Oliver, R., 2000. An instructional design framework for authentic learning environments. Educational Technology Research and Development 48, 23–48.

Martens R. L., Gulikersw, J. Bastiaensw T., 2004. The impact of intrinsic motivation on e-learning in authentic computer tasks. Journal of Computer Assisted learning, 20, 368–376.

Oproiu G. C., 2015. A Study about Using E-learning Platform (Moodle) in University Teaching Process. The 6th International Conference Edu World 2014 “Education Facing Contemporary World Issues”, 7th - 9th November 2014. Procedia - Social and Behavioral Sciences 180 (2015) 426 – 432.
Sean B. Eom, H. Joseph Wen, Nicholas A., 2006. Learning Outcomes and Satisfaction in University Online Education: An Empirical Investigation. Journal of Innovative Education. Volume 4, Issue 2 July 2006. p. 215–235.

Wolters, C.A. & Pintrich, P.R., 1998. Contextual differences in student motivation and self-regulated Learning in mathematics, English and social studies classrooms. Instructional Science 26, 27–47.

Dineva Snejana, Ducheva Zlatoeli, 2011. Positiveness of Web-based site for General and Inorganic Chemistry in Blended Learning. The 6th International Conference on Virtual Learning ICVL 2011. C3VIP: "Consistency-Competence-Clarity-Vision-Innovation-Performance". University of Bucharest and "Babeş-Bolyai" University of Cluj-Napoca. 211-217.

Kotzer Shulamit, Yossi Elran, 2012. Learning and teaching with Moodle-based E-learning environments, combining learning skills and content in the fields of Math and Science & Technology. 1st Moodle Research Conference Heraklion, Crete-Greece SEPTEMBER, 14-15, 2012. p.122-131.

De La Rosa, Mari Luna; Tierney, William G., 2006. Breaking through the Barriers to College: Empowering Low-Income Communities, Schools, and Families for College Opportunity and Student Financial Aid. https://files.eric.ed.gov/fulltext/ED498745.pdf

Dudhagundi Darshan, 2018. Top 5 Benefits of Moodle Learning Management System. May https://blog.commlabindia.com/elearning-development/moodle-learning-management-system-benefits

Galusha, Jill M., 1998. Barriers to Learning in Distance Education. https://files.eric.ed.gov/fulltext/ED416377.pdf

Midgley Simon, 2018. Advantages and Disadvantages – Why Choose Distance Learning? https://www.thecompleateuniversityguide.co.uk/distance-learning/advantages-and-disadvantages-%E2%80%93-why-choose-distance-learning/.

Noorani, 2011. Equal access to education. https://www.unicef.org/education/index_access.html

SACOB, 2017. Face to Face Learning vs Online Distance Learning. https://www.sacob.com/blog/fame-to-face-learning-vs-online-distance-learning

Yorkshire Tye, 2010. Moodle: Effective or Flawed Learning System? http://www.brighthub.com/education/online-learning/articles/94013.aspx.

Shields L., A. Newman, D. Satz, 2017. Equality of Educational Opportunity. https://plato.stanford.edu/entries/equal-opportunity

Zoe Harrison, 2017. Equal access to education helps you and the community. http://www.rightforeducation.org/human-rights/access-education/