

Tool for computer teachers' CPD-MOOCs: Opportunities and Challenges

Mohamed Saad Eldin Mohamed Ahmed

Assiut University, Faculty of Education at the New Valley, Department of curricula and teaching methods
Assiut, Egypt

mohamed_saad_99@hotmail.com

Keywords: Massive Open Online Courses; Continued Professional Development; Connectives; Computer Teachers

Abstract:

MOOCs or Massive Open Online Courses are considered one of the latest disruptive and innovative technologies which are becoming increasingly and rapidly popular in Education. MOOCs are a special type of open educational recourses designed and offered online for massive or huge number of learners. They are viewed in many recent studies as promising technology for lifelong learning. However, little is known about how the use of MOOCs will be effective for teachers' Continued Professional Development (CPD). In Egypt, the educational system is suffering from many problems and weaknesses. One critical problem is the lack and difficulty of providing training opportunities and improving the professional development of a huge number of teachers and the training programs. In this Paper we argue that MOOCs might have potential opportunities for teachers' CPD. However, there are emerging considerations and challenges might threat the effective use of MOOCs in teachers' CPD programs. We purpose utilizing MOOCs for the Egyptian Academy of Teachers' Professional Development as a criteria or a requirement for career promotion. In this paper, literature related to MOOCs and the philosophy or theory underpinning its use in education will be reviewed in the relation to teacher CPD. Opportunities and challenges of using MOOCs in teachers' CPD will also be highlighted. Moreover, suggestions and recommendations will be provided in the conclusion.

I. Introduction

Teachers' CPD is considered as one of the most essential processes for improving teacher learning and enhancing student learning outcomes. It's a significant key factor to the success of the educational system in general

and the success of Science teaching and learning in particular (Lowden, et. al., 2012).

Despite the growing and increasing number of teachers in Egypt, the educational system is suffering from many problems and weaknesses. One of the most significant problems is the lack of quality and competency due to the weak system of human recourses management and teacher professional development. Recently, the Egyptian Ministry of Higher Education is paying attention to this critical issue in the current strategic plan for pre-higher education (2014-2030). It aims at building a dynamic system which provides programs for professional development as a main supporter for the educational reform. These comprehensive programs will relate incentives, hiring and promotion process of teachers with CPD.

The latest statistics by the Egyptian Ministry of Education indicate that there is about 1.4 million teacher and 30% of them are not qualified. This with no doubt has a negative effect on the quality of education. As one of the positive steps to overcome this problem, the Egyptian Ministry of Education has established the Egyptian Academy of Teacher's Professional Development which is responsible for qualifying and training teachers.

To achieve this crucial mission, it is clearly urgent to provide effective training and professional development opportunities to all teachers and this is very difficult for thousands of teachers across our country. Thus, the e-learning and distance learning through MOOCs tend to be the solution for this problem as it offers a variety of training programs with low or no cost.

II. LITERATURE REVIEW

According to a UNESCO monitoring report, by 2015, the world will need at least an additional 2.6 million teachers in order to ensure that every child receives a primary school education (Clifford, 2015).

MOOCs are one of the latest disruptive technologies and can be defined as massive open online courses offered via web and designed to support unlimited number of enrollees (Nicoara, 2013; Cuzack, 2014). MOOCs are driven from the

Connectivism theory. George Siemens (2004) set a number of principles for Connectivism theory by as the following:

- Learning and Knowledge rests in diversity of opinions.
- Learning is a process of connecting specialized nodes or information resources.
- Maintaining connections is needed to facilitate continual learning. (Bell, 2011).

MOOCs are Massive in the way that student numbers might reach 100.000 or over. They are Open where learners can study any course, anywhere, and anytime. They are Online as they are offered via web online or blended. MOOCs are courses that contain learning content.

Cuzack (2014) reported the different types of MOOCs such as: XMOOCs and CMOOCs. XMOOCs are the most common; they are organized around central professor and core curriculum. CMOOCs (connective MOOCs) involve learners in more interaction and participatory activities. Cuzack (2014) added another type which is Cooperate MOOCs which are designed for employee training or continuing education and uniquely accredited by employers.

MOOCs bring unprecedented opportunities for teachers' CPD and lifelong learning such as accessibility and availability to massive numbers of learners, learners' engagement, lifelong learning experiences, and low cost programs (de Ward, 2011; Chen, et al., 2013). However, there are some considerations and challenges might threat the effective use of teachers' CPD programs via MOOCs in Arab and developing countries and in Egypt in particular. Some of these challenges can be presented as follow: (EduTech, 2013; Fasimpaur, 2013, Fyle, 2013, Richter, 2013)

- MOOCs require self directed Learning readiness.
- They require digital literacy, a set of skills in using digital technologies and internet.
- They need internet connections.
- They require a sense of community.
- They need a good instructional design based on a clear pedagogy.
- They need motivation, participation and interaction from participants.
- Teachers need guidance and support.

There are many MOOCs utilize mainly video lectures, but they provide a little amount of interactivity among instructor and learners. Despite the high rates of enrollment in many MOOCs, the completion rates are low (Marcus, 2013; Jordan, 2013). This highlights the importance of taking the above mentioned factors into consideration when design and deliver a MOOC for teachers.

III. CONCLUSION

Teachers' CPD in Egypt is a crucial requirement for reforming the Egyptian Educational system and to improve the quality of teaching and learning. MOOCs offer great opportunities to support teacher's CPD such as solving the problem of the difficulty of qualifying and delivering training programs to massive number of teachers. However, there is no enough data from research studies to decide the effectiveness of using MOOCs in Egypt for teachers' CPD. Many challenges for implementing these programs via MOOCs also have been discussed and should be taken into consideration. In this paper, we suggest adopting carefully MOOCs for teachers' CPD in Egypt and we purposed applying them as criteria or requirements for hiring and promoting teachers by the Egyptian Academy of teachers' professional development.

IV. Recommendations

- Develop training programs for teachers on e-learning system
- Develop training programs for students on e-learning system
- Use Mooc in the educational process

REFERENCES

- [1] Cuzack, MOOC Inphographics. MOOCs – Think Massively. Retrieved from: <http://moocs.com/index.php/category/mooc-infographics/>. (2014).
- [2] C.Fyle, Teacher Education MOOCs for Developing World Contexts: Issues and Design Considerations. Retrieved from <http://linc.mit.edu/linc2013/proceedings/Session3/Session3Fyle.pdf>. (2013).

- [3] E. Nicoara, The Impact of Massive Online Open Courses in Academic Environments. The 9th International Scientific Conference eLearning and software for Education Bucharest, April 25-26, 2013. Retrieved from file:///C:/Users/itc/Documents/CEEOL%20Article.PDF. (2013).
- [4] EduTech, More about MOOCs and developing countries. world Bank blog on ICT use in Education , Retrieved from <http://blogs.worldbank.org/edutech/moocs-developing-countries>. (2013).
- [5] F. Bell, Connectivism: Its Place in Theory-Informed Research and Innovation in Technology-Enabled Learning . International Review of Research in Open and Distance Learning, Vol. 12.3 March –2011. Retrieved from: <http://www.irrodl.org/index.php/irrodl/article/view/902/1827>. (2011).
- [6] I. de Waard, Explore a new learning frontier: MOOCs. Learning Solutions Magazine. Retrieved from <http://www.learningsolutionsmag.com/articles/721/explore-anew-learning-frontier-moocs>. (2011).
- [7] J.Marcus, All Hail MOOCs! Just Don't Ask if They Actually Work. Time. Retrieved from <http://nation.time.com/2013/09/12/all-hail-moocs-just-dont-ask-if-they-actually-work/> . (2013).
- [8] K. Lowden, V. Lally , and S.Hall, Effective CPD in Science Education,Addressing the Challenge of Rapid Curricular Change Through Evidenced-Based Professional Development and Learning. ECER Conference 2012, The Need for Educational Research to Champion Freedom, Education and Development for All.Retrieved from: <http://www.eera-ecer.de/ecer-programmes/pdf/conference/6/contribution/16981/>. (2012).
- [9] K.Jordan, MOOC Completion Rates: The Data. Post hegemony. KatyJordan. Retrieved from <http://www.katyjordan.com/MOOCproject.html>. (2013).
- [10] Clifford, Fyle Teacher Education MOOCs for Developing World Contexts: Issues and Design Considerations.Sultan Quaboos University, Muscat, Oman. (2015).
- [11] S.Richter, Design and Development of a MOOC: The Value of a Collaborative Process. Retrieved from http://www.aect.org/pdf/proceedings13/2013i/13_33.pdf . (2013).
- [12] X.Chen , D.R. Barnett, and C. Stephens: Fad or future: The advantages and challenges of massive open online courses (MOOCs), In research-to practice conference in adult and higher education (pp. 20-21). (2013).