

What do MOOCs give us or what is the future of technical education in always changing world?

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Анотація

В данній статі розглянутий новий підхід до отримання нових навичок та знань за допомогою відкритих онлайн курсів. Проаналізовано основні концепції, переваги та недоліки такого виду отримання освіти загалом. Розглянуті найпопулярніші відкриті площадки для онлайн навчання та відповідні курси, які встигли себе зарекомендувати.

Ключові слова

МООС, навчання, освіта, знання, курс, англійська, онлайн, Університет, студент, учень, вчитель, інформація, Інтернет.

Abstract

In this article it is considered a new approach to getting new skills and knowledge through massive open online courses(MOOCs). It's analyzed the basic concepts, advantages and disadvantages of this type of education in general. It is also considered the most popular open platform for online learning and the courses that have been already proven themselves.

Keywords

MOOC, studying, education, knowledge, course, English, online, University, student, pupil, teacher, information, the Internet.

Thousands of years people were interested to get the best approaches in studying new material, preparing new specialists. In other words we wanted to create the best unified technique to master something new or to obtain knowledge which will be necessary for us in future life or professional sphere. In the last millennium humanity created a lot of Universities and other institutions where people could obtain new knowledge. There were general titles created to label persons graduated from these institutions. As a matter of fact we've got the model of educational system. We've got, until recently, only places where we can gain new knowledge. So, in most cases when a person reaches a certain age he has to get education. There he studies everything that is possible, everything that may be needed in his career, because over time it will be hardly possible to get some additional material. So, the crucial role was to provide material as much as possible, and to teach how to think, how to understand an abstract principle was secondary. So-called overlearning played a significant role. And it was even rational because nobody knew what he would do after graduation of a University. Information cost was really high, let alone having a teacher.

But time changes, everyday there appears new areas of activity, new scientific spheres, new technical approaches, for example, in building web-application. So many spheres where a person is good at not because of knowing something, but due to having capability to study new material. Here the Internet and MOOCs come into play.

Yet MOOC is not a silver bullet. There are a lot of choices where we can get new knowledge, but one should remember that via MOOCs we can learn from the best University, teachers from all over the world just for free of charge or symbolic cost. And one more advantage here is the possibility to communicate with people from different parts of the world, do the same job you do and exchange experience. I guess it's amazing, isn't it?

Now let's look a tiny bit deeper what it's, what can we do with it and try figure out how to get the most benefits out of this.

So, a MOOCs(massive open online course) is an online course aimed at unlimited participation and open access via the web. In addition to traditional course materials such as filmed lectures, readings, and problem sets, many MOOCs provide interactive user forums to support community interactions among students, professors, and teaching assistants. MOOCs are a recent and widely researched development in distance education which were first introduced in 2008 and emerged as a popular mode of learning in 2012. [1]

MOOCs provide a new methodology and modality for teaching and learning. This newness does pose some problems for learners, but also provides for exciting new possibilities. Some of the learning skills acquired by learners through face-to-face coursework and traditional online programs are transferable to MOOC learning; however, the distributed nature of the MOOC and the massive number of participants don't allow the traditional disambiguation method of going to the teacher for an explanation. MOOCs require learners to be more proactive in their education. Everyone can be successful in a MOOC if they take certain steps and devise strategies before, during, and after a MOOC. If you are interested in trying out a MOOC, the good news is that the opportunities will only increase from one month to the next.

So, in general terms the fundamental reason why MOOC is becoming a market is because people want to access education anytime, anywhere, in a way that they are actually able to learn from the given courses(more retention of concepts, skill acquisition, etc.). And this fundamental reason is, in my own opinion, the future of technical education. That's easy to understand when you are studying at some University and there a lot of subjects you don't want to have to deal with, but you have to, just because somebody decided you'd need it sometime when in fact you wouldn't. You spend a lot of time doing something you don't like, you're, saying in simple words, procrastinating. Here you can get whatever YOU want just by clicking a button on your device. The possibility of being taught by the best teacher from the world in this sphere plays a crucial role. Just find out what you need and you can immediately start growing up in the way you want to do it. Make a little hard work and you can be that one person you always wanted to be.

In the meantime there are tons of examples where people fell in love with MOOCs. For instance in the spring of 2011, Sebastian Thrun was having doubts about whether the classroom was really the right place to teach his course on artificial intelligence. Thrun, a computer-science professor at Stanford, had been inspired by Salman Khan, the founder of the online Khan Academy, whose videos and discussion groups have been used by millions to learn about everything from arithmetic to history. And so that summer, Thrun announced he would offer his fall course on Stanford's website for free. He reorganized it into short segments rather than hour-long lectures, included problem sets and quizzes, and added a virtual office hour via Google Hangout. Enrollment jumped from 200 Stanford undergraduates to 160,000 students around the world (only 30 remained in the classroom). A few months later, he founded an online for-profit company called Udacity; his course, along with many others, is now available to anyone with a fast Internet connection. [2]

But regardless of all these obvious benefits there a lot of thoughts about this brand new kind of education: New York Times columnists David Brooks and Thomas L. Friedman are gushing that MOOCs are the best thing to happen to learning since movable type. Inside academia, however, they have been met with widespread skepticism. As Joseph Harris, a writing professor at Duke, recently remarked in The Chronicle of Higher Education, "I don't see how a MOOC can be much more than a digitized textbook." [2]

Nevertheless MOOC is a brand new approach to studying, which has proved to be very effective and useful in a lot of cases including combining with standard approach to education and instead of it.

Here I've chosen the best MOOCs which you can easily find on the Internet. Some of them I have used by myself, about some I've heard as very good ones. Hope this list will help you to immerse in you opportunities with MOOCs.

1. edX - www.edx.org (Harvard University, the Massachusetts Institute of Technology, and the University of California, Berkeley, are just some of the schools that you have at your fingertips with edX. Through massive open online courses (MOOCs) from the world's best universities, you can develop your knowledge in literature, math, history, food and nutrition, and more.)
2. Coursera - www.coursera.org (Every course on Coursera is taught by top instructors from the world's best universities and educational institutions. Courses include recorded video lectures, auto-graded and peer-reviewed assignments, and community discussion forums. When you complete a course, you'll receive a sharable electronic Course Certificate.)

3. Advance Your Education With Free College Courses Online - Udacity – www.udacity.com (With industry giants—Google, AT&T, Facebook, Salesforce, Cloudera, etc.— offer Nanodegree programs and credentials, designed so that professionals become Web Developers, Data Analysts, Mobile Developers, etc. Students acquire real skills through a series of online courses and hands-on projects.)
4. MIT OpenCourseware - ocw.mit.edu (It is not needed to say anything. Open classes from the best technical University of the world, where just one year of studying costs over 40 million, for free.)
5. Khan Academy – www.khanacademy.org (Khan Academy is a non-profit educational organization created in 2006 by educator Salman Khan with a goal of creating an accessible place for people to be educated. The organization produces short lectures in the form of YouTube videos.)

You can attend the classes online, attend the tests and exams and also complete the assignments given as homework.

You are awarded a statement of accomplishment on successfully completing the courses.

My own experience in MOOCs and the classes I have already taken

I've discovered the world of MOOCs about 2 years ago and for the first time just kept it in mind without any actions. It was hard for me to catch something new without pressure from the side. Once surfing the Internet particularly the coursera I found the course "algorithms" from the Princeton University. Then I had the same course in VNTU. It was a good opportunity to take part in. Having passed only one assignment I gave it up. The cause was evident - bad English I just couldn't keep on track. A year later I made up my mind to try one more time. This time I did my best and accomplished it. From then on I took part in several more MOOCs and want to introduce all of them here from the very beginning:

1. Algorithms. By Princeton University. Authors: Kevin Wayne, Robert Sedgewick (Coursera).
This is an awesome course. Go for it. Lectures have plenty of visualizations of an algorithm. I liked programming assignments the most. In addition to the auto-grader/unit-tester (which tests your library for strict memory/time constraints as well as correctness and even style and potential bugs) and the set of helper libraries (e.g. `algs4.jar`, `stdlib.jar`) provided for the ease of development, each assignment has a specification (including required API) as well as a checklist (consists of frequently asked questions (FAQ), common pitfalls, possible progress steps). Moreover you are given a set of visualization libraries like the one for "Percolation" assignment or even a better example with the "Boids" simulator (groups of flying birds) from the "KD-Trees" assignment. It has been my first and the best MOOC so far. It's worth at least checking out.
2. CS50. By Harvard University. Author: David J. Malan (edX)
This is introduction to computer science from the very beginning. The lectures are the most important parts of the course. A teacher uses clever real life examples to make complicated notions easier, in fact, you don't need any programming experience and it's still useful in non-programming jobs. The course has big community on the facebook what gives students a chance to communicate with each other on different topics including abstracted from computer science topics.
3. Learning how to learn. by University of California, San Diego. Authors: Barbara Oakley, Terrence Sejnowski, Becca Judd (Courera)
This course gives you easy access to the invaluable learning techniques used by experts in art, music, literature, math, science, sports, and many other disciplines. you'll learn about the how the brain uses two very different learning modes and how it encapsulates ("chunks") information. it also covers illusions of learning, memory techniques, dealing with procrastination, and best practices shown by research to be most effective in helping you master tough subjects. [3]
4. Calculus One. by The Ohio State University. Author: Jim Fowler, PhD (Coursera).
This course is a first and friendly introduction to calculus, suitable for someone who has never seen the subject before, or for someone who has seen some calculus but wants to review the concepts and practice applying those concepts to solve problems. [4]

At the end I want to say a few words about benefits in studying English which MOOCs give us. Above I said that at the beginning of immersing in the world of MOOCs my English was below the average and I had some difficulties due to this circumstances. A lot of MOOCs taken up by me I did not finish, but they improved my English very significantly. I studied extremely high amount of new words, idioms, combination of words which improved my English and made my next course easier. I had an opportunity to collaborate with native

English speakers, exchange thoughts with them and just speak on different topics not concerning this course. After all that, I concluded that one of the best way to practice any foreign language is to study something new and try to express one's thoughts in this language. For the time being it may be a bit ugly every now and then, but you're not a native speaker, so who dares to judge you? This is one of the reasons I've written this article.

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