Transversal Skills and MOOCs: A Good Partnership to Improve Employment Opportunities

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Abstract

This paper provides an analysis of the potential contributions that MOOCs could make to the Tourism Industry when used as a tool through which specific transversal skills are honed, whether they are knowledge-based skills, attitudes, or even behaviors. Our research starts with an analysis of pre-existing MOOCs on offer in the EU, with particular emphasis on Spain. The purpose is to identify which MOOCs are available under each of the categories established by Open Education Europa and to describe existing trends.

The paper details a list of generic transversal skills that are common to all professions that can be delivered via MOOCs before providing an overview of the current supply of MOOCs within the Tourism Industry. In Spain, the Tourism Industry creates more employment than any other sector of the economy and as such staff must be highly trained if they are to be successful in a competitive market.

1. Introduction

Nowadays, MOOCs appear to be relatively well established. An online search produces more than eight and a half million hits on the topic, in the form of articles, blogs, news, databases, forums, and so on. This is a huge amount of information that offers reflections on the function of MOOCs from several different perspectives.

In 2012 there was a sudden boom in MOOCs that saw the large American universities and leaders of the movement exploiting the phenomenon. In the years since this boom we have seen many more universities and private enterprises jump on the MOOC bandwagon. However, what is clear is that we are still very much in the experimental and research phase when it comes to MOOC design and methodologies, and during this standardizing phase we are still exploring their true value for education. For this reason, the road that lies ahead is a long and winding one and important progress is still yet to be made with regards to unlocking their full potential.

Some studies into MOOCs have identified additional and equally important problems: firstly, the lack of prestige given to the certificates awarded by these courses; secondly, the absence of a coherent pedagogy; and finally, the high dropout rate of students sitting such courses [1]. These problems are not beyond the control of the institutions that opt to use this type of training and they are currently working on solving them.

So, in 2012 MOOC were predominantly linked to formal higher education, but in 2013 things began to change. One of the most well-know platforms, Udacity, decided to turn its attention away from higher education and towards work-based learning. It left strictly academic subjects behind and focused its efforts on offering courses that delivered the skills and competencies being sought within the labour market. It signed agreements with technological companies such as Google, Autodesk, Intuit, Nvidia, Salesforce.co, AT&T and Cloudera for the delivery of training to both potential candidates and contracted staff [2].

In an ideal world, businesses would prefer to contract individuals who already possess the skills and abilities that the company needs, however in reality it is not always possible to find such candidates. According to the study by McKinsey on education and employment, only 42% of companies worldwide feel that recent graduates are ready to face the tasks and demands that will be placed on them. Essentially, the problem is that there is a gap between the skills offered by individuals and the skills demanded by companies, and it is one that affects over two million jobs vacancies that European companies find themselves unable to fill [3]. Furthermore, only 30% of people believe that traditional teaching-learning methods help them to acquire the skills they need to find work [4].

1.1. MOOCs for the business market

Companies often rely on external government funding to offer continuing education to staff. The typical training course offered in-house is normally based on the least effective of educational methods: virtual or physical classrooms, with a professor who dictates information while students listen and read. Under the current circumstances in which there are many newly emerging professions, small enterprises
cannot afford to spend years waiting for the right course to be developed, nor can they waste time and money on delivering the wrong course. Today’s companies need to act fast and they need to engage staff in effective and profound learning so that the individual is capable of applying their knowledge in the performance of their duties. The solution to this problem are personalised training courses. Hypothetically, MOOCs are more than capable of providing such training, especially when combined with new technologies and new pedagogical approaches.

Universities have much to offer by way of MOOC creation, although at this time the existence of viable business model from an economics perspective, remains unclear. MOOCs require institutions to make considerable financial investments and given that they are freely and openly available it still remains to be seen what the return on this type of investment. That said, in offering MOOCs, universities are contributing to society by providing continuing education to all and essentially fulfilling one of their main duties.

Independently of the training on offer via different marketplaces (OCW, Udemy, Tutellus, iTunes, YouTube EDU, some of which are not classified as MOOCs), when it comes to work-based learning it is worth further mentioning the initiative undertaken by Udacity. Udacity began its journey as a spin-off from the University of Stanford by offering academic courses such as Artificial Intelligence. However, since 2014 it has refocused its energies and now dedicates its time and efforts to offering open access courses for work-based training to companies that meet the demand for more sector specific competencies that are required by the labour market, i.e. computer platform programming. Under this new business model it generates revenue by charging for certificates or personalised tutorials and not for the courses themselves.

2. Objective and methodology

This paper presents the state of Massive Open Online Courses in Europe, and in particular Spain, as of February 2015, at the beginning of Erasmus + Project (Destiny Project: http://destiny-eu.net/).

This paper focuses on data corresponding to MOOCs in Spain and explores the potential of such courses when used as a tool for offering transversals skills and competencies-based professional training to facilitate job hunting or work-based training. The report also provides a brief analysis of the transversal skills that are required by the Tourism Industry. This choice of sector was made as a result of it being one of the largest sectors of the Spanish economy.

Several different sources were used to produce this report, including the MOOC sites themselves in order to verify data. Thanks to the reliability of information sources in the European Union, such as Open Education Europa, it has been possible to easily obtain and evaluate the data and scientific articles that are detailed in this report [5]. The sources of information used to prepare this paper and the strategy used include:

1. A review of scientific bibliography
2. A review of videos and conferences relating to MOOC trends
3. An analysis of the website: openeducationeuropea.eu
4. A search of MOOCs by universities and by platforms.
6. A search for occupational and sector specific transversal skills
7. Interviews with Spanish university professors who teach within the field of Tourism Studies

3. The unlocked potential of MOOCs for work-seekers and employees

Open Educational Resources offer the potential for increasing access to education and improving the quality and affordability of teaching and learning in Europe. We argue that the most successful way to achieve this is via MOOCs, which are one of the most recent advances to emerge in free and open education. In this given moment, and generally speaking, MOOC suppliers need to rethink different approaches to MOOC design from the perspective of content delivery. For the purposes of this report, two issues are of particular concern:

- Certain competencies are difficult to deliver via MOOCs if we lack a suitable methodology.
- Educational quality control measures need to form an essential part of such a methodology to ensure effective teaching and learning.

MOOCs could play an important role in driving forward educational innovation and transforming higher education. They have the potential to become a tool that acts as a bridge between an academic education delivered by secondary schools and universities and the needs of the labour market.

MOOCs that focus on delivering specialised training and the acquisition of the work-based skills that are needed to successfully perform the contractual duties in question would most certainly offer a bridge between traditional academia and the needs of the labour market for all levels of training [6]. In doing so, MOOCs could reduce a company’s outlay on training costs, and enable them to deliver content to vast numbers of staff easily, both of which create a significant positioning advantage for MOOCs over other formats.

Nowadays businesses need potential candidates to already possess all the necessary training, and where possible, qualifications that are required for the job. Employees must therefore possess the motivation to gain the skills needed for the duties required of them.
On this premise, it is likely then that both company the executives and its employees will discover the benefits of MOOCs as there could be significant benefits both for the individual end users and for the company.

4. MOOCs: a statistical breakdown

In 2014 there was a boom in the creation of MOOCs, both within Europe and internationally. The number of MOOCs launched in Europe has doubled since then, from 458 courses in February 2014 to 1040 courses as of February 2015. At an international level there has been a similar trend that has seen the number of courses double from 1654 MOOCs in February 2014 to 3081 MOOCs by February 2015.

Onah, Sinclair & Boyatt (2014), identify high dropout rates as a major problem confronting MOOCs. They mention that the high dropout rates on this type of course are the result of several factors: a lack of motivation to continue with the course until its completion; an inability to devote the necessary time to study due to work loads; course difficulty; the lack of available support (such as digital literacy and mathematics); and the poor quality of learning materials.

5. Europe and Spain: the regional and local panorama

Those countries with the largest numbers of institutions (read public and private universities) creating MOOCs include: Spain (73), France (71), the United Kingdom (67) and Germany (67). These are closely followed by Italy (18), the Netherlands (15) and Portugal (12). In the remaining European Member States few institutions contribute to the creation of MOOCs.

Within the European Union, Spain offers the largest number of MOOCs with a total of 288 courses. However, as some of these have been run more than once, it could be said that 312 courses have been delivered to date (data updated February 4th, 2015). The following map shows a graphic illustration of the European countries in which MOOCs are being created.

An interactive table and graphic available on http://goo.gl/7tY57T, shows MOOC availability according to subject.

Spain leads the way in the overall number of MOOCs created, although the U.K has created more MOOCs in the specific subjects of Applied sciences, Humanities, Natural sciences and Social sciences. (See interactive graphic: http://goo.gl/3AxBqA).

In Spain, 73 institutions have created some form of MOOC. The most active of these include the Polytechnic University of Valencia (UPV), the Open University (UNED), and the University of Cantabria. Although both the UPV and UNED have their own MOOC platforms - https://www.upvx.es/; http://unedcoma.es/ - both continue to share courses on the Miriadax platform. (See Interactive Graphic: http://goo.gl/h5lg6). The distribution of MOOCs launched in Spain by subject area: Science and technology (68), Social Sciences (55), Mathematics and statistics (48), Business (44), Humanities (40), Applied sciences (34), Natural sciences (15) and Arts (8). The next graph shows a breakdown of MOOCs by subject and country in the European Community. See complete list: http://goo.gl/6LNXZK.

Following this analysis, it has been ascertained that MOOCs in Spain are predominantly focused towards resolving the problem of gaps in the higher education system, and in having an academic footing are used for the following:

1. Resolving knowledge gaps that novice students may have by offering introductory courses or foundation courses, e.g. Basic Mechanics for Engineers, or Basic Maths.
2. Resolving gaps in the curriculum, e.g. Fundamentals of Microeconomics, Financial Investment and Taxation, Introduction to Economics, Descriptive Statistics, Graph Theory, Mathematical Foundations, Probability, Basic Maths, Integration by substitution and Integration by partial fractions, Introduction to Chemistry, The Basics of Electromagnetism, Basic Chemical Analysis, Biostatistics, Basic Pharmacology, etc.…

3. Providing generic tools that enable students to complete coursework and university studies, e.g. How to write a thesis (MSc Thesis Communication)...

4. Providing continuous training to improve the quality of teaching e.g. educational innovation, educational technology, Flipped Classroom, Personal Learning Environments (PLE) to help staff manage their learning, etc.

5. Offering promotional courses such as Business Models in order to capture students for other courses (online or classroom-based courses) that must be paid for.

To a lesser extent it is possible to find courses for the following:

1. Specialised content. In general the majority of these particular MOOCs fall under the subjects of Technology and Science: Android; Application Programming; Creating and Editing Media; Introduction to E-marketing and Commerce, Web Development, CAD, etc.

2. Self-help courses and personal development tools such as: Skill Building via Personal Coaching, Improving Mental Agility, Creative Techniques, and Mindfulness to control emotions...

3. MOOCs with content clearly targeting professionals: Open Data: business opportunities linked to open source data, Hotel Management, Sports Marketing and Communication, Human Resource Management for NGOs, Cross-platform Apps Development, How to introduce Best Practice, Business and Project Management, E-commerce, Social Media, Online Marketing Strategies...

4. There are also MOOCs that provide transversal skills, such as Delivering Effective Presentations developed by the University of Cantabria, which has been run four times; Professional English and German for Spanish Speakers, developed by the Open University (UNED), and The Polytechnic University of Valencia has delivered How to perform searches on the Internet and Transversal Skills for Entrepreneurs.

Courses clearly targeted at developing professional skills that will then be applied in the workplace can be found under the categories of Business and Science and technology, although it is also possible to find a few within the category of Social Sciences.

In general however, all of the courses on offer in the different subject areas are academic MOOCs, which is to say that they complement the content that can be found in the curriculum of university qualifications, except for the subjects of Business and Science and technology. In these subjects, the majority of courses are aimed at entrepreneurialism and the use of applications and technological advances and as such the content is slightly different to those courses that are entirely academic in nature. Overall it appears that MOOC courses are not designed to assist individuals integrate themselves into the labour market as they do not provide the skills that would be useful in terms of preparing for new employment.

6. MOOCs and Transversal Skills according to the EU

The free training that is provided via MOOC courses to anyone around the world that also allows them to study and gain knowledge at their own pace is an incredibly useful tool for those seeking employment, or for those looking to update their skills for the job they already hold down. However, two issues need to be addressed: firstly, the certificates awarded by MOOC courses are not held in very high regard and lack prestige, and secondly, there is no adequate methodology in place for MOOC courses. It is possible to resolve these issues by encouraging businesses to recognise the importance of MOOC courses and to play their part in the design and pedagogy behind such courses [7].

Companies are looking for workers who hold professional qualifications, who “know what to do”, who possess the skills and abilities needed to perform their duties. As such, it would be sensible and desirable to have MOOC courses that focus on delivering content that covers the skills and abilities required by specific professional occupations [8]. According to the European Lifelong Guidance Policy Network [9] Transversal Skills as defined as: “the skills individuals have which are relevant to jobs and occupations other than the ones they currently have or have recently had. These skills may also have been acquired through non-work or leisure activities or through participation in education or training. More generally, these are skills which have been learned in one context or to master a special situation/problem and can be transferred to another context.”

Generally speaking, anyone interested in receiving training would agree that gaining knowledge is a fundamental aspect of this, however it should not be forgotten that what is really important is that companies need workers who also possess all the necessary professional skills and abilities for their post. When designing a MOOC, in addition to defining the content that should be taught, a specific methodology should also be established that will allow students to acquire the transversal skills needed for the job. Thus, it is important to not only teach content but to also develop skill sets. Skills are not taught, they are trained and perfected; as such it is necessary to provide the right tools, tasks and activities that will provide students with the change to train the skills needed for
their occupation. In doing so, companies will begin to value MOOCs and the certificates awarded by such courses will gain prestige. Those MOOCs that offer transversal skills in addition to standard content will act as a bridge between students and employers by connecting the knowledge and skills of the former to the needs and demands of the latter, thus enabling them to perform well at work. This however, will require a methodology that is based on delivering a combination of content together with practical activities that the student must “do” in order to put into practice the skills being learnt.

Generally speaking, the MOOCs that have been analysed in this report and in the context of the EU are not focused on delivering and developing transversal skills, with the exception of some in the area of Science and technology. These courses are more focused on the use of computer applications and the creation of products that meet social needs, and on entrepreneurial activities and are delivered in such a way so that students are required to complete tasks to train the skills being covered in the course.

7. MOOCs and employment in the Tourism Industry

The Tourism Industry provides a huge number of different services and as such there is a great demand for specific types of expertise, depending on the occupation. This sector is dramatically reinventing itself, and it is now one in which innovation, entrepreneurial approaches, and technology are driving forward the introduction of new tourism models, new companies and new occupations.

7.1. What can MOOCs offer the Tourism Industry?

MOOCs can offer the specialised training required by existing and newly emerging occupations in this sector. On one hand, jobseekers can learn and practice the professional skills and competencies demanded by this sector, and on the other hand business will have a tool that can be used to overcome the challenge of finding adequately trained staff as trends change. In this context, the cost and financial investments involving in delivering continuous training programs and the on-going training of staff is a challenge that needs to be addressed in this sector. The use of MOOCs to overcome this challenge means that businesses can do the following: Reach a larger number of individuals; Keep training costs lows, even for large numbers of staff; Training hours are flexible and training can be delivered without affecting an individual’s work schedule; Online training reduces the costs associated with venue hire or travel; The company will have professionally trained staff.

MOOCs offer an alternative form of training that is efficient and easy to implement, even the largest of companies looking for a successful training solution for their staff. In the business world the goal is to train a growing number of people in such a way that allows them to develop their professional skill set whilst working for the company. In addition, the qualifications awarded (accredited by universities and business) could prove to be very useful for the students of such courses as they can be used to improve career opportunities both within and outside the company. However, one difference that separates the academic approach from the business approach regarding MOOC use is that in the business world it appears that holding a certificate is less important than the ability to demonstrate the correct use of a specific competence and successfully perform the job at hand. As well as learning specific competencies for an occupation, it is possible to develop transversal skills via MOOCs. The generic transversal skills that are relevant to the Tourism Industry include:

- Good customer service
- Friendliness
- Verbal communication
- Foreign languages: English and German
- Helpfulness
- Organisational skills
- Teamwork
- Decision-making
- Inter and Intra-personal communication: The ability to communicate and interact with others
- Respect for diversity: Accept cultural differences.
- Understand cultural differences
- Empathy
- Use of sector specific I.T systems
- Creative thinking, inventive and taking the initiative
- Leadership qualities and motivational skills
- Responsibility
- Tolerance
- Problem solving and results analysis
- Strategic planning
- Public Relations
- Negotiation and Persuasion
- Memory
- Tidiness
- Mindfulness and awareness
- Problem-solving

In the university context, students of the Degree in Tourism must undertake practical work experience in companies from this sector. A study by Fuentes, Muñoz and Talón [10], on the competencies acquired by students during their practical training reveals that the undergraduates prefer to carryout their training with the following: hotels (64%), event management agencies, conferences and congresses (58%), tourism offices (39%), tour operators (31%), public agencies (27%) and museums (21%). This provides an indication of the future occupation areas in which
students are most likely to want to prepare themselves for professionally. Therefore this study alerts us to the preferred occupational areas of university undergraduates and enables us to predict the types of specialisations that would draw significant interest should they be offered as MOOCs.

8. Conclusion

The expertise, skills and values related to a specific field or discipline are important elements that a university graduate will bring to the workforce. However, generally speaking, when students join the workforce they are often ill prepared to, or at least not consciously aware of how to, transfer the values and generic skills that they have gained and apply them in practice. As such, it is important to ground training on the acquisition of competencies in order to ready students and empower them not only to be knowledgeable, but also efficient and capable of applying the knowledge they possess to the task in question once they find work. It is essential that training courses are orientated towards improving competencies, and that assessments are included that enable students to track the progress that they are making. In addition, it is important to research the labour market and identify the competencies that students will need to acquire so that the transition from academia to the workforce is as smooth as possible, regardless of the entry level of the position in question.

MOOCs offer a powerful tool through which it is possible to empower learning through the introduction of innovative elements, both technological and pedagogical. It is their flexibility and their capacity for integrating distinct learning elements - both formal and informal - that makes MOOCs such an interesting format for both the academic and professional spheres.

If a business is considering using a MOOC as part of its training program it must take into account students’ aptitudes, clearly define the concepts the students are expected to learn under their own initiative, and also clearly distinguish between universally applicable transversal skills, and those which are the sector specific generic, basic and specific transversal skills. The company must also clearly define the level of the course and its scope and the pace at which students are expected to complete the course and its associated competencies.

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References


