

## Three Perspectives on Hybridizing x and c MOOCs to Create an Online Course on Digital CVs



McGuire W, Raaper R, and Nikolova,  
V University of Glasgow (2016)  
Glasgow, Scotland, UK  
[william.mcguire@glasgow.ac.uk](mailto:william.mcguire@glasgow.ac.uk)  
[rille.raaper@glasgow.ac.uk](mailto:rille.raaper@glasgow.ac.uk)  
[viktoria.nikolova@glasgow.ac.uk](mailto:viktoria.nikolova@glasgow.ac.uk)

### Abstract

*If massive open online courses (MOOCs) were considered as an educational revolution influencing the traditional model of Higher Education [1] then their discourse is formulated in terms of polarity, and this is no better depicted than in their characterization, as either c or x MOOCs. This typology is based on underlying pedagogical principles: the cm is designed using constructivist - connectivist theories, while the xm is premised on behaviourist principles. In both conceptualisations, however, educational principles predominate, while the MOOC's purpose appears to be secondary. What is clear, though, is that very careful thought needs to be applied to their macro and micro design characteristics (Scagnoli, 2014; Richter, 2014). This paper will explore the attempts of the designers to hybridize the key strengths of both forms of architecture in order to create a construct that puts purpose first – the creation of a personalized, digital cv for real – world use. The focus, then, is on the creation of a micro - MOOC titled: 3DCV - a tool to support participants by combining elements from both pedagogical spectra: connectivist and behaviourist. This new form of cv is necessary because the traditional configuration of the two dimensional 'print' cv has given way to a continuum of 'digital', three dimensional cvs within which employers can exploit the potential of the digital medium to both deepen and broaden their understanding of the strengths of a particular candidate. In effect, we will examine two revolutionary digital concepts at the same time: the MOOC and the digital cv and, in doing so, we will explore the challenges from the perspectives of the three course creators, two of whom were RDP interns (a PhD graduate and an undergraduate student) and the third member, an experienced academic and project lead, in order to support colleagues who might be considering*

*writing their own MOOCs. Our selected pedagogy to deliver the course was based on a hybrid of x and cMOOCs using the principles of: relationships; an informal tone; the use of ipsative comparison, and the use of 'thematic' feedback.*

**Keywords :** MOOC; hybrid MOOCs; online cvs.

## **Introduction and Contextualization**

Despite the fact that they have only been in existence for a relatively short time, since 2008, in fact, and reaching their zenith in 2012, the 'year of the MOOC', we 'feel' as if they have been with us for much longer, perhaps because their early exponential growth generated a gravity of its own, which subsumed the whole field of e-learning.

The MOOC on which this paper is based titled: 'Net That Job: How to Write an Online CV' was written after a period of settlement, when the X school of MOOC creation and the C school had had the opportunity to spar, digitally for several years.

The writing team was aware of these developments and hoped to use them to create a learning environment fit for purpose to enable learners to both improve and digitise their cvs through the creation of a hybrid MOOC form.

### **Setting the digital scene**

September 2008 saw the launch of the first massive open online course (MOOC) of its kind [1]. [1] describe the first MOOC *Connectivism and Connective Knowledge* course(CCK08)at the University of Manitoba as 'a courageous, ambitious and ground-breaking attempt' that allowed participants to experience the principles of connectivism and openness in practice. It was a twelve week credit-bearing course for twenty four students, within an open-access network that included over two thousand two hundred registered participants [2]. Soon after MOOCs became popularised and widely known as online education platforms accessed free by great masses [3]. Some argue that MOOCs are essential to promote educational access and to create more sustainable societies. For example, UNESCO considers universal access to high quality education as a key for ensuring 'peace, sustainable social and economic development, and intercultural dialogue' [4].



In addition to their potential for social justice, however, MOOCs have also turned into an industry, including millions of students around the world, thousands of courses offered and hundreds of universities taking part [5]. Some MOOCs are expected to serve large numbers of concurrent learners, in some cases reaching between 50 000 and 150 000 participants [6]. Easy access to advancing technologies and social networking has made this possible, reflecting a situation in which adults can take control over where, when, and how they learn [7]. It could also be argued that as self-development is regarded as being highly important in contemporary societies, perhaps even more important than diplomas and degrees, universities are also trying to reach more learners with less cost . MOOCs seem to provide an environment for these needs and this is especially true as MOOCs, with their free enrolment and social networks, can reach large learner populations [8]. Furthermore, most elite universities throughout the world want to take part in this establishment as providing MOOC courses has become ‘a symbol of the reputation and brand worth institutions’ [8].

### **MOOC architectures**

So, what forms do MOOCs take? Different types of MOOCs exist such as cMOOCs and xMOOCs which both have significant theoretical underpinnings [8]. Many scholars [e.g. 8; 9] argue that cMOOCs are underpinned by connectivist learning theories and xMOOCs are closer to a traditional behaviourist model of learning and teaching. According to [8], cMOOCs can also be called ‘Canadian MOOCs’ as the creators of first MOOCs were the Canadian researchers George Siemens, Stephen Downes and Dave Cormier, and they prepared the concept based on the principles of the theory of connectivism. CMOOCs, therefore, have an earlier history than xMOOCs [8]. The key argument in the theory of connectivism is related to the belief that each individual is responsible for their own learning [8]. It promotes a networked and collaborative approach to learning that is not primarily curriculum-driven but that emphasises self-led exploration of course topics [9]. Knowledge in cMOOCs is viewed as ‘a networked state’ and learning as ‘the process of generating those networks’ [4]. Therefore, cMOOCs employ a system that promotes learners’ freedom throughout the learning process and allows them to set their own learning goals [8].

Many of the MOOC platforms used (Coursera, Futurelearn) tend to promote a behaviourist understanding of education in which the tutor prepares the course through a video or presentation while the learner passively receives the course [8]. [9] describe xMOOCs as highly structured and content-driven courses that are designed for large numbers of learners who will be guided by pre-recorded lectures and assessed by automated assignments. It could, therefore, be argued that xMOOCs focus on knowledge duplication whereas cMOOCs promote knowledge creation [8]. In other words, if xMOOCs rely on expert knowledge and authority, cMOOCs promote self-directed learning [9]. [9] therefore argue that the notion of a 'hybrid MOOC' has become useful in describing courses that do not fit the well-established categories of cMOOC or xMOOC. The category of hybrid or 'quasi-MOOCs' encompasses a variety of web-based tutorials that are intended to support learning specific tasks but that do not include social interaction of cMOOCs nor automated grading and tutorial-driven format of xMOOCs [4]. This notion also promotes an understanding of cMOOC and xMOOC as oversimplified categorisation that requires critical reflection [9].

### **Challenges**

It needs to be noted that the revolutionary potential of MOOCs has received much scepticism, particularly regarding the quality of learning offered [1] and the pedagogical effectiveness of MOOCs [6]. [4] explain that MOOCs pose challenges never faced before, particularly as, until not long ago, it was unthinkable to have several thousand learners participating in an online course. Similarly, [1] argues that being 'massive' and 'open' are the challenges unique to MOOCs: these courses tend to have a very large learner population with diversity of age, culture, language, experience and motivation. As MOOCs are usually free, credit-less and open to anyone with an Internet connection, teaching staff cannot possibly interact with students individually [10]. The teacher's role within a MOOC, therefore, clearly differs from most other educational environments where teachers can know and interact with their students through such processes as selection, tutoring and assessment [9]. The issues related to learner population seem to also constrain the pedagogical practices of the MOOCs, making them align with behaviourist models of learning and teaching. [4] describe tutoring on MOOCs as usually poor, since minimal feedback is received by the participants, and peer-based assessments tend to lack the necessary expertise in terms of didactics and the specific subject. It could also be argued that a MOOC that



does not develop higher order thinking nor promote student interaction and does not provide the true education characteristic of universities and colleges [1].

Furthermore, while one of the key arguments supporting the expansion of MOOCs is related to the promotion of self-development and employability of the adult population, [8] argue that the employment aspect following course completion is highly ambiguous and unknown. This is particularly the case as the average student population on MOOC courses tends to be young, well- educated and employed, with the majority of learners being from developed countries [5]. It could, therefore, be argued that the adults the ‘MOOC revolution’ was supposed to help most – people with no access to higher education in developing countries – are clearly underrepresented among the current learner population [5].

Many authors [8; 11] also argue that MOOC courses face the challenge of high dropout rates. According to [11] one widely quoted dropout figure for students in MOOCs is 90 percent. This is also highlighted by [4] who argue that international statistics demonstrate that only about 5% to 15% of participants complete MOOCs on average. However, [11] notes that, in order to understand the high dropout rates in MOOCs, researchers should be looking into the question of why hundreds of thousands of people across the world are signing up for MOOCs in the first place. Similarly to [11], [5] argue that there is no robust and published data to describe who and why are taking the MOOC courses.

## **Conclusions**

MOOCs are changing the landscape of learning and teaching [12]. Like [1], we believe that MOOC designers and tutors need to explore the pedagogical challenges of teaching MOOC courses and from there to consider the many possibilities offered by the contemporary educational technologies that would suit with their own teaching philosophies and would help to support learners and their engagement with education. It could, therefore, be argued that the current scholarly work on MOOCs is not adequately addressing the complexity of the teacher’s role [9]. The debate around MOOCs has been focused on the ‘social, institutional, technological and economical aspects’ rather than on the need to develop new pedagogical approaches that would help to design and deliver education in this new emerging environment [13].

## Methodology

The methodology deployed was a reflective, multi-perspective, qualitative study using the written vignettes of the MOOC design team to which [14's] method of inductive thematic analysis was applied and whose broad stages are detailed below:

1	Familiarisation with the data through repeated readings
2	The generation of initial codes (broad themes) looking for meaning/striking words/recurrences/images trying in order to form units of meaning
3	The search for themes and their sorting into gradations of importance
4	The naming of themes via the creation of global themes and their organisation into sub-themes as well as the generation of consideration of what these themes tell us about the ideas/concepts/assumptions/thinking behind the data
5	The written analysis phase <i>via</i> the selection of vivid or compelling excerpts as examples, and the organization of writing around global themes and linking to academic literature on the themes

Following Stage 5, the results were compared to the key issues arising from the literature review to form key factors impacting on the design process. The process is, therefore, a categorising strategy, 'a process of encoding qualitative information' according to [15].

## Thematic links

The table below highlights the keywords/headings used by the designers to organise their reflections, each of which was constructed in isolation. The chart below suggests a pattern of emerging similarities.

1 Bureaucracy	Pedagogy v business	Technical limitations
2 Unexpected tales	Student numbers	End vision
3 Time	Technical expertise	Formatting

**First level observations**

Row 1, while it uses different headings, describes very similar issues. The lead tutor, for example, refers to the problem of bureaucracy in terms of 'labyrinthine' liaison networks, where tutor 1 amplifies this impression *via* reference to the impact of pedagogy and business aspirations, which hindered 'this positive experience.' Tutor 2 extrapolates this idea in terms of the frustrations felt when the platform was felt to be lagging behind the design vision, with 'things that were not compatible with the platform.'

**Second level observations**

Here, there was clear commonality again. Tutor 1 related the idea of massive numbers back to the issue of pedagogical atavism: 'It almost seems that pedagogical practices have gone through a devolution through which a behaviourist understanding of teaching and learning has become once again popular.' The lead tutor echoed these frustrations in the description between the 'massive philosophy of the platform and the student-centredness' that was felt to be desirable. Tutor 2, perhaps captures and characterises these impressions in the idea of the newness of MOOCs, with which she had only, 'some limited experience.'

**Third level observations**

Time was probably the defining feature at this level, for all of the designers. All shared the polarised emotions of challenge and frustration, summarised in the description of 'exciting and challenging' according to tutor 1. The lead tutor's view was that time was problematic. The course start actually meant that it had to be finalised one month before that date. Filming had to be organised *via* the media unit far in advance of time to ensure availability and the experience was that the course had to be completed before we had really started it. To add to the pressures, we were neither experts in either MOOC design nor digital cvs, both of which were very new fields. Indeed, tutor 2 sums up the situation well: 'I have never considered myself an expert on CVs [or] MOOCs.' So, the collision between time constraints and the development of the requisite skills to create the MOOC, perhaps best captures the essence of our dilemma. Tutor 1 describes it thus: 'It is not so much about pedagogical knowledge and methods but about digital



literacy and technological skills’, while tutor 2 describes the frustration of coding, ‘Formatting took hours.’

### **Summation**

Much of our challenges could be described as being the result of polarisation: the conversion of a static to an active support system in the forums, for example; outwardly forward-looking yet inwardly backward-looking pedagogical underpinnings; rewards yet challenges; our flexibility and the inflexibility of the platform.

### **Links to the Literature: Architectural challenges**

There are many commonalities between the literature and the experiences of the design team. In terms of course design, there is conflict between behaviourism and constructivism/connectivism which is echoed in the Futurelearn platform structure and, in particular, its limitations and in the reticence of its staff to adapt its structures.

Industrialisation is another influence that can be extrapolated from the literature to the experience of the design team. The MOOC on which we worked was one of four which had received funding and there was a clear need to meet deadlines, forward plan, and to liaise with interested parties. Additionally, the Glasgow University (A Russell Group University) branding was evident from the signup page.

Our first goal, was to create a fit-for-purpose student support structure, so, to a significant degree, neither an xMOOC, nor a cMOOC was entirely helpful as we were working on the blended/hybridised principle of creating the potential for both knowledge duplication or creation or even both as participants decided, for themselves, what form of cv they required for the specific job role.

‘Massiveness’ and ‘openness’ then combined to create, perhaps, the single greatest challenge. Just how do you differentiate within a massive course? Indeed, it could even be argued that this contradicted the underlying principle of connectivism. A further aspect of this problem is evident in the creation of visibility and/or individuality of experience within such a massive



environment, as, paradoxically, the larger the environment, the greater the risk of invisibility, disaffection, and attrition.

### **Towards a solution**

Our 'solution' was to develop four areas of our pedagogical model:

(1) Relationships (teacher-student, student-student, student-course) via (2) an informal, friendly, chatty tone and mood to encourage participants to (3) alter their points of view or perspectives to enable them to put themselves in the position of an employer as well as a prospective employee, which all began even prior to the start of the course proper as the first activity asked that participants find or create their own starter cv on which they would work throughout the course in order to evaluate their success at the close through ipsative comparison. During this process, the course team would 'moderate' the forum in terms of providing (4) 'thematic' feedback based on emerging good practice in the discussions.

### **Next Steps**

Currently, the course has 15,000 participants, a full month before the first of its two runs and we anticipate 20,000 participants by its starting date. It is, therefore, vital that we determine the extent to which our pedagogical model has been supportive, or otherwise. As such, we intend to conduct at the end of both runs and to create an addition to this paper at that time.

### **Appendix 1**

#### **The Experience: Tutor 1 MOOC Reflection Rille Raaper**

#### **Emergent Themes**

Developing a MOOC has been an exciting but challenging process. On the one hand, it has been extremely interesting to be involved in something that is so new and innovative, allowing us to imagine what education could look like in 20 or 50 years time. Working on something that is purely based on online systems has also offered unique flexibility. As an educator or course developer you can find yourself working from home and at late hours – MOOC allows you to have this freedom and to shift from usual time and office frameworks to online space that often feels as borderless. I truly liked that part of MOOC development process. On the other hand, the process also includes many challenges that tend to hinder this positive experience. This is mostly

the case when technology and business aspirations conflict with pedagogical ideals. Let me reflect on this below:

### **Pedagogical vs business aspirations**

I often felt that MOOC platforms such as FutureLearn are very limited in their design, aiming to support brand development rather than pedagogical values in terms of active participation, student interaction, collaboration and feedback. It might be that MOOCs are in their early stage of development just now, and it requires time to shift the focus from online platforms, image and brands to the actual ways of supporting student learning and engagement.

### **Large student numbers**

My biggest concerns were related to high student numbers. On the one hand, it demonstrates that MOOCs have significant potential in reaching wide audience and transforming educational environment as we know. I also very much like the idea of free education, and the ways in which MOOCs can encourage adults to continue with further studies in universities and beyond. On the other hand, I feel that large student numbers require a fundamental change in pedagogical practices. As evident from relevant literature on MOOCs, practices have not altered in accordance with high number of participants. It almost seems as pedagogical practices have gone through a devolution through which a behaviourist understanding of teaching and learning has become once again popular: teacher creates the material and delivers knowledge to students. I hope that pedagogical issues will receive more attention in the future, and scholars and practitioners find ways to promote active student engagement in MOOCs.

### **Technical skills**

Finally, I also believe that MOOC courses require different type of preparation and skill set from course developers and teachers. It is not so much about pedagogical knowledge and methods but about digital literacy and technological skills. I found it very difficult to get my head around the technical discourses promoted by FutureLearn platform. I believe that most practitioners today are not well equipped to cope with changing educational environment, and I therefore believe that professional development frameworks and courses for university teachers should start emphasising the importance of digital literacy and technical skills.



## **Appendix 2 The Experience: Lead tutor MOOC Reflection Willie McGuire**

### **Emergent Themes**

#### **Bureaucracy**

Certainly well before the start of the MOOC as the process of applying for funding itself is both onerous and iterative. This was further intensified as the design of the MOOC was posited on the appointment of two RAs, a process which took until September from an outcome in April and this was representative of the process as a whole.

More than any other activity, this has been very difficult to control. Normally, initiatives are largely within the control of the principal investigator, but this is not the case with a MOOC. The liaison process for a lead educator is labyrinthine and involves: research assistants, the administrative burdens prior to appointment with job descriptions and interviews as well as budget holders, staff from the Learning and Teaching Centre and specialist media unit staff as well as many meetings with the Learning Innovation Officer and staff from Futurelearn, the platform used by the University of Glasgow. Additionally, because of their newness, MOOCs attract a lot of attention from SMT, probably more than an academic will ever see in their daily work to create an unusual concatenation of pressures and influences all bearing at once, while, of course, the other more mundane aspects of the academic's life meander on: lectures, seminars, papers, marking, meetings, conferences...

#### **Time**

I experienced tremendous pressure to design and create rapidly, while coming to terms with two distinct novelty sets: MOOCs and CVs. In my case, I was an expert in neither field. And neither were the Research assistants, which had implications for the timescale as a March 14<sup>th</sup> run, meant completed material for Feb 14<sup>th</sup>, one month earlier than expected. I felt that the pressure was to complete almost before we'd started as dates were inserted into diaries for filming artefacts that hadn't even been created.

#### **Tensions**

Many tensions existed in the construction: with Futurelearn there were collisions in terms of vision between 'massive' philosophy and the student-centredness I wanted to create in the

learning environment. Massive or miniature was the key question, which further unravelled, paradoxically, as it became clearer to me that more fora were needed as the numbers grew. The imperative became all about the conversion of a static system to an active support structure for students. Three fora in the final week versus an open forum for the first two weeks. Additionally, there was the need for dualistic expertise development in both medium and subject matter not to mention the basic organisational challenges of matching timeframes to the availability of the RAs, one an undergraduate; the other on PhD write up.

### **A Tale of the Unexpected**

Unexpected elements abounded in the course design process. Week to go emails...Month to go emails...Pre-course start online activity. Additionally, it was hard to describe the sheer euphoria of logging on to see that we had 13,500 participants 2 months before course actually runs. What's the largest class you've taught? 300? This course was nearly 50 times that with two months to go. Estimates put the final numbers at over 20,000. And we were expected to provide a unique and supportive experience for all of them! Initial feedback was very strong. There was obviously a felt need out there and we seemed to have struck a chord with many people. There were many kind (and deeply moving) words just from the signup video, which I didn't feel showed me at my strongest. And that's before I get on to the absorption of new skills: the use of an autocue; interviewing experts on camera; imagining the completed product before even beginning. It was a nightmare. Would I do it again?

In a heartbeat.

### **Appendix 3 The Experience: Tutor 2 MOOC Reflection Viktoria Nikolova**

#### **Emergent Themes**

This has been a long but rewarding creative process, and still is. I remember when I first applied for this position, having previously had some limited experience with MOOCs, I had an idea in my head of what to expect in terms of the tasks I had to complete. I have never considered myself an expert on CVs, MOOCs, teaching or anything that has to do with online courses, but I knew I would be able to cope with any difficulty in the process, as well as learn something new. I can safely say I have learned a lot, as the process was a bit more challenging than I had expected. This is probably the best part of this role.



One of the biggest challenges of this whole process was working things through without having a clear idea of what the final product was supposed to look like. Most of the time the three of us just came up with different ideas and sometimes they worked, sometimes they didn't, and sometimes we needed to change an already completed piece of work in order to match it with the new idea. One thing that constantly changed was the order of steps, which was the main 'skeleton' of the whole creative process. Trying to work on small pieces of the course while their order was changing was difficult, but the important part is that the content didn't change much. I am happy with how flexible the materials became, so that we could basically move some of them from week 3 to week 1 or 2, and there was still a connection between the materials. Even though most of the time I struggled with the materials, the process also felt smooth and at some point things just started falling into place. By the end of week 3 they became as clear as they could be, but that took a great deal of researching and running into problems such as lack of essential information online or lack of resources. The lack of resources mainly had to do with having a good idea for an activity, but the platform didn't allow it. The hardest week in terms of information, resources and activities for me was week 2, where I didn't quite have a clear idea of what the product should look like, and almost every time I came up with a solution, it took a great deal of research and putting together things that were not compatible with the platform. Formatting took hours, only to discover I didn't have to do it, because I needed to do a different type of formatting when uploading the materials to the platform. Apart from that, I received a clear enough guidance that allowed me to stay on the right track even when I wasn't sure what the right track was.

Overall, this job was, and still is, one of the most challenging experiences. The best part about it was having to work independently, yet receiving valuable guidance, which allowed me to both follow an established path and do things my own way.

### References:

- [1] M. Bali (2014). MOOC pedagogy: gleaning good practice from existing MOOCs. *MERLOT Journal of Online Learning and Teaching*, 10(1), pp. 44-56.
- [2] S.F.J. Mak, R. Williams, J. Mackness (2010). Blogs and forums as communication and learnintools in a MOOC. *Proceedings of the 7th International Conference on Networked Learning 2010*, pp. 275-284.
- [3] S.F.J. Mak, R. Williams, J. Mackness (2010). Blogs and forums as communication and learning tools in a MOOC. *Proceedings of the 7th International Conference on Networked Learning 2010*, pp. 275-284.

- [4] T. Daradoumis, R. Bassi, F. Xhafa, S. Caballe (2013). A review on massive e-learning (MOOC) design, delivery and assessment. *2013 Eighth International Conference on P2P, Parallel, grid, Cloud and Internet Computing*. Available at:  
[http://ieeexplore.ieee.org/xpls/abs\\_all.jsp?arnumber=6681230&tag=1](http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6681230&tag=1)
- [5] G. Christensen, A. Steinmetz, B. Alcorn, A. Bennett, D. Woods, E.J. Emanuel (2013). The MOOC phenomenon: who takes massive open online courses and why? *Social Science Research Network*. Available at: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2350964](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2350964)
- [6] N. Sonwalker (2013). Brief. The first adaptive MOOC: a case study on pedagogy framework and scalable cloud architecture – part 1. *MOOCs Forum*, pp. 22-29. Available at: <http://static1.squarespace.com/static/53eb8591e4b0ba68f27eea55/t/5435611de4b05ee447c1e8ff/1412784413749/World%27s+First+Adaptive+MOOC+-+White+Paper.pdf>
- [7] J. Mackness, S.F.J. Mak, R. Williams (2010). The ideals and reality of participating in MOOC. *Proceedings of the 7th International Conference on Networked Learning 2010*, pp. 266-274.
- [8] M. Kesim, H. Altinpulluk (2015). A theoretical analysis of MOOCs types from a perspective of learning theories. *Procedia – Social and Behavioural Sciences*, 186, pp. 15-19.
- [9] J. Ross, C. Sinclair, J. Knox, S. Bayne, H. Macleod (2014). Teacher Experiences and Academic Identity: The Missing Components of MOOC Pedagogy. *Journal of Online Learning and Teaching*, 10(1), pp. 57-69.
- [10] L. Pappano (2012). The year of the MOOC. *The New York Times*, November 2 2012. Available at:  
[http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?\\_r=0](http://www.nytimes.com/2012/11/04/education/edlife/massive-open-online-courses-are-multiplying-at-a-rapid-pace.html?_r=0)
- [11] R. Rivard (2013). Measuring the MOOC dropout rate. *Inside Higher Ed*. Available at:  
<https://www.insidehighered.com/news/2013/03/08/researchers-explore-who-taking-moocs-and-why-so-many-drop-out>
- [12] T. Papathoma, C. Blake, D. Clow, E. Scanlon (2015). Investigating learners' views of assessment types in massive open online courses (MOOCs). In. G. Conole, T. Klobučar, C. Rensing, J. Konert, E. Lavoué (eds.). *Design for Teaching and Learning in a Networked World*. Springer International Publishing, pp. 617-621.
- [13] L. Guardia, M. Maina, A. Sangra (2013). MOOC Design Principles. A Pedagogical Approach from the Learner's Perspective. *eLearning Papers*.
- [14] V. Braun and V. Clarke (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3 (2), pp. 77-101. ISSN 1478-0887.
- [15] R.E. Boyatzis (1998) *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks, London, & New Delhi: SAGE Publications.