MOOC for Professional development: an effective, low-cost experience

Paola Monno
Librarian and E-tutor, Associazione Italiana Biblioteche, Italy.
E-mail address: monnopaola@gmail.com

Matilde Fontanin
Librarian (University of Trieste, Italy) & PhD Student (University "La Sapienza", Rome, Italy)
E-mail address: matilde.fontanin@uniroma1.it

Abstract:

Librarians must be constantly up-to-date to keep pace with the demands of a changing professional landscape, beginning from LIS school and continuing lifelong. Research showed that MOOCs are well suited to specific needs, therefore this tool was chosen in Italy in 2018 by AIB, Associazione Italiana Biblioteche (the Italian Librarians' association), to comply with the pressing demands from its associates in view of the professional validation deadline.
Though the validation procedure had been started in 2014, the competence-based scheme developed since was about to be tested for the first time. Since 2014, AIB had been investing in the blended learning approach, delivering courses on the Moodle platform Aibformazione.it, and forming up e-tutors and CPD experts among members. In 2018 it tested a full on-line experience with the course "Gli strumenti per l'attestazione professionale AIB" (AIB tools for Professional Validation), to make courses more accessible and low-cost. In November 2018 the MOOC-like course was proposed to train in one instance many people from different Italian regions before the validation deadline in January 2019. AIB moved from a blended learning to a totally on-line approach, using the platform for the whole learning path - from video-lessons to "workshop" tools - to promote a critical attitude and develop the sense of belonging to a learning community. The MOOC model had no precedents in the Italian LIS CPD landscape: it proved the platform's flexibility and underlined the advantages coming from the use of a virtual learning space.
In future, the platform could be used to host different courses, tailored to varying needs; similarly, the course organisation could be modified to be adapted to specific course demands, in every professional branch.

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In the digital revolution age, when information and data management evolve continuously, professionals must improve their skills and competences accordingly to face the evolving labour market: the IFLA CPDWL Guidelines (Varlejs and CPDWL 2016) state clearly that professionals learn lifelong, beginning as students at a Library and information Science (LIS) School. However, the personal need for professional development must be met with effective learning paths, adequate investments and policies from employers, professional associations and other stakeholders: investigating the needs of the local communities to intercept common interests and transforming them in learning paths with a strong impact – possibly containing costs - is a priority.

1 The MOOC model adapted to the needs of a Professional association

MOOCs, Massive Open Online Courses, have a recent history. They are generally offered by Universities and Higher education institutions around the world and were born out of the desire to provide affordable opportunities for higher education.
The name was coined in 2008 (Kenny and Gunter 2014) from MMORPG (Massively Multiplayer Online Role-Playing Game), for a course held by George Siemens and Peter Downes at the University of Manitoba, Canada. With 25 on-campus students and 2200 participants online, it was of a highly connective nature, in fact the model was named cMOOC, the connectivist MOOC. A precursor had been a course held in 1994 by O' Donnell (O'Donnell 2012), introducing the life and thought of St. Augustine and open to the whole world. It relied on Gopher and Listservs, a technology which would seem primitive nowadays, nevertheless 500 people enrolled from different countries and with different faiths. It may seem incongruous that something as technology-related as e-learning should originate from a subject area which might suffer from a prejudice with respect to innovation as the Humanities, especially of the Middle Ages. Yet, the core of teaching and learning - online or not - is linked with human interaction (Bruner 1977; Vygotskij and Cole 1981) more than with technology - the latter merely helps overcome space and time restraints in a context where mutual exchange is crucial.

After Siemens, the MOOC model jumped to world-wide attention when the University of Stanford launched three courses in 2011, namely "Machine Learning", by Andrew Ng and "Databases" by Jennifer Widom - both hosted on a platform that would eventually have developed into Coursera – and the MOOC on Artificial Intelligence by Sebastian Thrun and Peter Norvig, hosted on a platform that was later to become Udacity (Ng and Widom 2014). They chose a teacher-driven model to answer the challenges posed by the need for a scalable offer of online high-quality education to everyone (Thrun's course had 160.000 participants) and were defined xMOOCs.

According to the New York Times, 2012 was "The year of the MOOC", it seemed that it would redefine the traditional model of education, as "*the evolving form knits together education, entertainment (think gaming) and social networking. Unlike its antecedent, open*

courseware — usually written materials or videotapes of lectures that make you feel as if you're spying on a class from the back of the room — the MOOC is a full course made with you in mind." (Pappano 2012). The phrase "with you in mind" recalls the "Person of the year is YOU" 2006 cover ('TIME Magazine Cover: Person of the Year: You - Dec. 25, 2006'), maybe an attempt at underlining a real revolution.

The enthusiasm was dampened by the low completion rate - Thrun reported it was less than 7% - and soon faded, so that someone spoke of "The year after the year of the MOOC" (Wetterstrom 2014). Nevertheless, the MOOC is here to stay, its figures are high and expanding-and, incidentally, a business model seems to be successfully setting in (Shah 2019). Classcentral[1] reported in January 2019 that the estimated number of MOOC students was 101 million and that "*by the end of 2018, over 900 universities around the world had announced or launched 11.4k MOOCs, with around 2,000 new courses added to the list this year (down from 2,500 courses in 2017). The number of available MOOCs has grown dramatically in the last few years [...] but since user growth hasn't kept up, each course is getting fewer users.*".

The last sentence leads us to the subsequent development: MOOCs seem to be most successful in smaller numbers and/or to answer local or specific needs (Hollands and Tirthali 2014). Since most MOOC participants are qualified professionals wishing to learn something new, MOOCs seem to be a good tool for professional development and workplace learning. This reasoning led to the experience described in this paper.
MOOCs constitute both an advocacy tool for the organizing institutions and an opportunity for everyone to learn something outside the personal research or study path. Examples include soft skills such as CV writing, management of successful job interviews, foreign languages, or any other topic for the curious minds such as AI (Artificial Intelligence), history, art, to mention but a few. In the library field, MOOCs have been held on Big Data, on library advocacy and more.

E-learning courses offer a virtual, online classroom where much of the value is given by conversations among peers: this is rewarding, but in very large numbers participation is challenging as participants would be overwhelmed by the sheer mass of what is written by peers, as Ng and Widom (2014, 6) noticed. MOOCs therefore do not assume that everyone will read all posts, the most successful experiences plan a large part of individual work and some structured peer-interaction.
If success is measured from the completion rate, the most effective models are probably those with a clear schedule which implies, on a weekly basis, videos, some reading, some compulsory tests and short writing tasks. The latter may be anonymously peer-assessed, a convenient activity to interact with peers in a moderated way and get some sort of feedback. The drawback is that since anyone is allowed to participate, assessments could greatly differ in quality and awareness, but this side-effect can be diminished by evaluating the assessors. Unlike in e-learning courses, therefore, peer-interaction is limited, and, unlike online academic courses, the course is quite short - generally 4 to 8 weeks – with a weekly effort estimated at 2-3 to 4-6 hours.
The courses are generally free of charge and offer an attendance certificate whose verification implies a small fee.

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[1] Classcentral (https://www.classcentral.com/) is a search engine for MOOCs which takes its profits from participants who enroll on certified courses - that is they pay a fee.

2 A MOOC for AIB

The Italian Library Association (AIB) in 2018 faced a problem: it was necessary to communicate to, at least, a selected group of members of the regional chapters the new criteria for the validation scheme before the end of November, and the MOOC was proposed as a solution.

The contents of the new validation system, based on competences rather than, as previously, on the proof of participation in training, needed to be widely explained: though the guidelines had been published 3 years previously, the practical implications still puzzled many members. A space where contents could be not only presented but also discussed seemed to constitute an effective solution. *Portfolio* was among the tools for validation application, and it was especially this which needed much feedback and help; it is not a skill which is normally acquired during LIS education, and also the previous, long experience of CILIP (the UK's library and information association) shows that the reflection on one's career in the light of the professional competence framework requires careful guidance (Owen and Watson 2015). Merrill (Merrill 2002) stated that learning is promoted when existing knowledge is activated as a foundation for new knowledge, when it is demonstrated rather than explained and when it is applied by the learner to solve problems which are integrated into the learner's world. This is why the course brought together a large number of professional librarians who were all aware that some new rules had been set up for validation of the library profession, yet had never gone through that process and never had the opportunity of analyzing their own personal and professional experience in that light.

The course aimed not only at transferring specific information and skills, but at creating a group of knowledgeable professionals able to help other members write their portfolios. Voicing the participants' doubts on a peer-to-peer basis and having teachers and tutors reading the answers to their doubts and commenting when necessary had to be a feasible option, therefore a limit was set at 100 participants, and one tutor was provided for every 20 learners.

Before describing in detail the course experience, the next paragraph will frame its goals in the specific Italian context.

3 The validation and competences dilemma

The validation scheme for librarians in Italy had been started in 2014, after Law 4/2013 established the possibility for the so-called "non organised professions" that the associations representing them asses the quality of their members. AIB made the necessary moves and to date it is the only association in Italy which is entitled to the assessment of the librarian's profession.

Among the steps taken, the Directive approved by CEN, the AIB National Board, on 29 December 2015, established the prerequisites for validation, a process available only to members who had developed or improved their professional competences, supported by the evidence of at least 25 hours' continuing professional development per year. The application, to be submitted to a dedicated commission for evaluation, could be shaped as a portfolio, which was supposed to become the only tool from 2019 on.

The first validation round, which had taken place in 2013-2014 while the Directive and the new rules were being prepared, had temporarily established that a self-certification of professional accomplishments was enough. The latter, together with the CV, were deemed sufficient also by the CEN in charge in 2018, which emanated a new Directive on 16 November 2018, when the course had already started. The intention was to make life easier for associates, as the portfolio was perceived to raise mixed feelings in the community of librarians. Nevertheless, when the project for the course was started, rules pointed to the portfolio as the only tool, and associates felt they needed training on this. Even the other tools, though - CV or self-declaration - need prior reflection on the professional's learning path in the light of professional competences, as they imply some sort of narrative to be made intelligible to the commission – these issues were discussed on the platform.

Whatever the tool, the goal of the validation process is always to determine whether the professional has developed new skills or improved existing ones. This requires that professional competences are outlined: in Italy Professional competences are described in UNI 11535:2014, the standard set by the Italian Institute for Standardization based on EQF, the European Qualification Framework; corresponding training standards are outlined in a document prepared by AIB *Osservatorio Formazione* (the Professional Monitor Board), divided in areas roughly overlapping the UNI areas. The board also prepared guidelines (AIB. Osservatorio Formazione 2016), with specific examples for competences at various level of proficiency (beginner, intermediate, advanced).

Once associates knew that, in order to apply for validation, they needed to demonstrate the acquisition of competences through at least 25 hours' learning per year, they needed to understand clearly which learning experiences were admissible and how they could prove the achievement of the competences.

On the one hand, the association had been delivering since 2014[2] courses which were based on a model including the assessment of competences: participants were not only presented knowledge, but asked to put it to use, therefore their competence could be evaluated. These courses had been designed with the validation process in mind, they lasted generally at least 25 hours and were often - but not necessarily - delivered in blended learning mode.

On the other hand, any experience could be used to demonstrate professional growth, as long as it was put in context of a librarians' competences as described by UNI 11535:2014. Explaining to a Commission how an on-the-job experience might have contributed to achieving specific competences, though, is not an innate capacity, it needs to be nurtured. This is what the delegates in Regional chapters were supposed to do, but the governing boards had been changed only one year previously, and it could not be expected that many volunteers had the same background and skills, it was necessary to train them.

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[2] The first was a 100- hours' blended learning course for teachers and members of the regional boards, held in January-March 2014.

4 The MOOC course "*Gli strumenti ai fini dell'attestazione professionale AIB*": the learning path

The MOOC course "*Gli strumenti ai fini dell'attestazione professionale AIB*" (Tools for AIB Professional Validation) was proposed[3] to CEN, the AIB National Board, as a solution to all the above-mentioned issues while the deadline of the validation scheme, in January 2019, approached, and the project was accepted.

The course was based on a learning-by-doing approach, and aimed at teaching librarians to analyze their professional experience, whether it derived from formal, informal or non formal learning, and to explain how it had contributed to refining or attaining professional competences - the process of translating experience into narrative could be achieved by using one of various tools.

The course learning goals were expressed according to Bloom Taxonomy as follows:

Participants will learn:	
Knowledge	A1. Retrieving and consulting the laws and AIB Directives and Regulations that led to the current CPD learning model; A2. Analyzing and applying to cases the requisites for professional validation; A3. Learning the basis to prepare and help prepare a self-assessment, a CV or a portfolio for professional validation.
Skills	B1. Being able to answer or re-address the questions of chapter members regarding the validation tools; B2. Being able to discuss with chapter members about the validation process (creation, development, state-of-the-art); B3. Ability to actively be engaged at chapter level in the organisation of learning paths compliant with AIB requirements.

Participants would be encouraged to learn more about the laws and documents supporting the process and subsequently to think about their personal professional path, to move away from the old habit of inventorying courses and working experiences, to achieve, finally, the awareness of their own skills; indeed the value of competences attained in an informal context - for example through on-the-job experiences, without a certificate to demonstrate new expertise - is sometimes underestimated, and professionals in Italy are not used at reflecting on this.

According to AIB Directives, the tools that could be used were all based on self-certification processes, and included the *curriculm vitae*, the *portfolio* and the self-assessment renewal form prepared by AIB for this specific purpose. In order to reach out to as many members of

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[3] It was a specialist level course - level 7 of the *European Qualifications Framework* (*https://ec.europa.eu/ploteus/content/descriptors-page*).

the Library Association (AIB) as possible, it was decided to involve every Italian regional chapter, by suggesting that the course be attended by at least one member, generally the one in charge of professional development within the chapter board. There were 59 registered participants from 18 different Italian regions. Choosing the MOOC form, an asynchronous, online model, reduced the space and time difficulties of gathering people from different areas: using the Moodle platform, it was possible to substitute the face-to-face lessons with video-lessons.

The learning team was composed of two teachers, who developed and recorded the video-lessons, wrote assessment tests and set tasks, answered on the forum; the bulk of the online assistance and coaching, though, was led by the three tutors: as planned, there was one tutor for every 20 course participants, and they were fundamental to set the pace and call teachers to action when necessary. Tutors are fundamental in supporting participants by helping them surf the platform or interact with available resources, providing guidelines for carrying out tests or writing assignments. Moreover, they are expected to cooperate with teachers by arranging learning tools on the platform, uploading materials, supervising students' participation and assessing learners' activity on the platform. As usual, there was a webmaster, who initially enrolled participants on the platform, solved related problems and eventually prepared an attendance report.

These figures were present in all previous blended-learning courses, but here the appointment of a "course manager" was deemed necessary as well. This was an innovation for AIB, as the figure chosen was not a voluntary member of any other board but a person chosen to this aim; the course manager constituted a reference for both organisers and students: she was in charge of enrollments and fee payments validation, cooperated with AIB national administrative staff and the webmaster in enrolling students on the platform, providing the participants' names and reporting access problems on the platform AIBFormazione.it. After the course started, the manager was responsible for the organization and setting of course sections: she uploaded video-lessons, created tests by inserting contents given by teachers and set up platform tools to carry out the weekly tasks.

Course completion required 50 hours'[4] workload, stretched over six weeks. Lessons started on 5 November 2018 and closed on 15 December 2018. The first three weeks opened each with a 20-30 minutes' video-lesson – 120 minutes' video-lessons on the whole; to complete the course, participants had to take assessment tests on the videos and carry out other individual assignments and activities, as part of the 8 hours' action learning. The community learning (15 hours' workload) meant discussing set questions in smaller groups and then reporting the results to the course community. A small reference library was available in a platform section dedicated to general information about the course and communications, to download materials and references, and also to ask questions.
During each of the first three weeks, in order to acquire basic knowledge, participants had to watch two video-lessons and complete a related multiple-choice test; it was a single-attempt, time-set, graded quiz.

"Forum" activities were used extensively to analyze weekly topics and to promote the debate; as in every previous AIB e-learning or blended learning experience on the Moodle platform AIBFormazione.it, two technical forums were available, along with course-related ones:

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[4] The professional path proposed in the MOOC course was composed of 2 hours' video-lessons, 15 hours' community learning, 8 hours' action learning and 25 hours' for individual portfolio writing.

- The "Helpdesk": participants could ask for help to solve technical problems. Usually this is where participants interact with the webmaster who periodically read the messages (by reading the threads, also tutors could solve problems or alert, if needed, the webmaster).
- The "General Forum": here people could discuss on both course-related and off-topic matters to reach out to colleagues.

The "Forum" tool was also used to stimulate brainstorming about the most controversial aspects of professional validation and to share a personal point of view about the experiences to be shared in a *portfolio*. The same principle of sharing and debate was adopted in the groupwork: participants were divided into three smaller parties to examine in depth, every week, one matter they deemed meaningful and report their observations - through a group leader - in a general dedicated course forum.

The second part of the course, the last three weeks, was dedicated to practical exercises and peer-assessment activities; the workshop activity was introduced to encourage a critical mindset and support the sharing of experiences, in light of the course goal of preparing participants to support other members writing their validation requests. A workshop is a tool where "*students submit their own work and then receive a number of submissions from other students which they must assess according to the teacher's specifications.*" ('Workshop Activity - Moodle Docs'). In the course participants had to evaluate the works by three other colleagues and assign a mark based on a simple rubric; later the papers were also read and marked by teachers, in order to give suggestions to improve contents.

As in every other course organized by AIB, competences acquired by participants had been tested through a conclusive individual work, in this case the preparation of a personal *portfolio*, that would be evaluated by teachers, to have people reflect on their own professional path by using a tool which was new to many (25 hours' workload were for portfolio writing). The document they wrote was ready to be presented by every participant to the Library Association Validation Commission.

5 Feasibility and transferability of the model

The MOOC-like experience described here was feasible as it built on previous experiences and policies which had created a favourable environment. The main features will be described, with comments on their transferability to different contexts:

- **the platform**: AIBformazione.it existed previously to the experience. It is owned and administered by the Association, therefore the cost of its use for this specific experience was moderate. In situations where a proprietary space is not available, though, organisers might look for partnerships with Universities or other institutions managing e-learning platforms and with common interests.
- **e-tutors**: the recent development towards blended learning had AIB organising courses for e-tutors. Apart from offering opportunities to members and finding new volunteers, this meant that e-tutors were already available. Where this is not the case, external e-tutors might be enrolled - though it is preferable that they are acquainted

with the disciplines taught and the course aims - or a call could be made among associates.

- teachers: the teachers were members of the Professional Development Board, and, following AIB code of conduct, they charged no fees. AIB states that members of elective boards are only entitled to expense refunds, and since the course was online there were none. In different contexts this cost might be high.

- course organiser: this function had been covered in the previous courses by the person in charge of professional development at the organising chapter. The solution was not feasible this time, as there was not a specific chapter; besides, competent AIB members were already engaged on the learning team. It was decided to enroll someone specifically assigned to coordinating, as there were many participants and many stakeholders involved (the learning team, the regional chapters, the office of the National secretary and president). It is undoubtedly an advantage to have this figure formally covered, but as said above for the tutor, someone familiar with the context would be a real asset.

- webmaster: because of the path undertaken, the association had an available webmaster - actually a webmistress - who offered her assistance regularly at limited cost. Where such previous agreements are not in place, partnerships - as mentioned above - might solve the issue, though an association wishing to open a regular new channel for professional development will consider different possibilities.

6 Results and future developments

At the end of every AIB learning path, participants fill in a questionnaire to evaluate the course experience from different points of view: the course organization, length, interest and pertinence of the contents, course location and platform, learning support. Besides, questions were included about peer-interaction and relationships with tutors and teachers, and about the correspondence of the course with expectations.

The average mark was 4.42 out of 5, the highest marks being for materials and choice of topics, the lowest for peer support (3.86), while tutor and teacher interaction scored 4.41. Maybe the most remarkable result is that the score on the usefulness of the course contents for the specific job environment is the lowest (3.79), meaning that participants see self-development disconnected from their job. On the one hand, many participants had a steady job, which in Italy implies scarce opportunities for job mobility, and therefore do not expect to put their competence to use. On the other hand, it would seem that the principles underlying the opportunities opened by the validation process in light of the increasing instability of the labour market in Italy had not been understood yet – and yet co-ops and other providers of library services do ask their employees to validate, as a qualified workforce constitutes an advantage for tenders bidding for public money.
A few respondents thought that the online environment was confusing and the workload was excessive. There were some negative reactions to peer-assessment, originated from the misunderstanding that those judgements would be part of the final grade: this issue would need to be clarified for future experiences. As regards the workload, this is one of the recurrent complaints in online learning and derives from job commitments and time

management. When teaching, especially a group of people with limited previous experience in online learning, it would be useful to introduce a pre-course session on these issues, next to the one on course commitments for different roles, already introduced in many AIB courses.

On the whole, the experience was positive and sustainable, and it could be tested on other topics. Since in Italy AIB courses, organised by regional chapters, are greatly appreciated among associates, the model could be further developed by organising MOOCs jointly among various regional chapters, thus optimising platform and e-tutor costs.
Besides, the model could be used for other library associations or institutions on the brink of facing major changes and needing to train a large number of people with a participatory approach, regardless of time and space constraints.

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