Bringing Learning Closer to the Workplace: An Online Course for Librarians in Developing Countries

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Abstract: Face-to-face training workshops are frequently used in a capacity development context. However, the workshop approach has its limitations as the application of learning in practice can only happen once the learners are back at their workplaces. Unfortunately, once back at work, participants are often pulled into day-to-day responsibilities and rarely get immediate opportunities to apply their learning, and knowledge gained from the training is lost as the time passes. Therefore, we decided to redesign a workshop on Monitoring and Evaluation of Electronic Resource Use (MEERU) – an important topic for university libraries and librarians – from a face-to-face workshop into a fully online course. Our goal was twofold: to train more librarians in INASP's partner countries in the developing world, and to support an immediate application of learning in the workplace. We used a learning design approach to put the learners' needs and experience at the heart of course development. We situated the learning in the librarians' work context through a careful combination of interactive 'guided readings', activities for discussion and reflection, and a course assignment structured in parts so that the learning from each unit could be immediately applied in practice. The course was piloted for eight weeks in May to June 2016 with 23 librarians from five developing countries. Here we present the approach to the course design, the evaluation outcomes, and lessons learnt.

Introduction

Higher education and research institutions subscribe to online journals and books to support research, teaching, and learning at their institutions. Librarians need to demonstrate the value of these resources and understand exactly what literature their researchers need and use. Therefore, librarians must have advanced monitoring and evaluation (M&E) skills to analyse publisher usage data and conduct surveys. INASP, a UK-based international development charity, has been training librarians in developing countries through face-to-face (f2f) workshops on 'Monitoring and Evaluation of e-Resource Use' (MEERU) since 2006. This workshop has been modified over the years since the first pilots in Kenya and Tanzania based on participant and facilitator feedback as well as changes in the publishing sector. Feedback for the workshops has been very positive, but the workshop approach has limitations. Workshops are costly and require expert facilitators every time, yet can only accommodate around 20 participants. Timing is always tricky as some institutions within a library consortium are more ready than others. Therefore, some participants gain considerably from the training while others don't. Once back to the office the participants' attention is often directed to a full mailbox and lengthy to-do lists; they may find it hard to start applying in practice what they have learnt, and they may lose the knowledge gained as time passes. Indeed, we often find the same institutions and individuals requesting more training.

Considering other approaches to capacity building, we turned to online learning – an approach that has been used at INASP since 2011 with the first online course offered by INASP's AuthorAID project (Murugesan, 2012). Since then more online courses have been developed and delivered by INASP – from intensely facilitated, practice-based courses for small numbers of participants to Massive Open Online Courses (MOOCs) that have raised awareness of research communication among more than 2,000 researchers predominantly from developing countries. INASP courses are delivered using a Moodle site.

When considering the benefits of delivering the MEERU training online, we felt that the online format would offer the following advantages: (1) flexibility in timing; (2) the course can be offered several times a year and

consortia/institutions can join at the point of need, which is crucial for application of learning; (3) flexibility in participant selection – it can be left to the consortia to decide whether they want to run the course nationally or join in with other consortia; (4) the ability to deliver the course over a longer period of time while linking it closely to immediate application in the work context; and (5) opportunities for peer-learning and cross-consortia collaboration.

Approach

Learning design

To redesign the workshop from f2f delivery to a fully online course, we adopted a principled approach to learning design that is explicit and iterative in nature (Laurillard, 2012, p 80). Learning design as defined by Conole (2013, p 7) *"is a methodology for enabling teachers/designers to make more informed decisions in how they go about designing learning activities and interventions, which is pedagogically informed and makes effective use of appropriate resources and technologies [...]"* Learning design promotes 'explicitness': it encourages teachers/designers to represent their design decisions in a shareable format to invite feedback and revisions (Laurillard, 2012). Learning design is collaborative, iterative, and highly reflective.

The MEERU design team consisted of four people – the course commissioner, content developer, learning designer, and technical developer – working closely for one year. To redesign the training from a three-day f2f workshop to an online course, we first 'stepped away' from the pedagogic design of the workshop. Then we analysed the new situation for learning and new pedagogic opportunities and challenges. We used the Learning Designer tool (https://buildingcommunityknowledge.wordpress.com/learning-designer/; http://learningdesigner.org/) to help put the learners' needs and experience at the heart of the course development and allow for iterative redesign (Laurillard, 2012). Learning Designer, a web-based tool to create and share learning designs, is underpinned by Diana Laurillard's Conversational Framework. It supports careful planning of students' learning time and teaching and learning activities (TLAs) by making design decisions explicit and graphically representing the learning experience. Learning Designer helps organise learning into a sequence of TLAs aligned with the learning outcomes and categorised into six activity types: acquisition, inquiry, practice, production, discussion, and collaboration (Fig. 1). Using Learning Designer to support the design process, we situated learning in the learners' work context acknowledging the key principles for adult learning (Knowles, 1980) and drawing on our own knowledge of the target audience, their needs, and their socio-cultural context.

To support the learners in linking the course to their workplace, we created a series of 'guided readings', where the core narrative is enhanced with (1) built-in points for reflection asking learners to relate what they have learnt to their own work experience, and (2) short activities to practice skills or consider a problem, which are complemented with model answers and/or expert commentaries.
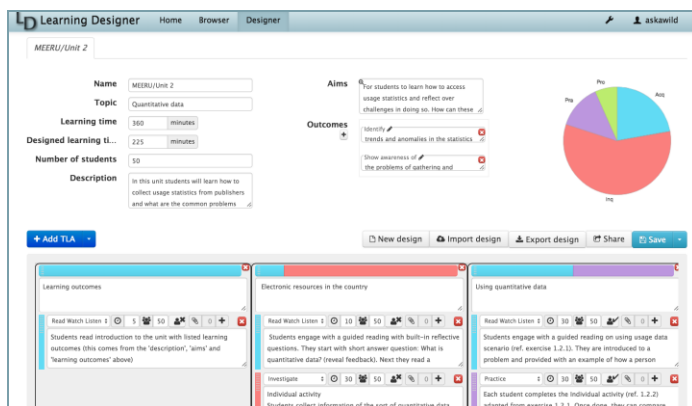

Fig 1. Design of MEERU unit 2 represented in the Learning Designer tool

At the beginning of each unit, learners are provided with expected learning outcomes and asked to consider their own learning goals for the unit. At the end, learners are asked to reflect on what they have achieved.

The key aim of the course i.e. linking theory to practical application at the workplace, is achieved through the course assignment. The assignment is structured in parts so that the learning from each unit can be immediately applied in

practice. At the end of the course the learners are asked to consolidate all parts of the assignment and provide a realistic action plan for workplace implementation. Assignments are then peer-reviewed with each assignment checked by two other course participants. Assignment guidelines provide a checklist of aspects to be covered in the assignment and peer-reviewers use a similar checklist to provide feedback. The key aim of the review is not so much about "assessing" others, but rather to enable the reviewers to reinforce their own learning.

Peer-learning is also designed into other parts of the course, for example discussion forums are used for interaction on a particular topic, the Padlet tool (https://padlet.com/) is used for brainstorming ideas, and blogs are available for sharing reflections.

Acknowledging the nature of 'learning on the job', we took care that the learning time per week does not exceed three to four hours. The overall course duration is eight weeks.

The guided readings were developed based on the existing f2f training material. The original material contained slide decks, detailed facilitator notes, and activity handouts. The content needed to be rewritten and expanded to suit the online course and we did this with in-house expertise. We also integrated some Open Educational Resources (OERs) into the core content, acknowledging that new pedagogical wrapping was necessary for the materials to be meaningful for new audiences (Masterman & Wild, 2011).

The guided readings combine theory with practical work such as Excel exercises, collaborative tasks, and prompts for discussions. Within the content and activities we tried to account for a variety of participants' backgrounds, needs, and the levels of readiness. For example, we encourage working with original materials from the workplace, but we also offer scenarios, files, and handouts for practicing skills.

Technical implementation

The course was developed and delivered on INASP Moodle (http://moodle.inasp.info). The input for development on Moodle was the documents from the learning design phase, one for each unit of the course. The technical developer created the guided reading for each unit using the 'Book' plugin in Moodle, which is a content presentation tool to develop a series of pages with content and optionally embedded videos, code, etc. We used JavaScript code for the reflection-type questions where learners are asked to consider a question or scenario before seeing the answer, and we embedded small quizzes developed using the open source H5P tool (http://h5p.org). To identify various types of activities within the guided readings, we reused icons released by the University of Leeds as OERs and provided links to the activities and discussion forums. As a result, the guided readings are not simply "page-turn content" that learners read passively. Instead learners are engaged through reflection-type questions, embedded quizzes, and hyperlinked activities, all within a visually attractive structure. The guided readings can be easily printed out, thus becoming reference materials.

The course assignment is presented using the 'Workshop' plugin in Moodle, which allows for peer assessment activities. After the submission phase, the assignment moves to the assessment phase in which each participant is given two of their course colleagues' submissions to review along with an assessment form.

Piloting

We invited five library consortia (Ghana, Kenya, Sri Lanka, Uganda, and Zimbabwe) to nominate participants for the pilot. Participants who joined the course were mainly librarians from universities or research institutions and most of them also hold a voluntary position within their national library consortium. Some who volunteered for the pilot were mainly interested in assessing the usefulness of the course for future training of their consortium members.

Our main goals for the pilot were twofold: to test whether the course supports 'learning on the job' and immediate application at the workplace; and to explore whether the course could be offered in a non-facilitated mode, with support from a course moderator but no direct involvement of a content expert. The role of the course moderator is limited to sending weekly reminders of what needs to be done, motivating participants who are lagging behind, and replying to participants' queries. The main reason for taking this approach lies in sustainability and the possibility of scaling up – if the course can be successfully delivered in a moderated version, it can be run often and with a large number of participants.

Finally, we wanted to evaluate the usability, learners' experience, and relevance and usefulness of the course for the target audience. With respect to the learners' experience we were particularly interested to evaluate aspects related to the learning time, activity-centred design, and peer-review.

The pilot ran for eight weeks from 3 May to 30 June 2016. It started with an induction unit where the participants could get to know each other, form study groups, and become familiar with the learning environment. The learning was organised in a weekly rhythm and the participants were encouraged to work at their own pace. Each week, the moderator summarised key learning points of the previous week and gave an overview of the upcoming topics. The course left the responsibility for progress monitoring with the participant and did not enforce any deadlines until the end of the course when the course assignment had to be submitted and peer-reviewed. Submitting one's own assignment and reviewing someone else's work were the requirements for receiving a certificate of completion and a digital badge.

To evaluate the pilot, a mixture of quantitative and qualitative data were collected from the background and feedback surveys administered using SurveyMonkey (https://www.surveymonkey.com/) at the beginning and end of the course. The results were complemented with data from Moodle learning analytics and qualitative data from content analysis of discussion forums, blogs, and assignments.

Key findings

Twenty-nine volunteers signed up for the pilot, but six dropped out very early on. Some informed us that they had insufficient time for the course, and we heard from some others that they were mainly interested in 'seeing' the course. We were able to pilot the course with 23 participants, 11 of whom (five female) have completed the whole course i.e. completed the assignment and peer-reviews. Eight were engaged in most parts of the course but did not submit the assignment.

Twenty-seven people completed the background survey before the course started. Only 12 completed the feedback survey at the end – mostly those who completed the entire course including the assignment. At the time of writing this paper, we have started conducting semi-structured interviews with some participants including those who did not complete the assignment or feedback survey.

The participants' feedback shows that the course content and activities were broadly relevant for those who completed the entire course. Some participants said they gained new skills they now use in their workplace and that their M&E knowledge has expanded. One said the course was "*very relevant to any librarian, both e-resource coordinators and managers of library involved in monitoring and evaluation of library activities and projects*". Participants mentioned newly acquired practical skills such as how to obtain usage statistics and collate them in Excel sheets as very useful for their work. Excel exercises and video tutorials helped them understand concepts covered in the reading materials. However, participants who were inexperienced with Excel found the Excel exercises daunting.

The key course content – the guided readings with built-in reflection questions and mini-quizzes – were much liked by most participants. Participants felt that the reflection questions prompted deeper thinking and the mini-quizzes helped them check their knowledge. Content analysis of discussion forums indicates that participants were able to relate the course to workplace issues, for example, participants sought help with collecting usage data for their institutions.

The assignment was among the most useful course activities: "*The course assignment was good as it helped us to reflect on what we had learnt and engage ourselves into a real life MEERU situation*". One participant said that the assignment encouraged him to stay committed to the course and the action plan he presented in his assignment is applicable to his work context.

Participants also highly appreciated the peer-review activity. Most felt that it helped them learn from each other: "*Peer review exposed me to what others were doing and learn from them as well. It was also an opportunity to assist fellow participants*". One participant felt that by reviewing someone else's work she learned how to better present her own work in writing.

Participants were encouraged to work on the assignment with a colleague on-site, but as expected not everyone did this. Some preferred to work on their own, whereas others joined the course while on sabbatical. Some did not manage to find a person to work with. However, those who did work in institutional pairs/teams said it was helpful for generating ideas and getting advice. One institutional team used the social forum to share pictures of them working together.

In terms of hours spent on the course, we received mixed feedback: most participants said they were able to complete the whole course by spending no more than the designed time of three to four hours per week. Two participants said they spent less than three hours per week, and four said they needed more than five hours per week. Most survey respondents felt that the length of the course units was appropriate. One participant said he would have preferred a shorter course duration even if this meant spending more hours on average per week.

Thirteen participants contributed to the discussion forums that were linked to the course units. Generally the participants replied to questions seeded upfront as part of the course design, but they also shared reflections and asked questions.

Only a few participants used the Moodle blog to share reflections about their learning; however, feedback from other participants indicates that they made notes on paper. One participant said she kept a dedicated notebook for her reflections as she likes making pictorial notes. Another participant found it useful to read others' blog entries even though he did not write any himself.

Overall, the participants engaged in all means of online exchange that the course offered and were able to choose their preferred means. Padlet walls were liked most, whereas one-to-one and small group communication tools were said to be least useful. A possible explanation is that the course size was small enough for the participants to feel comfortable interacting with all fellow participants rather than in small groups. We received mixed feedback about the discussion forums: some liked them but some were indifferent. Feedback in open comments suggests that the forums were not used to the extent some participants expected.

Lessons learnt

One of the critical questions we wanted to explore in the pilot was whether the course in its current design successfully supports step-by-step application of knowledge and skills in practice. Even during the course, it became obvious from the forum discussions that some of the participants were transferring skills and knowledge to their workplace. Those who completed the assignment put together meaningful and realistic action plans. Through INASP's continuous engagement with the library consortia, we have been able to directly observe the early impact of the course on the librarians' everyday work. One participant told us she was using the action plan in her assignment to guide her team in conducting M&E tasks.

Although the course seems to be relevant and useful to the participants who completed the assignment regardless their diverse backgrounds and skills, we need to find out more about the course relevance to those participants who stayed engaged for most of the course but did not submit the course assignment. The follow-up interviews currently taking place will help us understand this.

The diversity of participants' backgrounds, knowledge, and skills makes it challenging to design a course that would be a perfect fit for all. So we had tried to bring in some variety to the course content, activities, and communication tools. It is however important to strike a balance between further tailoring the course for individuals to accommodate diverse backgrounds and skills, and making sure that the moderation effort is kept low and the course can be run easily and frequently.

It seems that the course can be offered in two ways in the future: (1) as a bigger event run by INASP, with several consortia sharing experiences and practices across countries; or (2) as a smaller course for one consortium, where the moderator is appointed by the consortium and discussions are tailored to their context. Both options will be further discussed with relevant consortia. Indeed, we have already received feedback from the Kenyan library consortium that they would like to use the course to train librarians in their country, preferably in a blended format: an introductory f2f workshop for awareness raising followed by the online course to support application. While the course can be successfully offered with low-key moderation only, it can be further enhanced with facilitators from consortia to support online discussions.

Time commitment seems to be the biggest barrier to course completion. Dedicating three to four hours per week for almost two months seems to be challenging for many. It might be easier for a librarian to take time off to attend a three-day workshop away from the workplace than to fit an online course into their weekly schedule for a long period. Indeed, derived from the notion of 'flexibility', there seems to be an assumption among many that online learning can be done on top of existing commitments. This assumption is misleading and there is an urgent need to raise awareness among institutional managers that in order to succeed, training participants need to be relieved of some other obligations for the duration of the online course.

Conclusion

Principled and theory-based design of online learning is crucial for improving access and inclusion. Online courses are too often seen as a means to improve access to learning rather than as carefully designed spaces to make learning happen. An online course might improve access in certain aspects, but equally, if not situated in the socio-cultural and work contexts of the participants, barriers to learning may emerge. When designing the MEERU course, we did not simply assume that by creating an online course we would automatically improve access to M&E training for librarians. Instead we analysed country-specific contexts, considered the barriers that the new format could introduce, and tested our approaches in the pilot.

The pilot clearly shows that, if carefully designed, online learning can be a powerful capacity building tool to supplement and enhance traditional approaches such as workshops. As Datta (2011) puts it: *"Workshops are good for raising awareness about an issue, introducing new topics and developing skills, but not for actually promoting change. Transformative changes only happen when individuals have the space to test and reflect on tools, methods and approaches over a longer period of time".* The MEERU online course attempts to give learners the space, time, and tools they need to relate the course to their work. It allows learners to retake the course if/when needed, and the course can be scaled up to accommodate more learners. As such it is a big step towards improving access to M&E training for librarians in developing countries. It is too early to talk about the impact of the course, but there is early evidence that the participants who completed the assignment are applying their learning in their everyday work.

It also seems that the gender balance in our online courses is generally better than what we see at f2f workshops. The MEERU course was balanced in terms of gender and so were our other online courses. A participant in one of our online courses said this about online courses in relation to workshops: *"Women have multiple responsibilities with work and family. Sometimes they can't think of taking time away from their job and their children"* (Owens, 2013).

As a capacity building organisation we draw from an existing pool of theory-informed and tested approaches but we also constantly explore new ways to support the growth of our partner institutions and library consortia in the developing world. Online courses have shown promising results and we will continue using and improving this approach to capacity building going forward.

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