Supporting Open Education Resource qualification and creation: The TEL MOOC Case

Nathaniel Ostashewski
Athabasca University
Canada
nostashewski@me.com

Dan Wilton
Athabasca University
Canada

Martha Cleveland-Innes
Athabasca University
Canada

Sanjaya Mishra
Commonwealth of Learning
Canada

ABSTRACT: The TEL MOOC (Technology-Enabled Learning MOOC) is a five-week professional development course about teaching that provides OERs (Open Educational Resources) to learners as both content and assessment activity. As content, OERs are presented to learners with opportunities to explore, qualify using the TIPS framework, and share curated examples with peers. In the course assessment activity, OERs are presented as an authentic creative experience that asks learners to develop a TEL Activity plan (lesson plan) and share it as an OER. Analysis of these OER TEL Activity Plans created by learners shows that many learners are still early in the understanding of TEL integration as 54% of the plans developed show low levels of planned TEL student activity according to the TIM framework (University of Florida, n.d.). This finding highlights the need for additional TEL professional development courses that seek to advance TEL integration in teaching environments. Further study about support for Activity Plan development at increased levels of TEL engagement is needed.) Areas of need for further research is identified.

Introduction

Providing education via massive open online courses (MOOCs) is one way in which the fifth recommendation of the 2012 Paris OER Declaration (Unesco, 2012) - S*upport capacity building for the sustainable development of quality learning materials* – can be met. The recommendation stated specifically that there is a need to:

> Support institutions, train and motivate teachers and other personnel to produce and share high-quality, accessible educational resources, taking into account local needs and the full diversity of learners. Promote quality assurance and peer review of OER. Encourage the development of mechanisms for the assessment and certification of learning outcomes achieved through OER.

The online course delivery project described in this paper, in fact, meets all elements of this described need and can stand as an exemplar for others who wish to support OER. The TEL MOOC (Technology-Enabled Learning MOOC) is a five-week professional development course about teaching that provides OERs to learners as both content and assessment activity.

The TEL MOOC is an introductory online course that has been offered three times since 2017 with another offering planned for September 2019. A collaboration between the Centre for Distance Education at Athabasca University, Alberta, Canada, and the Commonwealth of Learning based out of British Columbia, Canada, this five-week MOOC is intended to engage teachers who work in any level of education, are from all over the globe, and are interested in

technology-enabled learning and open education resources. The experiential, evidence-based course not only introduces learners to contemporary online learning, but also provides plenty of opportunities for learners to understand education and technology as it pertains to their own context. The course further stands as an example to learners of how OER might be utilized in their own teaching, as all of the educational content in the course is OER by design. In fact, the TEL MOOC course materials (Mishra, Cleveland-Innes, Ostashewski, 2017) including design and materials can be found on OAsis, the Commonwealth of Learning's online institutional repository for learning resources and publications.

Reports on the deliveries of the TEL MOOC demonstrate the wide-ranging reach of the course to support educators across the Commonwealth. Below are the statistics and country demographics of the three TEL MOOC deliveries:

> For the first offering of TEL MOOC in the winter of 2017, there were 1143 registered participants: 1123 identified as students and the remaining 20 as instructors, teaching assistants, and other administrative roles. 673 (59%) participants were considered active, having logged into the course at least once, and 107 (9.4%) were awarded completion or participation certificates. (Cleveland-Innes, Ostashewski, Wilton, & Murphy, 2017)

> There were 3881 registrants for TEL MOOC[2], the majority from Rwanda (33%) and Bangladesh (22%), followed by India (8%) and Barbados (4%). There was close to an equal number of Certificates of Completion (347) and Certificates of Participation (349) issued; for a total of 696 certificates. There were 202 technology-enabled activity plans added to the TEL Resources open-source repository. (Cleveland-Innes, Ostashewski, Wilton, & Murphy, 2018)

> There were 2493 student registrants for TEL MOOC3, the majority from Fiji (28%), India (17%), and Bangladesh (13.6%), followed by the Bahamas (4.9%) and Ghana (4.2%). There were 270 Certificates of Completion and 102 Certificates of Participation awarded, for a total of 372 certificates, a certification rate of 14.9%. (Cleveland-Innes, Ostashewski, Wilton, & Jensen-Tebb, 2019)

Open Educational Resources are central to open education practices, providing accessible and free-to-use educational resources, which is an integral element of the TEL MOOC mandate. There are many OER publicly available on the Internet that can be used to integrate technology into teaching and learning for both blended and online learning contexts. As such, any discussion of technology-enabled learning requires OER as an important component of TEL MOOC material. Fully OER course materials was one design requirement given to the instructional team. Furthermore, a detailed description, qualification, curation, and creation activity set was presented as the content of the TEL MOOC Week 3. In this paper we will outline each of these activity set elements with the goal of articulating a potential model for others who wish to further support the fifth recommendation of the 2012 Paris OER Declaration. In the words of one TEL MOOC participant:

> *"Week 3 was very insightful. I am now knowledgeable about how to search for OER resources, and how to obtain a license for OER resources. This will be beneficial for my professional and personal development. Learning about the vast resources available and how these resources can be located was amazing. I am motivated to produce OER resources that other educators may find useful."*

OER, Open Education, and the TEL MOOC

As OER become more prevalent and researched in the recent past, there are ever-evolving definitions of the term OER. Initially the term OER was coined at UNESCO's 2002 Forum on Open Courseware and describes OER as:

> "teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work." (Unesco, 2012).

One prevalent understanding of OER comes out of the origins of the Internet where digital meant free-to-copy. Copyright and education have deep connections as the origin of the written book was needed to enable mass education. In many parts of the globe, where nations are struggling to find resources to educate ever-growing populations while at the same time struggling with impoverished governments, OER opens up many different possibilities. Most recently the social aspects of OER are beginning to be understood for not only developing nations but also disadvantaged learners anywhere on the globe.

Lambert (2018) articulates the social justice potentials of OER with an Open Education (OE) definition that incorporates the social justice aspects of OER and what can be argued is the potential and intentions of the original MOOC movement:

> Open Education is the development of free digitally enabled learning materials and experiences primarily by and for the benefit and empowerment of non-privileged learners who may be under-represented in education systems or marginalised in their global context. Success of social justice aligned programs can be measured not by any particular technical feature or format, but instead by the extent to which they enact redistributive justice, recognitive justice and/or representational justice. (p. 239)

Lambert's definition of OE articulates the growing sophistication of the OER movement since 2012 as more and more educators in grade schools and universities begin to adopt OER and become aware of OE. With these two definitions in mind we argue that the TEL MOOC is both OER and OE. As an OER the TEL MOOC stands as a fully open licence teaching and learning resource. As OE it provides experiences for the benefit of non-privileged learners.

Design and Delivery of Week 3: Open Educational Resources

The TEL MOOC as an educational experience is a five-week cohort grouped online professional development course. As such learners enrol in the course and progress through the weekly provided materials and activities at the same time as other learners. This intentional week by week design, as opposed to an online self-study course, supports peer-peer discussions and connections while providing time for learners to process the materials and concepts. The following three topics form the learning experience for Week 3 of the TEL MOOC:

     3.1: Understanding OER
     3.2: Types of Open Licenses
     3.3: Finding Open Educational Resources

And while definitions of OER continue to evolve and become perhaps more encompassing, the following definition of OER was used in the course both its simplicity and practicality:

> An open educational resource (OER) is defined as a digital self-contained unit of self-assessable teaching with an explicit measurable learning objective, having an open licence clearly attached to allow adapting, and generally being free-of-cost to reuse. (Kawachi, 2014).

The organization of each of week in the TEL MOOC centered around the presentation of 2 or 3 topics. Each of the topics is presented beginning with a short video segment, followed by readings, discussion, opportunities for exploration and self-assessment. The pattern of view, read, review, respond, explore and assess your learning was used for each of the topics. For the topic *Activity 3.1 Understanding OER*, the instructor video segment introduced the OER definition and the TIPS Framework (Kawachi, 2014).

Image 1: TEL MOOC Activity 3.1 Lecture Segment

Below is the transcript of the Activity 3.1 video which is 3:48 minutes in duration:

Welcome to Week 3. By now you should be well aware of the benefits and challenges of using technology enabled learning, aware of the models used to ensure technology and pedagogy work together and know some of your fellow participants. This week starts by defining open educational resources. An open educational resource is defined as a digital, self-contained unit of self-assessable teaching with an explicit measurable learning objective, having an open license clearly attached to allow adapting and generally being free of cost for reuse (Kawachi, 2014). Generally this means that educators can make use of OER in their teaching practice if and when the teacher decides the materials are suitable for their teaching content. There is however challenges in accessing OER, finding ones that are related to the curriculum you're teaching, and of course of suitable quality for use in the classroom.

With access to the internet we can find OER for almost any type and level of education, from K-to-12 through to post-secondary education. OER can also include resources for professional development and workplace training as well as informal learning tools that might even include areas of personal interest or hobbies. OER and open education in general provide endless opportunities for learners and an unprecedented base of resources for teachers. One way that we can begin to understand the challenges of OER is to explore what other educators have identified as the key quality assurance for OER. The **TIPS framework** for quality assurance criteria for teachers as authors of OER is based on the findings of educational researchers and was validated by teachers as useful for themselves and other teachers. It provides a starting point for understanding OER material. The four layers of the TIPS framework relate to aspects of an OER's quality.

- **T** is for teaching and learning processes.
- **I** is for information and material content.
- **P** is for presentation, product and format. And
- **S** is for system, technical and technology.

While we don't have time in this course to fully explore the layers of the TIPS framework or its 38 quality criteria, this is something you can refer to when you are searching, selecting, or even authoring OER for your classroom. We encourage you to take a few minutes reviewing the TIPS framework PDF that we've provided for you. There is so much to learn about using OER in technology enabled learning. Remember to look at selective reading and the videos for content in this MOOC. Discussion is also key. Talk to your fellow participants in the forums. There's also opportunity to review and assess your learning. Enjoy.

Following the video segment, the Activity 3.1 instructions are provided to learners to guide them through the topics resources, materials, and discussions at their own pace. The following is the set of 3.1 instructions:

The read, review, and respond activities below are required. The explore, self-assessment, and survey activities are optional. A document containing Week 3 material is available through the course Resources section.

READ
1. Kawachi, P. (2014). Quality assurance guidelines for open educational resources: TIPS framework, available in the course Resources section.
2. Habler, Neo, and Fraser (2014). Open Education and the Schools Sector, available in the course Resources section.

REVIEW
Review quality assessment at http://www.slideshare.net/AshishKumar70/framework-to-assess-the-quality-of-open-education-resources-oer.

RESPOND
Reply to this forum post with your responses to: What do you identify as the two most important aspects of OER for your classroom? If you have used OER in your classroom, what has been a challenge that you can share with others in the course?

EXPLORE
To consider other points about openness, watch Dr David Wiley's TED Talk on Openness in Education at https://www.youtube.com/watch?v=Rb0syrgsH6M

ASSESS YOUR LEARNING
After reviewing some of the comments of your peers in this discussion forum, consider and record what you feel are the top three qualities of OER.

ANSWER
If you have used any OER prior to this course, consider participating in an OER Use survey at https://www.surveymonkey.com/r/QCJQB75 to see what kinds of questions are being currently researched about OER.

Now use this forum to reply to the RESPOND question above.

This pattern of video instruction followed by activities engaging learners with resources, exploration, discussion, and self-assessment is repeated throughout the TEL MOOC course.

The second Week 3 topic presented was 3.2: Types of Open Licenses. In this second topic terms like fair use, fair dealing, remixing, share alike, no derivatives, and others were presented to learners. A description and resources that highlight the different types of Creative Commons licenses are introduced. Explanations about the wide range of acceptable uses for the OER are explained to learners in both documents and video segments. This second topic ensures learners are aware that there are very open licenses such as CC BY that allow the user to distribute, remix, and even add to a commercial work, to much more restrictive licenses such as CC BY NC ND that only allow users to download and share with others.

The final Week 3 topic in the TEL MOOC was 3.2: Finding Open Educational Resources. Learners are provided with examples of OER portals and repositories and asked to search and find an OER that is relevant to their teaching context. Once they find a resource, learners are asked to qualify the resource using the TIPS framework (Kawachi, 2014) from Week 3 Topic 3.1. This list of questions are presented to learners to consider as they qualify an OER for their teaching context:

- Is the skill level appropriate for your students?
- Does the resource match the curriculum you're teaching?
- Is the resource easily modified with the computer technologies you have available?
- What speed of internet connection is required to access the OER?

These are several of the questions educators are asked to keep in mind when they search for OER. Searching for OER is the task that educators are asked to spend some time doing for the remainder of week 3. Once learners find a suitable OER they are asked to share the link and a short description of the teaching context in a discussion forum. This forum is then curated by the course facilitators as a Scoop.it page (http://www.scoop.it/t/open-education-resources-1). Below are the instructions to learners regarding the search and share activity:

> The video we've provided in the Resource section is a detailed description of search techniques for finding OER and how you do an OER search on the Creative Commons website. You can also use Google to search and we'll show you that as well. While we've provided a couple examples of OER repositories, we are looking forward to you sharing some of the OER you find in the discussion forum. There is much reading to do on this topic and the other topics in this course. Share your views on what you have time to read with other participants. Remember to take time to review the topics and your ideas based on them. Also, assessment is a powerful tool for solidifying learning.

In many ways the Week 3 activities provide opportunities for learners to experience and participate in the finding, qualifying, and sharing of OERs relevant to their own specific teaching context. These course-driven experiences follow the same pattern of OER use that is becoming to be understood as OE practice.

Learner Perspectives

While the design and delivery of Week 3 in the TEL MOOC was developed using a system design approach (Cleveland-Innes, Ostashewski, Wilton, & Murphy, 2017), the research question addressed in this paper is: What

was the benefit of the Week 3 TEL MOOC experiences for learners? Over the three deliveries of the TEL MOOC there have been over 7500 registered learners and over 1800 forum posts in the Week 3 section of the course. Research that details specifically what learners reported as valuable, as well as their reviews of what they feel is important in utilizing OER is ongoing and will be published in the future. However, an exploration of a few participant responses to the 3.1 and 3.2 guided forums can provide insight.

In Forum 3.1 the learners were asked to respond to the following: What do you identify as the two most important aspects of OER for your classroom? If you have used OER in your classroom, what has been a challenge that you can share with others in the course? Overall in this forum many learners identify the following as challenges: ability to find OER that are suitable for their teaching context, lack of access to the Internet, and time to modify the content are topics discussed.

>Learner A's reply summarizes one of the most common sentiment expressed by learners in forum 3.1:
>*"The two important aspects of OER for my classroom would be accessibility and adaptability. The resources are readily available online and importantly free. They can be accessed anytime. In addition, the resources can be contextualized to suit my specific learning context.*

>Learner B, an OER user prior to the TEL MOOC experience, shared an example of open practice:
>*"The two most important aspects of OER for my classroom are: (1) to ensure that the content is relevant, up- to-date, accurate and reliable that I want my students to learn and (2) Make sure that I monitor and provide feedback, as well as offer additional support to my students whenever necessary. One of my challenges when using OER in the classroom is coming up with appropriate criteria to look for when I am formulating my rubric. To handle this challenge I involve my students in coming up with criteria that can be added to my rubric, it gives new insights and makes them more apart of the assessment which should in turn enhance their performance."*

In Forum 3.2 the learners were asked to respond to the following: Were you previously aware that some open resources have conditional licenses? Have you ever made your own material available through Creative Commons licensing? What were your choices, or what would your choices be in the future, for sharing your work through a Creative Commons license (what type of licence would you choose)?

>Learner C's reply demonstrates significant growth in understanding of CC licencing:
>*"I am aware that copyright laws exist. I remember vaguely in university hearing about the 5% photocopying of a text. I assume that all educational sites would have copyrights laws. Open Resources do implement a series of licenses to ensure acknowledgement of the source is done. I did not know the meaning of the varying symbols until reading the article. I also think it is unique to have these symbolic representations for a quick understanding of the terms in the licence. I also am more aware now of why Shakespeare 's work is so openly distributed and why Caribbean authors whether deceased or alive are not as open to the public like Shakespeare. I have not made any of my work available to the Creative Commons Licensing, but if I had to I will like for the users to acknowledge me as the creator. I will also insist that noncommercial (NC) to ensure that my work is not commercially exploited."*

While this short review of learner posts in these two TEL MOOC forums is neither comprehensive or precisely analyzed at this time, the general value in the experience and reflection shared by many of the TEL MOOC learners indicates growth in understanding OER for their education practice.

Conclusion

While not directly an activity in Week 3, there is a TEL MOOC course activity where learners were asked to directly participate in OER creation. As a final assessment for the TEL MOOC Certificate of Completion (Cleveland-Innes, Ostashewski, Wilton, & Murphy, 2017), learners are asked to create and share an OER Activity Plan. As part of the TEL MOOC, these OER plans were then collected and shared on an OER repository called the TEL Resources (http://www.telresources.org). While not all learners chose to share their OER Activity Plan, this activity demonstrated OER creation in the true sense of the OER philosophy of open practice. The Activity Plans also provided information to the TEL MOOC research team regarding learner achievement of other course goals, such as

understanding of the TIM framework (University of Florida, n.d.). Initial findings relating to creating OER as a component of a MOOC indicates that learners are able and willing to create and share OER (Ostashewski, Cleveland-Innes, Mishra, & Wilton, 2018).

> In total 202 Activity Plans were accepted for publication on the Technology-Enabled Learning Resource repository as a result of the second TELMOOC delivery in 2017. A slight majority (52%) of completing participants elected to share their plans openly, accounting for 180 out of a total of 347 Certificates of Completion. (Pg. 1661)

Further content analysis of the OER TEL Activity Plans created by TEL MOOC 1 learners shows that many learners are still early in the understanding of TEL integration. 54% of the plans developed show low levels of planned TEL student activity according to the TIM framework (University of Florida, n.d.). This finding highlights the need for additional TEL professional development courses that seek to advance TEL integration in teaching environments. Efforts on how to best support educators as they create OER is one of the areas of research that identified by this ongoing research as more work is done towards reaching the 2012 Paris OER Declaration.

To conclude, another learner's post relating to Week 3 activities in the TEL MOOC provides encouragement for further delivery and research on OER and OE practice.

> *Week Three is definitely an eye opener for me. I have been using Like OERs for years without actually knowing that they were referred to by this name. They do add value to the teaching /learning process. I will continue to make use of them to enhance my work in the classroom.*

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