



## Report of the Massive Open Online Course

**Introduction to Technology-Enabled Learning (TEL MOOC 4)**  
Fourth offering: 22 September - 26 October 2019

Commonwealth of Learning  
Athabasca University

## Credits

The following TEL MOOC design and delivery team members from Athabasca University, Canada, have contributed to this report:

**Dr. Martha Cleveland-Innes**, Project Director and TEL MOOC Instructor

**Dr. Nathaniel Ostashewski**, Content Specialist and TEL MOOC Inspirer

**Daniel Wilton**, Instructional Designer, Web Developer, and Analytics Specialist

**Carmen Jensen-Tebb**, Project Manager and Contract Administration Advisor

This report on the fourth offering of Introduction to Technology-Enabled Learning (TEL MOOC) has been submitted to COL as part of the agreement between COL and Athabasca University.

© Commonwealth of Learning and FHSS Centre for Distance Education, Athabasca University, 2019.



This document is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. Any reuse of this document must make attribution to Athabasca University and the Commonwealth of Learning and carry the same license.

<https://creativecommons.org/licenses/by-sa/4.0/>

# Table of Contents

Executive Summary .....	1
Section 1. Background of TEL MOOC .....	3
Need and purpose.....	3
Team members.....	3
Design and development.....	3
Technology .....	3
Marketing.....	4
Section II. Revisions of TEL MOOC for the Fourth Offering .....	5
Section III. Delivery of TEL MOOC 4.....	6
Distribution by country .....	6
Personal characteristics.....	7
Video lectures and instructor presence .....	9
Inspirer’s role and presence .....	9
The role and presence of the facilitation team .....	9
Discussion participation.....	10
The Hangout.....	10
Synchronous sessions.....	10
Section IV. Participant Performance.....	12
Weekly quizzes .....	12
Technology-enabled activity plans .....	12
Certificates .....	12
Section V. Survey Findings .....	14
Summary of pre-course survey results.....	14
Summary of end-of-course survey results .....	16
Section VI. Outcomes and Recommendations.....	21
Course content .....	21
Synchronous sessions.....	21
Instruction, facilitation, and the learning community.....	22
The mooKIT app.....	23
Appendix A.....	24
TEL MOOC information and log in page.....	24
Course description .....	24

Course contents .....	24
Target audience .....	25
Outcomes of this course .....	25
Certificates .....	25
Start date .....	26
Other information.....	26
Instructors .....	26
Appendix B .....	27
TEL MOOC brochure .....	27
Appendix C .....	29
Promotional material, Athabasca University CDE website.....	29
Appendix D.....	30
TEL Activity Plan template .....	30
Appendix E .....	31
Registration by country.....	31
Appendix F.....	35
Certification by country .....	35
Appendix G.....	37
Course announcements .....	37
Appendix H.....	38
Survey letter of consent .....	38
Appendix I .....	39
Pre-course survey .....	39
Appendix J .....	42
End-of-course survey .....	42
Appendix K.....	44
TEL MOOC resources page.....	44

## Executive Summary

Introduction to Technology-Enabled Learning (TEL), a massive open online course developed in partnership by the Commonwealth of Learning and Athabasca University, was offered for the fourth time from 22 September to 26 October 2019. The purpose of TEL MOOC is to provide an accessible learning opportunity to teachers, particularly in developing countries, to expand upon their knowledge and skills regarding the use of technology and open educational resources in teaching and learning.

There were 2425 student registrants in TEL MOOC 4, drawn from 84 countries worldwide, including Fiji (with 14.6% of all registrations), India (11.7%), and Bangladesh (11.3%), and representing all levels of education, from early education to university, as well as government and other organizations. There were 685 certificates awarded (154 Participation certificates and 531 full Completion certificates) for a total certification rate of 28.2%, the highest certification rate of all TEL MOOC offerings to date.

The content of the course, progressing from theoretical foundations based on the Community of Inquiry framework and models of technology integration to open educational resources and practical implementation of technology-enabled learning in context, remained largely unchanged in this fourth offering. As evidenced by the end-of-course survey, the course material continues to be well-received and relevant to learners' needs in highly diverse contexts.

Instead, revisions in this offering focused on streamlining communications and discussion management to better support the course's three-layered instructional model. At the instructor level, led by Dr. Martha Cleveland-Innes, a new pre-registration option for the two synchronous or "live" sessions may have increased the prominence of these presentations as a more integrated component of the course, given the attention to these in the end-of-course survey feedback. At the inspirer level, led by Dr. Nathaniel Ostashewski, a shift in emphasis from weekly summaries to weekly introductory videos may have reduced some of the reading load, identified by many participants as a concern, and allowed for development over the course of an effective instructional analogy between teaching and agricultural practice that also appears to have been well received. Finally, at the facilitator level, the use of carefully selected "sticky" or pinned forums, some supported by interning facilitators, appears to have encouraged a deeper and more sustained discussion around key topic areas than had previously been seen in the general, participant-generated forums.

This report makes a number of findings and recommendations based on registrant demographics and participant performance, as well as learner intentions, evaluations, and feedback from the two course surveys. One such recommendation is to provide further guidance for certain demographic groups, including those with limited internet access or in non-teaching roles, to locate the most critical information and understand the relevance of course activities to their own professional context. Other challenges identified include improving accessibility for the synchronous sessions and continuing to improve the overall quality of the forum discussions while retaining the sense of an open and welcoming learning community, potentially by redirecting posts not directly related to the course topics to the Hangout.

As evidenced by the end-of-course survey, TEL MOOC participants continue to find the course a valuable and enjoyable learning experience, with a high level of overall satisfaction with the course materials, resources, and mode of instruction. While conclusions cannot be drawn from the certification rate alone, the participant performance in the latest offering of TEL MOOC, often despite considerable language and resource barriers, suggests a commitment to learning success from participants, course organizers, and instructional team alike.

This report on the fourth offering of TEL MOOC has been prepared by Athabasca University and submitted to the Commonwealth of Learning. Reports for the first three offerings are available through the Commonwealth of Learning's website:

- TEL MOOC 1: <http://oasis.col.org/handle/11599/2760>
- TEL MOOC 2: <http://oasis.col.org/handle/11599/2970>
- TEL MOOC 3: <http://oasis.col.org/handle/11599/3134>

## Section 1. Background of TEL MOOC

The TEL MOOC initiative is well-aligned with the mandates of both the Commonwealth of Learning (COL), based out of British Columbia, Canada, and Athabasca University (AU), located in Alberta, Canada. Both organizations strive to remove barriers to education and promote lifelong learning worldwide.

### Need and purpose

The purpose of TEL MOOC is to provide an accessible learning opportunity to teachers, particularly in developing countries, to expand upon their knowledge and skills regarding the use of technology in teaching and learning.

### Team members

From the Commonwealth of Learning:

**Dr. Sanjaya Mishra**, Education Specialist, eLearning

From Athabasca University:

**Dr. Martha Cleveland-Innes**, Project Director and TEL MOOC Instructor

**Dr. Nathaniel Ostashewski**, Content Specialist and TEL MOOC Instructor/Inspirer

**Daniel Wilton**, Instructional Designer, Web Developer and Analytics Specialist

**Carmen Jensen-Tebb**, Project Manager and Contract Administration Advisor

### Design and development

The design of TEL MOOC was based on concepts and outcomes identified in the MOA and additional requirements identified through discussion between COL and AU. The design process was a collaborative engagement initiated by sharing perspectives and documenting ideas. This collaborative process has continued throughout the four offerings of TEL MOOC.

### Technology

As per the MOA, COL continued to provide access to the mookIT learning management system (LMS) for use in the fourth offering of TEL MOOC, now under the COL's MOOCs for Development (MOOC4D) initiative. Four qualities distinguish mookIT from other MOOC delivery platforms and were key design parameters for TEL MOOC:

- video as the primary content delivery format,
- synchronous and asynchronous interaction through forums and chat,
- accessibility, with low bandwidth requirements and alternative modes of access, and
- full support of mobile learning through iOS and Android apps.

This platform was developed and is supported by the Indian Institute of Technology (IIT), Kanpur, India. mookIT questions and issues were communicated to Dr. Mishra who then contacted the mookIT team through COL's Knowledge Management Team.

A key outcome of the course was for participants to create a technology-enabled activity plan as a final assessment. For greater authenticity in the creation of these plans as open educational resources, selected plans will be shared through an open and permanent repository. A supplemental website, the TEL Resources repository, was developed by AU and is available at <http://www.telresources.org>.

## Marketing

The target learners for TEL MOOC were teachers in developing countries. COL carried out the majority of marketing efforts as the organization has an established network of connections in the education sector throughout the developing world. The TEL MOOC registration website was promoted through COL's network and the promotional brochure was distributed through COL's Focal Points in the Commonwealth countries. Content of the promotional site and login page is shown in Appendix A and the most recent brochure in Appendix B.

TEL MOOC was also advertised on the AU-CDE website (see Appendix C). An advertisement and brief write-up was also submitted to OpenUpEd (<http://openuped.eu>), a European MOOC provider and promoter, with whom AU is affiliated.

Finding suitable marketing channels will remain an important marketing strategy in the future.

## Section II. Revisions of TEL MOOC for the Fourth Offering

Revisions applied in TEL MOOC 3, including the weekly release of course content and additional support videos for the TEL Activity Plan assignment, proved to be successful in the previous offering and continued to be applied in TEL MOOC 4. The course content remained unchanged, but adjustments were made to several aspects of communications and discussion management:

1. Participants were invited to pre-register for the two synchronous sessions through the mooKIT survey facility; while this did not appear to increase attendance at the sessions, it provided the instructional team the opportunity to better anticipate the attendance levels and may have contributed to a better sense of integration of the sessions into the course (a challenge due to the use of separate platforms).
2. The Inspirer (described below) elected to focus on weekly introductory videos rather than weekly summary videos and documents. These introductory videos emphasized an analogy between teaching practice and potentially more familiar farming or agricultural practice, which appears to have been well-received by several survey respondents; the de-emphasis of weekly summaries, previously presented as additional documents, reduced some of the reading load for students and overhead for the instructional team.
3. The mooKIT “sticky” or pinned forums feature was tried on a limited basis to highlight selected forums in the general discussion over a longer period; these forums proved to be popular with significantly more replies than un-pinned forums in the general discussion.
4. The facilitation team was expanded to include two interns from Athabasca University’s Doctor of Education in Distance Education program. Acting primarily as observers, these interns also hosted dedicated forums within the general discussion using the pinned forums feature described above, allowing for a deeper level of engagement around selected discussion topics.

## Section III. Delivery of TEL MOOC 4

There were 2425 student registrants for the fourth offering of TEL MOOC, compared to 1143 in TEL MOOC 1, 3881 in TEL MOOC 2, and 2477 in TEL MOOC 3. Of the 2425 student registrants, approximately 77% logged into the course at least once.

There were 685 certificates awarded (154 Participation certificates and 531 full Completion certificates) for a total certification rate of 28.2%, the highest certification rate of TEL MOOC so far.

During the course registration process, individuals are prompted for information on their age, gender, country, education, and affiliation.

### Distribution by country

There were 84 countries represented by student registrations in TEL MOOC 4, including the first TEL MOOC registrants from Bulgaria, Burundi, Cambodia, Ecuador, The Gambia, Haiti, Kazakhstan, Madagascar, Mauritania, Myanmar, St. Kitts and Nevis, and Zimbabwe. Including all four offerings, TEL MOOC has now reached 136 countries worldwide, including all members of the Commonwealth except Brunei Darussalam, Seychelles, and Tuvalu.

The 10 countries with the highest registration numbers in TEL MOOC 4 are listed in Table 1; the full list is given in Appendix E. Although Fiji remained the highest-registration country (as in TEL MOOC 3), registrants from India received a higher number of certificates and at a notably higher certification rate than the course average. Registrations from Greece were much higher than in previous offerings, boosted by a cohort from the International Hellenic University, achieving an 85% certification rate.

Table 1. Top 10 registrations by country and certification rates.

Country	Registrations	Percentage of total ( $n=2425$ )	Certificates (certification rate)
Fiji	355	14.6%	84 (23.77%)
India	283	11.7%	129 (45.6%)
Bangladesh	273	11.3%	49 (17.9%)
Canada	137	5.6%	26 (19.0%)
Greece	130	5.4%	110 (84.6%)
Nigeria	126	5.2%	22 (17.5%)
Jamaica	106	4.4%	26 (24.5%)
Belize	89	3.7%	28 (31.5%)
Barbados	84	3.5%	15 (17.9%)
Mauritius	77	3.2%	16 (20.8%)

### Personal characteristics

Of the 2425 student registrants, 1263 (52.1%) were female, 1154 (47.6%) were male, and 8 (0.3%) declined to answer; see Figure 1. This approximately equal balance in gender is typical of TEL MOOC offerings, with only TEL MOOC 2 showing a stronger bias towards male registrants (61%). 53.4% of certificate recipients in TEL MOOC 4 were female.

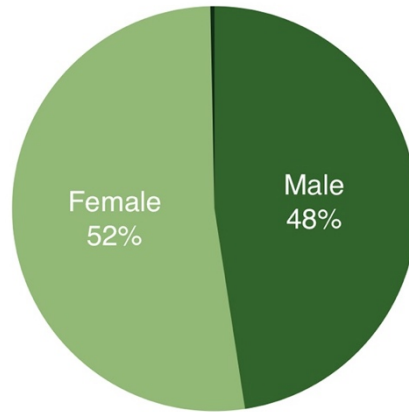


Figure 1. Gender of registrants in TEL MOOC 4.

The ages of registrants were broadly distributed across all age categories; the approximate average age was 37 years old, while the approximate average age for certificate recipients was 35 years old; see Figure 2.

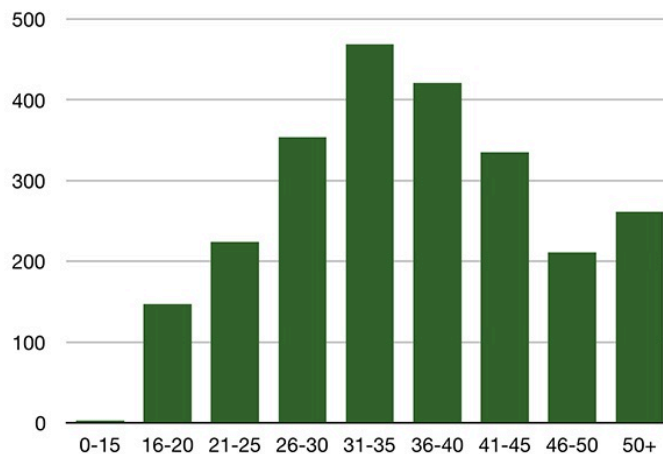
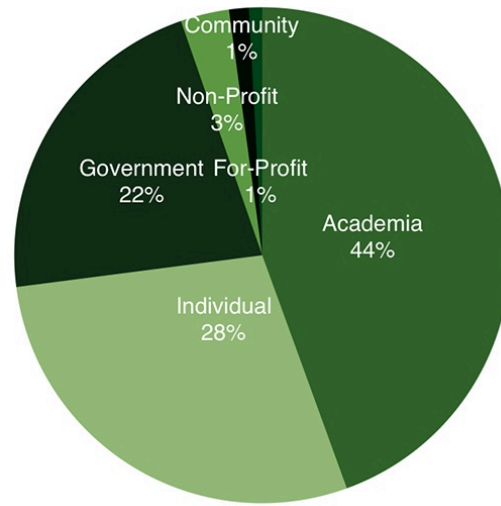


Figure 2. Age of registrants in TEL MOOC 4.

The largest proportions of registrants were from academia (1078, 44.5%), individuals (691, 28.5%), and from government (527, 21.7%). The remainder were from non-profit (77, 3.2%), community (31, 1.3%), or for-profit organizations (21, 0.9%); see Figure 3. This is the first offering in which academia represented less than half the registrants (as compared to 72%, 66%, and 58% in TEL MOOCs 1, 2, and 3, respectively), but it was also the first year that respondents were offered the “Government”

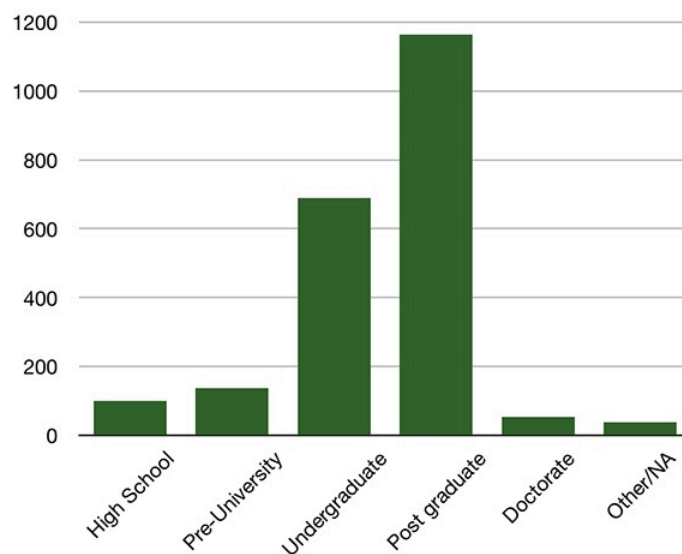
option. Of certificate recipients, a slightly higher proportion (49.9%) were from academia and a slightly lower proportion (18.4%) were from government; this may suggest that the course content



and activities are more relevant to those in academia and less so for those associated with government.

Figure 3. Professional affiliation of registrants in TEL MOOC 4.

The largest proportions of registrants indicated their highest academic qualifications as post-graduate (1163, 48.0%) or undergraduate (690, 28.5%), with 180 (7.4%) indicating doctorate, 137 (5.6%) pre-university, 100 (4.1%) as having completed high school, and 155 (6.4%) indicating “Other” or declining to answer; see Figure 4. These proportions are largely consistent with previous offerings of TEL MOOC and indicate a diverse but largely well-educated student population. The number of certificate recipients maps to these proportions very closely, including those with only a high school education.



#### Figure 4. Academic qualifications of registrants in TEL MOOC 4.

The close alignment between the demographics of registrants and certificate recipients suggests that, despite the wide diversity in age, gender, professional affiliation, and academic qualifications, none of these factors were decisive in an individual student's ability to earn a certificate; even previous academic levels were not a significant barrier to successful course completion.

#### Video lectures and instructor presence

The video lectures and support videos remain unchanged from TEL MOOC 3, including 11 content videos presented by Dr. Martha Cleveland-Innes as the course instructor (for a total time of 52:27), introductory videos by Dr. Sanjaya Mishra and by Dr. Cleveland-Innes and Dr. Nathaniel Ostashevski. The course also includes 8 support videos by Dr. Ostashevski to introduce various technical aspects of the course and provide more detailed guidance on the final assignment.

#### Inspirer's role and presence

The Inspirer's role also remained largely consistent with previous offerings of TEL MOOC, including:

- presenting announcements to guide learners during the course (see Appendix G),
- highlighting weekly questions or concerns via announcements in the course and by email,
- provide a sense of direct teacher presence in participant-generated forums,
- introduce the weekly content through video announcements, and
- guide the facilitation team through weekly meetings to ensure cohesive messaging and support.

As noted above, the focus of the Inspirer's video announcements shifted from weekly summaries of student activity (with associated documents) to introductions to the weekly course content. This allowed the course activity to be discussed at a more general level and allowed for the development of an analogy between teaching practice and agricultural practice. The shift in TEL MOOC 3 from full release of the content at the beginning of the course to a staged, weekly release paved the way for this shift towards introductory rather than summative video announcements.

#### The role and presence of the facilitation team

Four facilitators were hired to support the fourth offering of TEL MOOC to provide additional instructional and course management support and to facilitate networking between participants. The facilitator's role is to:

- review and respond to (or redirect) questions from participants in the lesson activity and general forums,
- facilitate the networking between participants by highlighting and including direct links to participants with similar interests or issues, and
- record and present in weekly facilitation team meetings the successes and challenges seen in participant activity.

In addition to the four facilitators, two interns from Athabasca University's Doctor of Education in Distance Education program were included in the facilitation team to provide further observations and more focused forum facilitation on selected topics. While the interns did not provide the detailed, day-to-day facilitation described above, the inclusion of doctoral-level interns potentially

supports the further development of research capacity around TEL MOOC and MOOCs for development in general.

### Discussion participation

Discussion was an important component of TEL MOOC. Introduced early in the course as critical to building a community of inquiry, discussion participation was frequently encouraged by the inspirer and facilitators and was also a criterion for earning a certificate.

There were a total of 1103 discussion forums created; 12 of which accompanied the introduction message and weekly course lessons. An additional 7 forums were created by instructors/inspirer or facilitators, and the remaining 1084 forums created by participants of TEL MOOC 4.

Including initial posts, there were 9284 discussion posts made to the discussion forums: 524 by the instructional team and 8760 by MOOC participants. Posts were made by 1023 distinct students, and the average length was approximately 63 words per participant post, which is 43% longer than TEL MOOC 3's 44 words per post and substantially longer than the TEL MOOC 1 average of 17 words and TEL MOOC 2 average of 13 words per post. This increased length of post may be partly due to demographics, with a greater proportion of participants comfortable communicating in English.

### The Hangout

The Hangout is mooKIT's synchronous chat tool. This tool was available to participants throughout the duration of TEL MOOC but was not officially used as part of the content delivery. Limited to text-based dialogue, the Hangout was not ideal for live sessions, and with no ability to directly respond to individual messages posted, the Hangout tool acts like a continuous stream of text where an element of "live" presence is maintained by the instructional team.

The Hangout was, however, an active messaging tool in TEL MOOC 4, with 600 messages posted by student participants and 101 messages posted by instructors or facilitators, for a total of 701 messages. 269 students participated in the Hangout, or 11.1% of the total registrants. This compares to a usage rate of 15.6% in TEL MOOC 3 and 10.5% in TEL MOOC 2. The total number of words posted in student messages in TEL MOOC 4 was 4595, for an average of 7.7 words per message.

### Synchronous sessions

Adobe Connect was used for two synchronous sessions. This web conferencing tool allows for verbal communication, text chat, as well as PowerPoint presentations, screen sharing, and whiteboard functionality, all of which add interactivity and active engagement to web-based meetings. Athabasca University provided access to Adobe Connect; the application is external to the mooKIT learning management system.

Several days prior to each session, an announcement was sent to all MOOC participants inviting them to the session and to indicate their interest by pre-registering through the course survey tool. Before the session itself, participants were sent a link to the presentation room; upon meeting time,

participants clicked on the meeting link, entered their names at the prompt, and were put into the conference space.

The sessions were recorded for those unable to join the sessions live and to support further discussion; links to these recordings and the session slides were posted to the course resources page and in a general forum approximately one hour after the end of the session; see the top section of Appendix K for the listing of synchronous sessions on the course resources page. Recordings were especially useful in the case of TEL MOOC where participants were dispersed throughout the world, making it a challenge to schedule synchronous events that are suitable to all time zones.

Dr. Martha Cleveland-Innes held the first one-hour web conference on 5 October 2019. She presented on *Teaching Presence: Facilitation in online and blended learning*, discussing the Community of Inquiry framework, and how to facilitate with teaching and online and blended learning. The latter half of the session was reserved for questions and discussions. There were 60 attendees at this synchronous online meeting, and approximately another 80 watched the recording in the next 24 hours.

The second 60-minute session was led by Dr. Nathaniel Ostashewski on 16 October 2019, who conducted an interactive presentation called *Integrating Technology into the Classroom: What, When and Why?* There were 44 participants in Adobe Connect for this session, and approximately another 30 watched the recording in the next 24 hours.

Recordings of the synchronous sessions are available:

**Presentation 1:** Dr. Martha Cleveland Innes  
<https://athabascau.adobeconnect.com/pjj1g472idk2/>

**Presentation 2:** Dr. Nathaniel Ostashewski  
<https://athabascau.adobeconnect.com/ptzp416wdu0r/>

## Section IV. Participant Performance

### Weekly quizzes

Each week included one multiple-choice quiz of 8 to 10 questions, for a total of 5 course quizzes. Multiple attempts at the quizzes was important for TEL MOOC as it is an open professional development (PD) course. The option for learners to complete and achieve a Certificate of Participation or completion required a base grade of 60% on the quizzes.

The average quiz scores were as follows: Quiz 1: 79.9%, Quiz 2: 82.7%, Quiz 3: 79.5%, Quiz 4: 88.4%, Quiz 5: 79.6%. These average quiz scores are about consistent with those from TEL MOOC 3.

### Technology-enabled activity plans

Creation of a technology-enabled activity plan was the final assignment in TEL MOOC and a requirement for the Certificate of Completion. A total of 579 plans were submitted, of which 531 (91.7%) were successful.

As with TEL MOOC 3, participants were asked to submit their plan through the assignment dropbox available in the Week 4 submission space provided in the course. This submission procedure has proven to be more manageable for students and instructors than the option in TEL MOOCs 1 and 2 to submit directly to the open archive at the TEL Resources website. During the course, the archived plans from previous offerings of TEL MOOC were hidden at the TEL Resources site to prevent duplication of previously submitted plans; selected plans from the current offering will be added to this archive and made openly available between courses.

### Certificates

There were 685 certificates awarded (154 Participation certificates and 531 full Completion certificates) for a total certification rate of 28.2%, the highest certification rate of TEL MOOC so far.

Certificates were awarded to participants from 40 countries; see Appendix F for the full list. Table 2 lists the 10 countries with the highest number of certificates awarded. India, with the second highest number of registrations, received the greatest number of certificates and had a certification rate well above the course average. Greece had a notably high certification rate, boosted by a cohort from the International Hellenic University.

Table 2. Top 10 countries by certification rate.

Country	Completion	Participation	Total	Certification rate
India	109	20	129	45.6%
Greece	63	47	110	84.6%
Fiji	66	18	84	23.7%
Bangladesh	35	14	49	17.9%
Belize	25	3	28	31.5%
Canada	22	4	26	19.0%
Jamaica	22	4	26	24.5%
Swaziland	20	5	25	36.8%
Botswana	18	4	22	34.9%
Kenya	16	6	22	37.3%

The mooKIT certificate received by eligible participants is a tamper-proof digital certificate using cryptography based on the Blockchain technology. These certificates have two components: one that can be read by a human (like a PDF), and one that can be read only by a machine. The machine-readable part is secured against tampering and secures the human-readable part. A PDF certificate, in contrast, is readable only by humans and can be tampered with.

To store blockchain-based digital certificates, mooKIT provides a mooKIT Wallet app. Through this wallet, participants have unlimited access to their certificates at any time to share with employers or universities without having to ask the issuing institution. With mooKIT Wallet, certificates are tamper-proof and participants own their certificates absolutely.

## Section V. Survey Findings

Data collected from the TEL MOOC 4 registrants ( $n=2425$ ) has been discussed in previous sections of this report. Here, results from the third set of data will be presented: the results from those who consented to the pre-course survey ( $n=550$ ) and end-of-course survey ( $n=349$ ). The two surveys used the same consent letter; see Appendix H. A copy of the pre-course survey and the end-of-course survey is included as Appendix I and J respectively.

### Summary of pre-course survey results

Of the 540 responses specifying gender, 58.5% were female, 41.5% male. Of the 542 respondents who disclosed their age group, the approximate average age was 40 years old. In terms of level of education ( $n=542$ ), 85.6% held a bachelor's degree or higher, and 44.3% held a Master's degree or higher.

Of the 541 responses indicating a primary language, 382 (70.6%) reported English as a primary language; of the 159 who did not indicate English as a primary language, their primary languages were Hindi (27, 5.0% of all respondents), Bangla (22, 4.1%), Bengali (13, 2.4%), Greek (13, 2.4%), and Siswati (11, 2.0%). The most common country of survey respondents ( $n=534$ ) was Fiji (81, 15.2%), followed by India (39, 7.3%), Bangladesh (36, 6.7%), Belize (34, 6.6%), and Canada (32, 6.0%).

The largest proportion of respondents (224 of 526, or 42.6%) indicated between 6 and 15 years of teaching experience, with 147 (27.9%) having more teaching experience than this, 110 (20.9%) less than 6 years, and 45 (8.6%) education students.

There was a wide range of responses ( $n=528$ ) to the professional roles of participants, with many indicating multiple roles. The most frequent roles are shown in Table 3.

Table 3. Most frequent educational roles of TEL MOOC participants (more than one role may be selected).

Role	Number (%)
Face-to-face teaching	416 (78.8%)
Education support services	141 (26.8%)
Management/administration	130 (24.6%)
Research	124 (23.5%)
Online teaching or facilitation	111 (21.0%)
Blended/hybrid teaching (face-to-face and distance or online)	103 (19.5%)
Work-based training	103 (19.5%)
Distance education	92 (17.4%)
Other	43 (8.1%)

485 respondents indicated the level at which they teach, and some selected more than one level. 307 (69.3%) teach in K-12: 27 (5.6%) in early education, 89 (18.4%) in elementary, and 220 (45.4%) in secondary school (with 29 respondents indicating more than one of these). 221 teach in post-secondary: 96 (19.8%) in college, 119 (24.5%) in university, and 44 (9.1%) in vocational training (with 38 indicating more than one of these). 43 respondents work in both K-12 and post-secondary settings.

The majority of respondents self-reported that they were proficient or advanced in the use of software (447, 84.0%,  $n=532$ ), social media (407, 76.6%,  $n=531$ ), but only a minority reported that level of skill with creating digital media (178, 33.9%,  $n=525$ ), generally consistent with previous offerings of TEL MOOC. 217 respondents (40.9%,  $n=531$ ) had heard of the Community of Inquiry framework; of those, 52 indicated they knew it well but had not used it, while 32 use the framework in their teaching practice. Notably for the subject-matter of the course, almost half of the respondents ( $n=531$ ) reported they felt proficient or advanced in teaching or supporting learners through technology (252, 47.5%) at the outset of the course, approximately 5% higher than in TEL MOOC 3.

Of the 530 respondents who indicated a primary reason for taking the course, 292 (55.1%) took the course out of general interest in technology-enabled learning, 177 (33.4%) for professional development, 22 (4.2%) out of general interest in MOOCs, and 16 (3.0%) specifically to earn a certificate.

Although only a few had the certificate as their primary reason for taking the course, the overwhelming majority (494, 93%,  $n=531$ ) indicated that they planned to complete all activities and earn a certificate of completion. A small number (19, 3.6%) did not plan to earn a certificate, and 18 (3.4%) had not yet decided. These numbers are consistent with previous offerings of TEL MOOC and continue to suggest that successfully completing all activities and the course is seen as important to the participants, even when taking the course out of general interest.

Approximately half (51.4%) of those who indicated an intention to earn a certificate (and could be matched with student activity data) actually did earn a certificate (198 Completion and 30 Participation certificates). This certification rate is almost double the overall course certification rate. While it is expected that those who are able to locate and complete the initial survey are also more likely to complete course activities, it is also possible that declaring an intention to complete has a positive effect on actual completion. It must also be noted, however, that almost half of those who indicated an intention to complete did not in fact do so.

Survey respondents ( $n=532$ ) indicated that they learned of TEL MOOC through a wide range of sources, with the most frequent being colleagues or the workplace (212, 39.8%), email notifications (98, 18.4%), the Commonwealth of Learning website (65, 12.2%), and social media (61, 11.5%). This represents an increase in the importance of the Commonwealth of Learning website (from 6.4% in TEL MOOC 3) and a decrease in effectiveness from social media marketing (from 20.5% in TEL MOOC 3). The top references for TEL MOOC 4 are summarized in Table 4.

Table 4. Top referrers for TEL MOOC registrations.

Referrer	Number (%)
Colleagues/workplace	212 (39.8%)
Email notification	98 (18.4%)
Commonwealth of Learning website	65 (12.2%)
Social media	61 (11.5%)
Athabasca University	20 (3.8%)
Course brochure	7 (1.3%)
Commonwealth of Learning newsletter	7 (1.3%)
Ministry of Education	7 (1.3%)
Other	57 (10.7%)

### Summary of end-of-course survey results

The End-of-Course Survey was completed by 349 participants, double the number completed in TEL MOOC 3. Survey responses to questions regarding general satisfaction with TEL MOOC indicate that respondents were both very happy with, and grateful for, this learning opportunity.

The survey results indicate a very positive response to TEL MOOC 4, with 303 (94.4%,  $n=321$ ) agreeing or strongly agreeing with the statement, “Overall, I was satisfied with TEL MOOC,” and 311 (95.4%,  $n=326$ ) agreeing or strongly agreeing with “TEL MOOC met the learning objectives.” Respondent evaluations of various aspects of the course and its delivery are summarized in Table 5; the results are consistently strong, although there may be a small concern around workload expectations and manageability.

Table 5. Course satisfaction and content evaluation.

Survey question	Responses	Agree or strongly agree (%)
Overall, I was satisfied with TEL MOOC.	321	303 (94.4%)
TEL MOOC met the learning objectives.	326	311 (95.4%)
The TEL MOOC experience will assist me in the use of educational technology for teaching and learning.	323	306 (94.7%)
The amount of time I spent on the course met my expectations.	324	284 (87.7%)
The workload was manageable.	323	288 (89.2%)
The pace of the course was comfortable for my learning.	320	290 (90.6%)
The course activities reinforced the course material.	326	294 (90.2%)
The course activities did a good job of triggering my thinking.	325	303 (93.2%)
The course activities did a good job of holding my interest.	325	294 (90.5%)
The course material was of good quality.	325	295 (90.8%)
Assignments were helpful to acquire knowledge and skills.	325	296 (91.1%)
The quizzes helped to test my knowledge.	324	301 (92.9%)
The course website was user-friendly.	318	294 (92.5%)

Survey responses about the instruction and community aspects of the course were more mixed, as shown in Table 6. Of the three layers of instruction, it appears that participants responded slightly more positively to the Inspirer role, a rich and multidimensional role that combines instruction, direct student support, assessment, and a more personal presentation through weekly videos that respond directly to activity in the course. In a separate question, respondents were asked how much instructor involvement they would like to have had; 157 (49.7%) indicated they would like to have had somewhat or much more involvement, 135 (42.7%) about the same level of involvement, and just 24 (7.6%) preferring less or no involvement.

While the respondents may have been more ambivalent about the benefit of other students and their posts in supporting their learning, they responded very positively about the practical benefits of the discussions, seeing them as a useful resource. Similarly, although they may have had more mixed responses for any particular role within the community, they nevertheless felt a strong connection to

that community, with 87.3% agreeing or strongly agreeing to the statement, “I felt like I was a part of a community in the TEL MOOC.” This might suggest some uncertainty about the individual roles played by the Inspirer versus the facilitators, for example, but nevertheless an appreciation of the whole.

Table 6. Evaluation of instruction and the TEL MOOC learning community.

Survey question	Responses	Agree or strongly agree (%)
I experienced direct instruction during TEL MOOC.	325	252 (77.5%)
My learning was supported through facilitation by the Inspirer.	325	269 (82.8%)
My learning was supported through facilitation by the roving instructors.	324	254 (78.4%)
My learning about TEL was supported through my discussions with other students.	324	244 (75.3%)
My learning about TEL was supported by reading other student posts.	324	257 (79.3%)
TEL MOOC discussions provided me with information about resources that I will be able to use in my own teaching.	323	288 (89.2%)
I felt like I was part of a community in the TEL MOOC.	322	281 (87.3%)

The end-of-course survey also allowed for open-ended suggestions and feedback. Many respondents used this opportunity to thank the course organizers and to describe the value of the course for their practice:

It was a great experience and pleasure to be part of the TEL MOOC team I will implement all the activities which I have learnt. Vinaka !!!! TEL MOOC team.

TEL MOOC has come at the right time when we need it most. In fact, we needed it like yesterday. Thumbs up to the never relenting instructors, facilitator and my fellow participants. It was a journey worth-taking.

I learned a lot about using technology in education. In my teaching there are many constraints (internet is available but our school has one projector that is shared by all instructors, classrooms are outfitted with just desk-chairs and whiteboard, projector has to be moved from one room to the next, students would have to use their personal devices to access the internet and some do not have). Despite these however, the course was helpful in locating media and determining what is

best suited for use. I would like to say thanks to our instructors who were instrumental in delivering high quality instruction. It will take my delivery to a higher level.

The TEL MOOC on technology in education was well thought out, planned and orchestrated. Thank you to the entire team, for your time, your timely responses other resources; and for imparting much needed knowledge.

Several respondents highlighted the need for more time, often citing internet connectivity issues that prevented them from achieving a certificate:

The course is demanding. I spent more than 3 - 5 hours a week working on the activities of this course. Next time tell the learners that they will spend more than 5 hours per week in order to complete the course. My suggestion is to give us a "Certificate in Technology-Enabled Learning" not just certificate of participation or certificate of completion.

I was unable to complete the Activity due to internet accessibility. I relocated at the time thus the internet service was not relocated at my new living premises and the backup at school was down for an entire week, thus I fell behind on week four's reading because I was unable to print the information or access the videos. To complete and receive a participation certificate was very stressful. I am disappointed of my outcome because I really wanted to receive a certificate of Completion.

A number of respondents suggested adjustments or enhancements to the course, including greater interactivity such as peer-to-peer collaboration, more practical examples, greater and more varied use of video, and options for the final certification activity including for those not directly involved in teaching practice:

Peer discussion in the forum need to improve. Some peer assessment activities or quizzes can be included to encourage the peer activities....

I believe that the TEL MOOC could have utilized more of the tools mentioned so that viewers could see in a real way how the tools can be utilized in teaching and learning in the online learning space.

I like this program very much. I will use the trained knowledge in my professional life. It would have been nice to have more video and live video classes.

It was an exciting experience participating in the TEL MOOC. The way in which videos were prepared and instructors has explains the content it was wonderful. One new experience was that Activity was shown on the big screen and instructor explained it where we can find that particular activity and how can we complete this....it was real demo (about taking on activity plan). Excellent. Thanking you The Entire TEL MOOC Team

I could not complete the Activity Plan as I am not in academics but work in Central Government... This course enabled me to understand better why and how of the MOOC courses, which gives me clarity in taking policy decision and direct the capacity building workshop for Course Coordinators. People like me should be given an alternate activity plan which we could do so that we can gain proficiency in understanding integration of technology in education from policy perspective. Since I couldn't do the TEL activity plan I am only eligible for Certificate of Participation and not completion.

Finally, accessibility remains a challenge, particularly for the live synchronous sessions. Several respondents highlighted the value of the live sessions but pointed out the challenge of conducting them at appropriate times across time zones and the relatively inaccessible software used for recording playback:

increase the varieties of options that students can have when it comes to accessing the videos, files or resources. Some which were used were restricted from our end or we do not have the installed software to access.

When setting time for the live sessions, please consider other continents so that the live sessions are not very late at night.

Despite these specific challenges and suggestions, the open-ended feedback as provided by respondents in the end-of-course survey was positive and emphasized the need for TEL MOOC and additional courses like it:

I do not really have suggestions because I experienced a well planned and executed training program. It was a job well done, I am highly motivated and have per-registered for Blended Learning Practice MOOC.

## Section VI. Outcomes and Recommendations

As evidenced in the registration data, participant activity, and survey findings, TEL MOOC continues to be well-received by participants even as it continues to expand its reach to new practitioners and countries around the world. Despite the often-challenging material (as indicated by several survey respondents), participation and certification rates remain robust, with TEL MOOC 4 achieving its highest certification rate so far (28.2%), with most recipients earning the more advanced Completion certificate.

### Course content

The end-of-course survey indicates that the course content remains highly relevant and useful in developing effective and principled practice for technology-enabled learning. The survey respondents judge the material to be of good quality, well designed, and successful in attracting and holding their interest. In both the surveys and the course forums, participants express a strong appreciation and gratitude for the learning opportunity provided by the Commonwealth of Learning and Athabasca University through TEL MOOC.

**Challenges and opportunities.** Several survey respondents and forum posts suggest that the workload is more demanding than the listed three to five hours per week. Many were grateful for the one-week extension to complete the quizzes and final assignment, but several indicated that this was not enough, particularly those with intermittent internet connections. While it is not recommended to remove content, it may be possible to provide further guidance to distinguish the core material and concepts, allowing those with more limited time, language facility, or connectivity to focus on the most critical points and stay within the suggested three to five hour window.

This was the first offering in which the registration data distinguished those affiliated with government from those directly involved in teaching, and the proportion of registrants affiliated with government (21.7%) is considerable. One survey respondent from the government sector indicated that some material, and particularly the final assignment, may be less relevant for this group (and in this case may have discouraged the respondent from working towards a certificate). It can be anticipated that government will continue to be an important cohort within the student body, and while it may not be necessary to develop alternative assignments (as suggested by the survey respondent), it may be appropriate to provide further guidance on how to make the material and assignment more relevant to their needs, for example, how the teaching practice demonstrated in the final assignment relates to the development of good policy or leadership.

### Synchronous sessions

The live or synchronous sessions, originally conceived as a supplemental or enrichment activity, have been effective for providing additional content as well as motivating and strengthening the sense of a learning community. Survey responses indicate that many participants now see the synchronous sessions as an integral part of the course content and experience, with many asking for additional opportunities for meeting synchronously. The introduction of pre-registrations for the sessions in

TEL MOOC 4, while providing new, practical information for the instructional team, may also have increased the enthusiasm around these live “events”.

**Challenges and opportunities.** Finding a suitable time for a worldwide audience will always remain a challenge; the most effective solution has been to record the sessions for later playback by those in different time zones. However, in TEL MOOC 4, these recordings were made available only in their original format, Adobe Connect, which for some users requires additional software. Although this software is free, it must be installed; some survey respondents indicated that this made the recordings less accessible or, in some cases, blocked by employers. Converting the recordings to a more universal video format (for download or access through, for example, YouTube) should be considered as supporting greater accessibility to these increasingly popular events.

Currently TEL MOOC offers two synchronous sessions: one presented by the course instructor and the other by the inspirer. Several survey respondents asked for more sessions, workshops, or - more generally - a greater focus on direct, hands-on examples of implementations of technology-enabled learning. It may be worth considering adding one or more synchronous sessions specifically to present case studies of technology-enabled learning in practice, potentially drawing on experts in the Commonwealth of Learning or Athabasca University’s research network as guest presenters. Such sessions might satisfy requests for more discussion of direct implementation experience without necessarily adding to the core course content.

### **Instruction, facilitation, and the learning community**

The three-tiered instructional format of instructor, inspirer, and facilitation team continues to work very effectively in TEL MOOC, allowing for a reasonable distribution of labour across the instructional team and visibility over the course activity in this very active and dynamic MOOC. While facilitators new to the course tend to find the first week disorienting, weekly facilitators’ meetings and a shared Google Doc for tracking key course activity, questions, and concerns continues to bring focus and coherence to the overall facilitation task. The mixed results in the end-of-course survey as to the roles of individuals in the instructional team may simply reflect an uncertainty of exactly how those roles are defined; the more significant response may be the participants’ sense of being part of a learning community, which remains high (87.3% agreeing or strongly agreeing that they feel part of a learning community).

The introduction of interns from Athabasca University’s Doctor of Education in Distance Education program as additional facilitators added a new dimension in that the interns, as observers and to some extent researchers, were able to focus on single, narrowly-focused topics for discussion, allowing for a deeper exploration of those selected topics than is typically possible in TEL MOOC. To highlight these selected topics, TEL MOOC 4 used mooKIT’s “sticky” or pinned feature in the general forums for the first time; previously, this feature had only been used for the lesson activity forums. Pinning selected forums in the general discussion proved to be a very effective method to encourage longer, more complex discussions and its use should continue to be explored, albeit very selectively, as a complement to the “Hot Topics” introduced in TEL MOOC 3.

**Challenges and opportunities.** Beyond the pinned forums, which can have only a very limited application, the volume of participant-generated forums (averaging over 30 new forums a day) and the speed at which topics are bumped from the first screen in the forum list continue to be a challenge. The ability of participants to create their own forums around topics of interest to them and potentially relevant to others in similar contexts is a key strength of the mooKIT platform; survey respondents indicated other participants' posts as potentially very useful for them in practice. Nevertheless, many forums are created around a single word (for example, "Thanks") and multiple replies keep them ranked high in the list despite having little or no learning benefit. Some survey respondents asked for these forums to be deleted.

A better approach may be to place a greater emphasis on the Hangout to draw such posts away from the discussion forums. Arguably, the Hangout has been underutilized in TEL MOOC, and its usage rate in TEL MOOC 4 declined significantly from the rate in TEL MOOC 3, to just a fraction of the usage rate of the forums themselves. Potential steps to increase usage of the Hangout may include creating a new support video specifically for the Hangout, posting a standard reply to one- or two-word forums to redirect them to the Hangout, assigning a facilitator to focus on the Hangout, or possibly giving an appropriate level of credit for Hangout posts towards the requirements for a certificate of participation. Another possibility is to ask participants to introduce themselves in the Hangout first, before asking them to post in a forum; in particular, those with limited English may find the Hangout a more natural place to practice conversing with others, with lower risk and more immediate feedback than in the discussions.

### The mooKIT app

The mooKIT app is an important enhancement to the platform, improving accessibility, especially for those with limited connectivity or bandwidth looking to download the video content. The app was well-received in TEL MOOC 3.

**Challenges and opportunities.** Unfortunately, the app did not support TEL MOOC 4, and this functionality was not able to be restored during the course. Ensuring that the app supports TEL MOOC should be a high priority for any future offerings. Although the course resources section includes the audio of all lecture videos, it may be necessary to include video downloads as well, allowing participants to view them offline as intended on the app.

# Appendix A

## TEL MOOC information and log in page

<https://www.mooc4dev.org/telmooc/>

### Course description

Teachers who want to learn more about teaching with technology will find this Massive Open Online Course (MOOC), Introduction to Technology-Enabled Learning (TEL), informative and engaging. Using up-to-date learning design and simple, accessible technology, the course runs on an easy-to-use learning platform available via the Internet. The course is designed for teachers who want to build on their knowledge and practice in teaching and learning with technology. It will run over five weeks and requires approximately three to five hours of time each week. Designed to accommodate teachers' busy schedules, the course offers flexibility with options for learning the content. You will learn from readings, videos, discussions with other participants and instructors, meaningful exercises, quizzes and short assignments. Certification is available for those who wish to complete all required exercises and quizzes.

### Course contents

#### *Week 1*

Learners will investigate technology-enabled learning activities that make use of a wide range of educational technologies:

- successful learning approaches implemented by educators in various teaching contexts;
- open and available resources that support technology-enabled activities; and
- teaching presence in the context of technology-enhanced learning environments.

#### *Week 2*

Learners will explore various educational technologies to enhance teaching and learning through review and discussion of:

- the purpose and types of educational technologies;
- the unique opportunities provided by educational technologies; and
- how specific educational technologies enhance the teaching and learning experience.

#### *Week 3*

Learners will examine the application of educational technologies to address challenges in different educational contexts:

- how content, pedagogy and education technologies are interrelated;
- when to integrate educational technologies, subject matter and pedagogy to enhance teaching and learning; and

- the processes for selection and application of educational technologies to address particular challenges in different teaching contexts.

#### *Week 4*

Learners will develop and share a plan for technology-enabled learning in their own teaching and learning context by:

- creating a practical application of educational technology;
- sharing and explaining a personal, practical application of educational technologies; and
- discussing the challenges in creating technology-enabled learning plans.

#### *Week 5*

Learners will reflect upon the role teaching presence with technology and the processes used to develop educational technology-enabled lessons, including

- learning theory and activities which could work in their individual teaching context;
- potential roadblocks and challenges to implementation of technology-enabled learning; and
- how technology can support teaching presence.

### Target audience

Introduction to Technology-Enabled Learning is designed for teachers in diverse contexts – secondary education, post-secondary education and vocational education. You will benefit from this course if you are teaching face-to-face or in a distance/online environment. Anyone interested in improving teaching and learning would enjoy participating in this MOOC.

### Outcomes of this course

Participants will:

- Meet online with teachers all over the world who are also learning about technology-enabled learning
- Be supported by instructors who understand technology-enabled teaching and learning
- Explore easy-to-use technologies for classroom and online teaching
- Evaluate best fit technologies for teaching/learning contexts
- Experience a fun and collaborative learning environment via the Internet
- Receive a certificate on completion of required activities

### Certificates

Two levels of certification are available based on your level of participation and completion of tasks/activities:

- Certificate of Participation: requires participation in at least 3 discussion forums and completion of quizzes.
- Certificate of Completion: requires 60% on all quizzes, participation in at least 3 discussion forums and the creation and sharing of a technology-enabled object

### Start date

Sunday, September 22, 2019

Duration

5 Weeks

### Other information

Workload: 3 to 5 hours per week

Level: Introductory

Language: English

Prerequisites: None

### Instructors

Dr. M. Cleveland-Innes

*Professor of Educational Innovation at Athabasca University, Canada*

Dr. N. Ostashewski

*Associate Professor of Educational Innovation at Athabasca University, Canada*

# Appendix B

## TEL MOOC brochure

**Meet the Instructors**

**Dr M. Cleveland-Innes** is Professor of Education Innovation at Athabasca University in Alberta, Canada. She has been teaching for 35 years in all areas of education, face-to-face and online. Martha has received awards for her work on the student experience in online environments and holds a major research grant through the Canadian Social Sciences and Humanities Research Council. In 2011 she received the Craig Cunningham Memorial Award for Teaching Excellence and in 2009 she received the President's Award for Research and Scholarly Excellence from Athabasca University. Her work is well published in academic journals in North America and Europe. She is also a visiting researcher at the KTH Royal Institute of Technology, Stockholm, Sweden.

**Dr N. Ostaszewski** is Associate Professor of Education Innovation at Athabasca University in Alberta, Canada. He has been utilizing technology in teaching since 1990, both at the K12 and graduate education level. For the past 20 years Dr Ostaszewski has been training teachers how to incorporate technology into "worth-it" classroom, blended, and online activities. His current research areas include iPads in the classroom, networked teacher professional development, MOOC design and delivery and collaboration technologies in teaching. In 2012, he was invited to work in Western Australia at Curtin University assisting professors in implementing technology-enhancements for courses with up to 1500 students. His latest book is titled *Optimizing K12 Education through Blended and Online Learning* and he has several open access publications available online.

**Certification**

Two levels of certification are available based on your level of participation and completion of tasks/activities:

- **Certificate of Participation:** requires participation in at least 3 discussion forums and completion of quizzes.
- **Certificate of Completion:** requires 60% on all quizzes, participation in at least 3 discussion forums and the creation and sharing of a technology-enabled object

**Registration**

To register, please go to:  
<https://www.telmooc.org>

**For more information:**  
**Commonwealth of Learning**  
4710 Kingsway, Suite 2500  
Burnaby, BC V5H 4M2 CANADA  
Tel: +1 604 775 8200 Fax: +1 604 775 8210  
Email: [info@col.org](mailto:info@col.org) [www.col.org](http://www.col.org)  
Dr Sanjaya Mishra, Education Specialist, e-Learning

**Athabasca University**  
1 University Drive  
Athabasca, AB T9S 3A3 CANADA  
Tel: 1 (800) 788-9041 [ext. 6179] (toll free for Canada/US)  
Tel: (780) 675-6179 (outside Canada/US)

**TEL-MOOC inquiries:** [telmooc@athabascau.ca](mailto:telmooc@athabascau.ca)

**MOOC**

**Introduction to Technology-Enabled Learning 4**

22 September 2019 – 26 October 2019

LEARNING FOR SUSTAINABLE DEVELOPMENT

Introduction to Technology-Enabled Learning 4 (exterior)

### Course Description

Teachers who want to learn more about teaching with technology will find this Massive Open Online Course (MOOC), *Introduction to Technology-Enabled Learning (TEL)*, informative and engaging. Using up-to-date learning design and simple, accessible technology, the course runs on an easy-to-use learning platform available via the Internet. The course is designed for teachers who want to build on their knowledge and practice in teaching and learning with technology. It will run over five weeks and requires approximately three to five hours of time each week. Designed to accommodate teachers' busy schedules, the course offers flexibility with options for learning the content. You will learn from readings, videos, discussions with other participants and instructors, meaningful exercises, quizzes and short assignments. Certification is available for those who wish to complete all required exercises and quizzes.

### Who Should Participate?

*Introduction to Technology-Enabled Learning* is designed for teachers in diverse contexts – secondary education, post-secondary education and vocational education. You will benefit from this course if you are teaching face-to-face or in a distance/ online environment. Anyone interested in improving teaching and learning would enjoy participating in this MOOC.



### Learning Outcomes

Participants will:

- Meet online with teachers all over the world who are also learning about technology-enabled learning
- Be supported by instructors who understand technology-enabled teaching and learning
- Explore easy-to-use technologies for classroom and online teaching
- Evaluate best fit technologies for teaching/ learning contexts
- Experience a fun and collaborative learning environment via the Internet
- Receive a certificate on completion of required activities

### Course Details

**Length of the Course:** Five Weeks  
**Schedule:** 22 September 2019 – 26 October 2019  
**Workload:** 3 to 5 hours per week  
**Level:** Introductory  
**Language:** English  
**Prerequisites:** None

### Week 3

Learners will examine the application of educational technologies to address challenges in different educational contexts:

- how content, pedagogy and education technologies are interrelated;
- when to integrate educational technologies, subject matter and pedagogy to enhance teaching and learning; and
- the processes for selection and application of educational technologies to address particular challenges in different teaching contexts.

### Week 1

Learners will investigate technology-enabled learning activities that make use of a wide range of educational technologies:

- successful learning approaches implemented by educators in various teaching contexts;
- open and available resources that support technology-enabled activities; and
- teaching presence in the context of technology-enhanced learning environments.

### Week 2

Learners will explore various educational technologies to enhance teaching and learning through review and discussion of:

- the purpose and types of educational technologies;
- the unique opportunities provided by educational technologies; and
- how specific educational technologies enhance the teaching and learning experience.

### Week 4

Learners will develop and share a plan for technology-enabled learning in their own teaching and learning context by:

- creating a practical application of educational technology;
- sharing and explaining a personal, practical application of educational technologies; and
- discussing the challenges in creating technology-enabled learning plans.

### Week 5

Learners will reflect upon the role of teaching presence with technology and the processes used to develop educational technology-enabled lessons, including:

- learning theory and activities which could work in their individual teaching context;
- potential roadblocks and challenges to implementation of technology-enabled learning; and
- how technology can support teaching presence.

DEVELOPMENT • INNOVATION • ENGAGEMENT • TRANSFORMATION

Introduction to Technology-Enabled Learning (interior)

# Appendix C

## Promotional material, Athabasca University CDE website

### Technology-Enabled Learning (TEL) MOOC



**Course runs September 22 - October 26, 2019. Registrations open mid-June 2019. Please visit this page for updates.**

As technology becomes ever more pervasive in teaching and learning environments, teachers in diverse contexts face many challenges as well as opportunities. This five week Massive Open Online Course (MOOC) is designed to help teachers build their knowledge and skillset in teaching and learning with technology. Instructors Dr. Martha Cleveland-Innes and Dr. Nathaniel Ostashewski are excited to connect with teachers around the world in this free, flexible, and accessible course.

Teachers who want to learn more about teaching with technology will find this Massive Open Online Course (MOOC), *Introduction to Technology-Enabled Learning (TEL)*, informative and engaging. Using up-to-date learning design and simple, accessible technology, the course runs on an easy-to-use learning platform available via the Internet. The course is designed for teachers who want to build on their knowledge and practice in teaching and learning with technology. It will run over five weeks and requires approximately three to five hours of time each week. Designed to accommodate teachers' busy schedules, the course offers flexibility with options for learning the content. You will learn from readings, videos, discussions with other participants and instructors, meaningful exercises, quizzes and short assignments. Certification is available for those who wish to complete all required exercises and quizzes.

To learn more or register for this MOOC, visit <https://www.telmooc.org/>. Click to download the [TEL-MOOC Brochure](#).



# Appendix D

## TEL Activity Plan template

### Technology-enhanced Learning - Activity Plan

**Name:** *Firstname Lastname*

**Grade / Course:** *Course Name Number*

**Length of Activity:** *50 minutes*

**Lesson Summary:**

Students will .....

**Lesson Objective:**

To provide students with ....

**Resources/Technology – Teacher**

Interactive Whiteboard

Online Resources

- 

**Resources/Technology – Students**

Computer Lab or Student Laptop setting

Worksheet /Learning Materials

Online Resources

- 

**Intended Curriculum Learning Outcomes**

- Students will
- Students will

**Instructional Activities**

Teacher will.... (15 minutes)

Students ...(35 minutes)

**Learner Assessment**

Students will demonstrate

## Appendix E

### Registration by country

Country	Registrations	Percentage of total ( <i>n</i> =2425)
Fiji	355	14.6%
India	283	11.7%
Bangladesh	273	11.3%
Canada	137	5.6%
Greece	130	5.4%
Nigeria	126	5.2%
Jamaica	106	4.4%
Belize	89	3.7%
Barbados	84	3.5%
Mauritius	77	3.2%
Bahamas	69	2.8%
Swaziland	68	2.8%
Botswana	63	2.6%
Saint Vincent and the Grenadines	62	2.6%
Kenya	59	2.4%
Saint Lucia	45	1.9%
Kiribati	42	1.7%
Myanmar	31	1.3%
Zambia	31	1.3%
Antigua and Barbuda	30	1.2%
South Africa	20	0.8%
Malaysia	16	0.7%
United States	16	0.7%
Grenada	15	0.6%

Country	Registrations	Percentage of total ( <i>n</i> =2425)
Uganda	14	0.6%
Australia	13	0.5%
Dominica	13	0.5%
Papua New Guinea	13	0.5%
Namibia	10	0.4%
Guyana	9	0.4%
Pakistan	9	0.4%
Trinidad and Tobago	9	0.4%
Vanuatu	9	0.4%
Ghana	8	0.3%
United Kingdom	6	0.2%
Lesotho	5	0.2%
Rwanda	5	0.2%
Somalia	5	0.2%
Tanzania	5	0.2%
Haiti	3	0.1%
Liberia	3	0.1%
Philippines	3	0.1%
Sri Lanka	3	0.1%
New Zealand	3	0.1%
Cambodia	2	0.1%
The Gambia	2	0.1%
Kazakhstan	2	0.1%
Madagascar	2	0.1%
Morocco	2	0.1%
Samoa	2	0.1%
Solomon Islands	2	0.1%

Country	Registrations	Percentage of total ( <i>n</i> =2425)
Switzerland	2	0.1%
Thailand	2	0.1%
Ukraine	2	0.1%
Argentina	1	<0.1%
Brazil	1	<0.1%
Bulgaria	1	<0.1%
Burundi	1	<0.1%
China	1	<0.1%
Ecuador	1	<0.1%
Egypt	1	<0.1%
France	1	<0.1%
Georgia	1	<0.1%
Indonesia	1	<0.1%
Iraq	1	<0.1%
Italy	1	<0.1%
Jordan	1	<0.1%
Lithuania	1	<0.1%
Malawi	1	<0.1%
Mauritania	1	<0.1%
Mexico	1	<0.1%
Nepal	1	<0.1%
Netherlands	1	<0.1%
Portugal	1	<0.1%
Qatar	1	<0.1%
Saint Kitts and Nevis	1	<0.1%
Senegal	1	<0.1%
Sierra Leone	1	<0.1%

Country	Registrations	Percentage of total ( <i>n</i> =2425)
Spain	1	<0.1%
Sweden	1	<0.1%
Syria	1	<0.1%
Turkey	1	<0.1%
Venezuela	1	<0.1%
Zimbabwe	1	<0.1%
<b>Total</b>	<b>2425</b>	<b>100.0%</b>

## Appendix F

### Certification by country

Country	Completion	Participation	Total	Certification rate
India	109	20	129	45.6%
Greece	63	47	110	84.6%
Fiji	66	18	84	23.7%
Bangladesh	35	14	49	17.9%
Belize	25	3	28	31.5%
Canada	22	4	26	19.0%
Jamaica	22	4	26	24.5%
Swaziland	20	5	25	36.8%
Botswana	18	4	22	34.9%
Kenya	16	6	22	37.3%
Nigeria	19	3	22	17.5%
Bahamas	16	2	18	26.1%
Mauritius	13	3	16	20.8%
Barbados	14	1	15	17.9%
Saint Vincent and the Grenadines	15	0	15	24.2%
Myanmar	3	10	13	41.9%
Saint Lucia	8	0	8	17.8%
Zambia	7	1	8	25.8%
South Africa	7	0	7	35.0%
Antigua and Barbuda	5	1	6	20.0%
United States	4	1	5	31.3%
Dominica	4	0	4	30.8%
Kiribati	3	1	4	9.5%
Malaysia	4	0	4	25.0%
Grenada	2	0	2	13.3%
Namibia	1	1	2	20.0%

Country	Completion	Participation	Total	Certification rate
Trinidad and Tobago	1	1	2	22.2%
Brazil	1	0	1	100.0%
Ecuador	1	0	1	100.0%
France	0	1	1	100.0%
Ghana	1	0	1	12.5%
Jordan	1	0	1	100.0%
Lesotho	1	0	1	20.0%
Papua New Guinea	1	0	1	7.7%
Portugal	1	0	1	100.0%
Rwanda	0	1	1	20.0%
Switzerland	0	1	1	50.0%
Tanzania	0	1	1	20.0%
Uganda	1	0	1	7.1%
United Kingdom	1	0	1	16.7%
<b>Total</b>	<b>531</b>	<b>154</b>	<b>685</b>	<b>28.2%</b>

# Appendix G

## Course announcements

📣 Announcements	
▶ TELMOOC Closes Tomorrow: Final opportunity to ge...	3/11/2019
▶ TELMOOC One Week Extension!	26/10/2019
▶ Week 5 Video and Information	23/10/2019
▶ Live Session 2 connection details	16/10/2019
▶ Week 4 Video and Live Session Information!	14/10/2019
▶ Pre-register now for the second live online sess...	12/10/2019
▶ Week 3 of the TELMOOC: News and more!	7/10/2019
▶ TELMOOC Week 3: OERS	7/10/2019
▶ Live Session 1 connection details	4/10/2019
▶ Week 2 Information!	30/9/2019
▶ Week 1 Activity and Updates	25/9/2019
▶ Information to start TELMOOC4!	22/9/2019

# Appendix H

## Survey letter of consent



22 September 2019

**Dear Participant:**

We are researchers at Athabasca University and the Commonwealth of Learning. We invite you to participate in a research study entitled "Understanding the Experience of Technology-Enabled Learning". The purpose of this study is to create a detailed picture of the participant experience in this MOOC.

Your participation will involve completing two short surveys: one at the beginning of the course and one after the course has finished. Each survey will take between 5 and 10 minutes to complete. Some participants may also be contacted for a more detailed interview. This interview takes between 15 and 20 minutes in total.

Data about your general course participation, such as the assignments you submit and the time spent on different course activities, is also of interest to us. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. If you decide to stop or withdraw from the study, the information/data collected from or about you up to the point of your withdrawal will be kept as part of the study and may continue to be analyzed.

In either case, all information collected in this study will remain confidential. No individually-identifiable information about you, or provided by you during the research, will be shared outside the research/instructional team without your written permission. All research data will be kept on a secure drive for which only the principal researchers and instructional assistants will have access. Identifying information of participants will be removed from any reports that are seen by anyone other than the principal researchers and instructional assistants. The results of the research study may be published but your name or any identifying information will not be used. The published results will be in summary form only.

The findings from this project may provide information on how to improve the quality of learning experiences in other online courses. There are no known risks or discomforts associated with this research. If you have any questions about this research project, please feel free to contact Dr. Martha Cleveland-Innes via email at [martic@athabascau.ca](mailto:martic@athabascau.ca). This study has been reviewed by the Athabasca University Research Ethics Board. Comments or concerns regarding your treatment as a research participant should be directed to the Office of Research Ethics at 1-800-788-9041, ext. 6718 or via email at [rebsec@athabascau.ca](mailto:rebsec@athabascau.ca).

Use the buttons below to indicate whether you agree to participate in the research project described above. To correlate the surveys with your general course participation, we will also require the email address you used to register in TEL MOOC. If you choose to consent to a follow-up interview, we may use this email address to contact you; your email address will not be used for any other purpose or shared with anyone outside the research team.

Thank you.

Sincerely,  
Martha Cleveland-Innes PhD, Chair, Centre for Distance Education, Athabasca University

# Appendix I

## Pre-course survey

Where do you live?

- Europe/UK
- North America
- Caribbean/Central America
- South America
- South Asia/Indian subcontinent
- Asia
- Oceania
- Middle East
- Africa
- Please specify your country.

What is your primary spoken language?

- English
- Other (please specify)

What is your gender?

- Male
- Female

What is your age group?

- Under 20
- 20-29
- 30-39
- 40-54
- 55 and over

What is your highest educational qualification?

- Secondary/high school diploma
- College certificate or diploma
- Vocational school certificate or diploma
- Bachelor degree or equivalent
- Master degree or equivalent
- M.Phil or equivalent
- PhD or equivalent

What is your teaching experience?

- Education student
- Less than 5 years
- 6-15 years

- 16-25 years
- More than 25 years

What does your job involve? (select all that apply)

- Face-to-face teaching
- Distance education
- Online teaching or facilitating
- Blended/hybrid teaching face-to-face and distance or online)
- Work-based training
- Research
- Management/administration
- Education support services
- Other (please specify)

If your job involves teaching, at which levels do you teach? (select all that apply)

- Early education
- Elementary
- Secondary/high school
- College
- Vocational school
- University

How would you rate your current skill level when performing the following tasks? (none, basic, proficient, or advanced)

- Using standard computer programs (word processor, email, etc.)
- Using social media (Facebook, Twitter, etc.)
- Creating digital media (video, blogs, etc.)
- Teaching or supporting learners through technology

Before registering in this course, were you aware of the Community of Inquiry framework for online and blended learning?

- No
- I had heard of it
- I knew it well but had not used it
- I use it in my instructional/learning design and/or teaching practice

How did you find out about this course?

- Commonwealth of Learning website
- Commonwealth of Learning newsletter
- Course brochure
- Athabasca University
- Email notification
- Social media
- Colleagues/workplace

- OpenUpEd
- PCF8
- Other (please specify)

What is your primary reason for taking this course?

- General interest in technology-enabled learning
- Professional development (contributing to your CV, for example)
- Obtaining a certificate
- General interest in MOOCs
- Other (please specify)

Which of the following best describes your intention to complete this MOOC?

- To browse the course contents, but not planning to complete the course
- Planning to complete some course activities, but not planning to earn a certificate of completion
- Planning to complete all activities to earn a certificate of completion
- Have not decided whether I will complete any course activities

Do you consent to be contacted to participate in a follow-up interview as indicated in the consent form?

- Yes, I consent to be contacted
- No, I do not consent to be contacted

# Appendix J

## End-of-course survey

Please provide us with your feedback by indicating your level of agreement to the following statements (strongly disagree, disagree, neutral, agree, strongly agree).

- TEL MOOC met the learning objectives.
- The amount of time I spent on the course met my expectations.
- The workload was manageable.
- The pace of the course was comfortable for my learning.
- The course activities reinforced the course material.
- The course activities did a good job of triggering my thinking.
- The course activities did a good job of holding my interest.
- The course material was of good quality.
- Assignments were helpful to acquire knowledge and skills.
- The quizzes helped to test my knowledge.
- I experienced direct instruction during TEL MOOC.
- My learning was supported through facilitation by the Inspirer.
- My learning was supported through facilitation by the roving instructors.
- My learning about TEL was supported through my discussions with other students.
- My learning about TEL was supported by reading other student posts.
- TEL MOOC discussions provided me with information about resources that I will be able to use in my own teaching.
- I felt like I was part of a community in the TEL MOOC.
- It was okay to express emotion in TEL MOOC forums.
- The course website was user-friendly.
- The Course Support videos helped me navigate the course and understand course expectations.
- The Course Support forums helped me navigate the course and understand course expectations.
- The TEL MOOC experience will assist me in the use of educational technology for teaching and learning.
- Overall, I was satisfied with TEL MOOC.

Please indicate the level of instructor and facilitator involvement you would have liked to have had in TEL MOOC.

- Much more instructor and facilitator involvement
- Somewhat more instructor and facilitator involvement
- About the same level of instructor and facilitator involvement
- Less instructor and facilitator involvement
- I felt no need for instructor or facilitator involvement

Which weekly activities did you complete, or do you expect to complete? (Please select all that apply.)

- Less than one week
- Week One activities, discussions, and quiz

- Week Two activities, discussions, and quiz
- Week Three activities, discussions, and quiz
- Week Four activities, discussions, and quiz
- Week Five activities, discussions, and quiz
- A TEL Activity Plan

What suggestions do you have for the instructor and/or course design team?

If you would like to provide general feedback on TEL MOOC, please enter it here.

# Appendix K

## TEL MOOC resources page

### Resources

Resources and downloads

#### LIVE PRESENTATIONS



**PRESENTATION 1:** 5 October 2019

##### Teaching Presence: Facilitation in online and blended learning

Dr. Martha Cleveland-Innes

In this presentation, course instructor Dr. Martha Cleveland-Innes discusses the Community of Inquiry framework and how to facilitate with teaching presence in online and blended learning. *(The recording of this session will open in Adobe Connect.)*

» [watch a recording of the full presentation \(1 hour\)](#)

» [view slides](#)



**PRESENTATION 2:** 16 October 2019

##### Integrating Technology into the Classroom: What, When, and Why

Dr. Nathaniel Ostashevski

In this presentation for TEL MOOC, course inpirer Dr. Nathaniel Ostashevski discusses how to integrate technology into the classroom, including social media and more. *(The recording of this session will open in Adobe Connect.)*

» [watch a recording of the full presentation \(1 hour, 10 minutes\)](#)

» [view slides](#)

---

#### COURSE SUPPORT: Course Structure and Technical Issues



##### COURSE SUPPORT

This downloadable package contains complete transcripts of the Course Support videos, covering the instructional team, forums, quizzes, certification, and technical issues.

» [view PDF](#)

#### Audio recordings of the Course Support videos

[Introduction to the TEL MOOC instructors](#)

[About certification](#)

[About the forums](#)

[About the quizzes](#)

[Support for technical issues](#)

[Take a tour of mooKIT](#)

[About the TEL Activity Plan](#)

[Creating a TEL Activity Plan](#)

---

## WEEK 1: Models of Technology-Enabled Learning



### WEEK 1: Models of Technology-Enabled Learning

This downloadable package contains complete video transcripts, activities, and resource links for Week 1.  
[» view PDF](#)

Teaching in Blended Learning Environments: Creating and Sustaining Communities of Inquiry  
Vaughan, Cleveland-Innes & Garrison (2013)

[Collaborative Learning Technologies](#)

[Worksheet of indicators for the Community of Inquiry](#)

#### Audio recordings of the lecture videos

Welcome to TEL MOOC

1.0 Welcome to Week 1

1.1 The Community of Inquiry

1.2 Two Models: TPACK and TIM

1.3 On Teaching Presence

---

## WEEK 2: Technology in Education



### WEEK 2: Technology in Education

This downloadable package contains complete video transcripts, activities, and resource links for Week 2.  
[» view PDF](#)

Evaluation of Evidence-Based Practices in Online Learning  
U.S. Department of Education

#### Audio recordings of the lecture videos

2.0 Welcome to Week 2

2.1 Integrating Technology in Education

2.2 Benefits of Technology in Education

---

## WEEK 3: Open Educational Resources



### WEEK 3: Open Educational Resources

This downloadable package contains complete video transcripts, activities, and resource links for Week 3.  
[» view PDF](#)

Quality assurance guidelines for open educational resources: TIPS framework  
Kawachi, P. (2014)

Open Education and the Schools Sector  
Habler, Neo & Fraser (2014)

Understanding Open Licensing  
Habler, Neo & Fraser (2014)

#### Audio recordings of the lecture videos

3.0 Welcome to Week 3

3.1 Understanding OER

3.2 Types of Open Licenses

3.3 Finding OER

## WEEK 4: Applications of Technology



### WEEK 4: Applications of Technology

This downloadable package contains complete video transcripts, activities, and resource links for Week 4.

[» view PDF](#)

TEL Activity Plan TEMPLATE: [Word \(DOC\)](#) | [OpenOffice \(ODT\)](#)

TEL Activity Plan EXEMPLAR: [Word \(DOC\)](#) | [OpenOffice \(ODT\)](#)

### Audio recordings of the lecture videos

[4.0 Welcome to Week 4](#)

[4.1 Practical Application of Technology](#)

[4.2 Getting Help with Technology](#)

---

## WEEK 5: Creating Technology-Enabled Learning



### WEEK 5: Creating Technology-Enabled Learning

This downloadable package contains complete video transcripts, activities, and resource links for Week 5.

[» view PDF](#)

Three Generations of Distance Education Pedagogy

Anderson, T. & Dron, J. (2010)

### Audio recordings of the lecture video

[5.0 Welcome to Week 5](#)

[5.1 Creating Technology-Enabled Learning](#)