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Athabasca
University

MOOC

Introduction to Technology- Enabled Learning: Course Materials



Athabasca
University

Massive Open Online Course
on
Introduction to Technology-Enabled Learning

Course Materials



COMMONWEALTH *of* LEARNING

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Athabasca University is committed to providing open, accessible education and takes seriously its responsibility to create new knowledge about, and access to learning opportunities through, new digital technologies.

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Course Team

Dr. Sanjaya Mishra, Education Specialist, eLearning, COL
Dr. Martha Cleveland-Innes, Project Director and TEL MOOC Instructor
Dr. Nathaniel Ostashewski, Content Specialist and TEL MOOC Facilitator
Daniel Wilton, Instructional Designer, Web Developer and Analytics Specialist
JoAnne Murphy, Project Manager
Carmen Jensen-Tebb, Contract Administration Advisor
Levina Yuen, Instructional Design Advisor

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COMMONWEALTH OF LEARNING
4710 Kingsway, Suite 2500
Burnaby, British Columbia
Canada V5H 4M2
Telephone: +1 604 775 8200
Fax: +1 604 775 8210
Web: www.col.org
Email: info@col.org

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About the Course

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.

Learning Outcomes

Participants in the TEL-MOOC 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

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.

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

The course materials are provided here for information only in 'as is' manner to prospective learners and institutions interested in participating in the future TEL-MOOCs or adopting these to offer in their own programme. For a deeper engagement on the subject, we recommend you to join our future TEL-MOOC offer.

WEEK 1: Models of Technology-Enabled Learning

Objectives

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.

1.0 Welcome to TEL MOOC!

1.0.1 VIDEO: Course Introductions

Welcome to TEL MOOC, with Dr. Sanjaya Mishra (2:08)

<https://www.youtube.com/watch?v=9MeWvjtr1ts>

Welcome to Week 1, with Dr. Martha Cleveland-Innes and Dr. Nathaniel Ostashewski (1:45)

<https://www.youtube.com/watch?v=GxkrMXk86Sc>

1.0.2 ACTIVITIES

This page provides you with a basic overview of TEL MOOC, followed by your first two activities for the course.

Course Instruction

This course is led by Dr Nathaniel Ostashewski, who provides instruction with Dr Marti Cleveland-Innes, both of Athabasca University in Canada. You will also find a team of facilitators in the course forums to provide you with support as required.

Course Structure

TEL MOOC takes place over five weeks. Each week will look similar and will include a short series of lecture videos. Under each video, you will find a link to a set of Topic Activities: material to read, review, and respond to, with optional explore and self-assessment activities if you would like to look more closely into the content. Selected, openly-licensed documents are also available in the course Resources section.

Course Certificates

- To earn a Certificate of Participation, you must participate (post at least one message) in at least three course Activity forums and complete all five quizzes with at least 60% on each.
 - To earn a Certificate of Completion, you must do everything required for a Certificate of Participation and submit a TEL Activity Plan in Week 4 or Week 5.
- (All certificates will be issued by email after the end of the course.)

Where to Get Help

If you have questions or need help at any time during the MOOC, post a question to the facilitators in the forums or send us an email at telmooc@athabascau.ca.

Now visit the forum titled “Welcome to Week 1: Activities” to introduce yourself to your fellow MOOC participants, facilitators, and instructors. Please also take a moment to complete our pre-course survey.

RESPOND

Introduce yourself to your fellow participants by telling them something about your background, teaching environment, or any particular interests or experience you might have with technology-enabled learning. (If you are working towards a course certificate, please note that this forum *does not count* towards the minimum of three discussion posts, but we encourage you to post anyway.)

1.1 The Community of Inquiry

1.1.1 VIDEO

1.1: Community of Inquiry (5:39)

<https://www.youtube.com/watch?v=O8eKm1IBUIk>

Hello, TEL MOOC participants. My name is Dr. Marti Cleveland-Innes and I’m one of your instructors in this course called Technology Enabled Learning. I’m a professor at Athabasca University in Canada and a visiting researcher at the Royal Institute of Technology in Sweden. These topic videos will help introduce you to each topic in the course and will remind you of your learning activities for each topic.

Welcome to Week 1, Topic 1. Our first topic is the Community of Inquiry, sometimes called CoI. We’re starting here because using technology for learning means setting a foundation for new ways of thinking about teaching and learning. Using technology provides many opportunities to enable learning but brings with it expectations for a new role for teachers and for learners. Why is this important? Teachers need two skills beyond their subject knowledge: (1) basic technology skills and comfort with tech tools and (2) pedagogical practice aligned with meaningful student centred learning. This week is a review of the pedagogy that supports new learning with technology. The Community of Inquiry model is how we will work together in this course and a model you can consider using in your classrooms, face-to-face, blended, or online. In order to do this, you must look at the model from your view as a student in this course and then as a teacher. This model takes into account the value that comes from learning together. Here the technology is used to improve connections and collaboration for a meaningful learning experience.

Based on constructed social learning theory the model identifies actions in the Community of Inquiry that lead to social presence, cognitive presence, and teaching presence. Here are the definitions for you:

Social presence is the ability of participants to identify with other people in the community, communicate purposefully in a trusting environment, and develop interpersonal relationships by

way of projecting their individual personalities. This happens through open communication, expression of feelings, and group togetherness.

Cognitive presence means the extent to which learners are able to construct and confirm meaning for sustained reflection and discourse in a critical Community of Inquiry. To go through the four stage process, students experience the following thinking steps: First, they respond to a cognitive trigger, 2. they explore the new idea, 3. they integrate the idea into their own context and 4. resolve or accept the idea or solution for themselves.

Teaching presence is defined in three different elements: design, facilitation, and direct instruction. The direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes. This direction comes from the instructor and, as appropriate, from the students.

Each presence has its own elements and strategies that need to be understood for teachers to create this community and foster an environment for engaged deep learning. You will see in your readings a chart that looks like this. Please review carefully so you can see how the elements of a CoI hang together. Note that each presence has three or four underlying critical elements and that in the third column there are things to do and to watch for when creating a Community of Inquiry in your classroom. You will read more about these elements and how they are applied in the assigned reading for this topic. This is your Topic 1 video. There's also reading to explain this topic further.

Read Chapter 6 in Teaching and blended environments - creating and sustaining Communities of Inquiry. You're also going to respond to forum questions: What do you see as beneficial about the CoI as a way to understand technology learning for your students? What possible challenges do you see?

You're going to review the document, Collaborative Learning Technologies, and finally, assess yourself - identify an area where you want to learn more. Best wishes.

1.1.2 ACTIVITIES

After each lecture, you will be asked to read, review, and respond as required activities. You will also be presented with optional explore and self-assessment activities to take a deeper look into the lecture's topic. After the final lecture of each week, you will be asked to complete a quiz.

Participating by replying to the Respond questions of at least three Activity forums and completing all five weekly quizzes with at least 60% is required for a Certificate of Participation. A Certificate of Completion also requires the posting of a completed TEL Activity Plan in Week 4 or Week 5.

READ

Vaughan, Cleveland-Innes, & Garrison (2013). Teaching in Blended Learning Environments: Creating and Sustaining Communities of Inquiry. This chapter is available in the course Resources section, or you can download the chapter or entire book by selecting "Free PDF" at <http://aupress.ca/index.php/books/120229>.

REVIEW

Review the range of collaborative technologies and their applications in the document, Collaborative Learning Technologies, available in the course Resources section or at <http://tinyurl.com/collaborativecommunity>.

RESPOND

Throughout this MOOC, use the Activity Forums to respond to key questions based on the video lectures, readings, and your own experience. In the forum titled “The Community of Inquiry: Activities”, reply to the forum post with your responses to:

What do you see as beneficial about the CoI as a way to understand technology-enabled learning for your students? What possible challenges do you see?

EXPLORE

Watch the video at <https://www.youtube.com/watch?v=pZQm8Fta93k>. It is an instructor talking to students about what a community of inquiry is. Consider how you would introduce your students to a community of inquiry.

ASSESS YOUR LEARNING

Identify an area where you feel you want to learn more. Say how you will arrange to learn more.

Now use the forum titled “The Community of Inquiry: Activities” to reply to the RESPOND question above.

1.2 TPACK and TIM

1.2.1 VIDEO

1.2: Two Models: TPACK and TIM (5:15)

<https://www.youtube.com/watch?v=acdH0hnNSiI>

Hello again everyone. By now you have met the other instructors and are, I hope, feeling comfortable and present in this technology-enabled learning space. This week, two more models created to help teachers consider technology enabled learning will be reviewed. Just like the theoretical framework about a Community of Inquiry, all these models consider that using technology requires thoughtful consideration of pedagogy.

Remember, we said that there are two things that have to be created for technology enabled learning to be successful. There must be: understanding of the technology (how to use it) and the pedagogy that goes with it. The CoI focuses on pedagogy for any type of delivery. It is a foundation of actions for teachers and learners. The next two models work to bring technology and pedagogy together.

The first model is called the **TPACK** model: technological, pedagogical, content knowledge. It’s a framework that identifies the knowledge teachers need to teach their subject effectively with technology. The TPACK also adds the view of the subject itself as a key to TEL. The model creators believe and I quote here, “effective technology integration for pedagogy around specific subject matter requires developing sensitivity to the dynamic; the relationship between three

components of knowledge situated in unique contexts. Your context is complicated and specific to the individual teachers, grade level, school-specific factors, demographics, culture, and other factors because every situation is unique and no single combination of content, technology and pedagogy will apply for every teacher, every course, or every view of teaching.” (TPACK Explained, <http://www.matt-koehler.com/tpack/tpack-explained/>).

At the heart of TPACK framework is the complex interplay of three primary forms of knowledge: **content**, **pedagogy**, and **technology**. The TPACK approach goes beyond seeing these three knowledge bases in isolation. TPACK also emphasizes the new kinds of knowledge that lie at the intersections between them, representing four more knowledge bases teachers apply to teaching with technology. Pedagogical-content-knowledge, technological- content-knowledge, technological-pedagogical-knowledge, and the intersection of all three circles: technological-pedagogical-content-knowledge.

The second model puts together environment characteristics with ways to integrate technology. Here is a description from the website about this model. The **Technology Integration Matrix**, or TIM, illustrates how teachers can use technology to enhance or enable learning for K to 12 students. The TIM incorporates five interdependent characteristics of meaningful learning environments: active, constructive, goal-directed, authentic and collaborative. The TIM associates five levels of technology integration: entry, adoption, adaptation, infusion and transformation, with each of the five characteristics of meaningful learning environments. Together, the five levels of technology integration and the five characteristics of meaningful learning environments creates a matrix 25 cells as illustrated in the slide.

Here are your learning activities for this week. Read about TPACK and TIM frameworks. Reflect on how these models may be applied. Respond to your forum questions of how are these two model similar? How are they different? How would you use one or the other to apply technology? Review by identifying two technology applications that you would like to use in your own classroom, and finally, assess yourself- create a list of 3 to 5 bullet points of ideas or applications you’ve learned this week and want to remember. Good luck.

1.2.2 ACTIVITIES

As mentioned in the previous lecture, you are asked to read, review, and respond as required activities. You can also choose to complete the optional explore and self-assessment activities to take a deeper look into this topic.

READ

Go to <http://tpack.org> to review TPACK and <http://fcit.usf.edu/matrix/matrix.php> to review TIM. Pay close attention to how this model might be applied.

REVIEW

Identify two technology applications you would like to use in your own classroom. You can include these in your answer to the Respond question below.

RESPOND

Reply to the forum titled “TPACK and TIM: Activities” with your responses to:

How do these two models look similar? How are they different? How would you use one or the other to apply technology?

EXPLORE

There are many ways to think about technology. The video identified below reviews the definition of technology and how it applies in education. Ask yourself what technology you currently use, and why you might want to change it. https://www.youtube.com/watch?v=D17P3kqB3_0

ASSESS YOUR LEARNING

Create a list in your own notes of three to five bullet points of ideas or applications you've learned this week and want to remember.

Now use the forum titled "TPACK and TIM: Activities" to reply to the RESPOND question above.

1.3 On Teaching Presence

1.3.1 VIDEO

1.3: On Teaching Presence (5:41)

<https://www.youtube.com/watch?v=j6ET-j26Xng>

Hi again, everyone. It's Dr. Marti again with more information about TEL. I'm happy to see the activity in mooKIT and I'm learning things from your contributions.

Your last topic for Week 1 is focussed on teaching with technology. There is no other more important requirement for quality education than good teaching. What does that mean for fostering technology enabled learning? You'll be reading some ideas about teaching with technology offered by Tony Bates, a Canadian academic very famous for his work about teaching with technology. In his latest book called *Teaching in a Digital Age*, Tony reminds us about the work of two other researchers, Chickering and Gamson (1987), who gave us seven teaching principles to guide instructors.

More recently, Norm Vaughan, Randy Garrison, and I suggested an updated version of these seven principles with a view to principles that take technology enabled learning into account. These are: design your courses for open communication and trust, design your courses for critical reflection and discourse, create and sustain a sense of community by connecting students to each other, support purposeful inquiry through problem-based learning and dialogue, ensure students sustain collaboration by giving them the opportunity to lead in the course, and ensure that inquiry moves to resolution by facilitating cognitive presence and bringing closure to the inquiry, ensure assessment is congruent with intent of learning outcomes and use technology where possible.

Take time to think about what these principles mean to you and which ones you already use. Then go back to the chapter you looked at in Topic 1. There are technology tools listed at the website you visited where Dr Norm Vaughan discusses the specific tools and activities. Consider what you might use and what principles would apply when using the tools.

This week you will fill out a worksheet about teacher and student actions to create community while teaching, especially for technology enabled learning. These indicators are especially for teachers. Just like the CoI framework describes, teaching involves three categories: design and organization, facilitation, and direct instruction. For example, in design and organization, one of the indicators is that the instructor clearly communicated important course topics. Another indicator is: the instructor provided clear instructions on how to participate in course learning activities.

An indicator of facilitation is when the instructor is helpful in guiding the class toward understanding course topics in a way that helps students clarify their thinking. Another facilitation indicator is where instructor actions reinforce the development of a sense community among course participants.

Under direct instruction, indicators are things like: the instructor helps to focus discussion on relevant issues in a way that help students learn; the instructor provides feedback in a timely fashion.

At the end of Week 1, you'll have reviewed three models combining technology and pedagogy, considered the role of the teacher, and the things you will do when using technology to enable student learning. You've completed assignments and participated actively in these activities and on the discussion board. This week, read Tony Bates' chapter 11 in his book *Teaching in a Digital Age*. Respond in the forum to the following questions: Technology can provide opportunities for students to work together to learn skills and knowledge. How would you encourage and support peer teaching when using technology?

Review again what Dr. Norman Vaughan says about technology tools and complete the worksheet of indicators for the Community of Inquiry. Add up your score when you do and consider what you learned from the exercise. This week your assessment will be a quiz on all three topics. My best wishes.

1.3.2 ACTIVITIES

The read, review, and respond activities below are required. The explore activity is optional. The weekly quiz is required for a Certificate of Participation.

READ

Bates, T. (2016). *Teaching in a Digital Age*. Chapter 11: Ensuring quality teaching in a digital age. Unit 3: Decide how you want to teach. <https://opentextbc.ca/teachinginadigitalage/chapter/11-3-step-one-decide-how-you-want-to-teach/>.

REVIEW

Consider again what Dr. Norman Vaughan says about technology tools and complete the worksheet of indicators for the Community of Inquiry (see the course Resources section or Appendix to this document). Add up your score as directed on the worksheet and consider what you learned from the exercise.

RESPOND

Reply to the forum titled “On Teaching Presence: Activities” with your responses to:

Technology can provide opportunities for students to work together to learn skills and knowledge. How would you encourage and support peer teaching when using technology?

EXPLORE

There are many pieces to the process of rethinking and applying new technology to enable learning. This short video reviews key aspects of online learning environments and what students should do with them. <https://www.youtube.com/watch?v=CPAybysg0Gk>

ASSESSMENT

Complete the quiz for this week. Passing the quiz with at least five correct answers is required for a Certificate of Participation.

Now use the forum titled “On Teaching Presence: Activities” to reply to the RESPOND question above.

RESOURCES

Vaughan, Cleveland-Innes, & Garrison. (2013). *Teaching in Blended learning environments: Creating and sustaining communities of inquiry*. Download Chapter 6 at <http://aupress.ca/index.php/books/120229>

Collaborative learning technologies. <http://tinyurl.com/collaborativecommunity>

Guthrie, O. Online pedagogy: Community of Inquiry. <https://www.youtube.com/watch?v=pZQm8Fta93k>

TPACK. <http://tpack.org/>

Technology Integration Matrix (TIM) framework. <http://fcit.usf.edu/matrix/matrix.php>

Toppo, G. A different way to think about technology in education. TEDxAshburn. https://www.youtube.com/watch?v=D17P3kqB3_0

TPACK explained. <http://www.matt-koehler.com/tpack/tpack-explained/>

Bates, T. (2016). *Teaching in a digital age. Chapter 11. Ensuring quality teaching in a digital age*. <https://opentextbc.ca/teachinginadigitalage/chapter/11-3-step-one-decide-how-you-want-to-teach/>

Chickering, A. W., & Gamson, Z. F. (1987). *Seven principles for good practice in undergraduate education*. AAHE Bulletin, 3, 7.

WEEK 2: Technology in Education

Objectives

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.

2.1 Integrating Technology in Education

2.1.1 VIDEO

2.1: Integrating technology in Education (6:12)

<https://www.youtube.com/watch?v=lgKkIGxT-xk>

Welcome back. This video introduces you to Week 2, Topic 1: Integrating Technology in Education. This week, we begin our discussion identifying several reasons why educators are integrating technology into their teaching. Consider the title of this MOOC, “Technology Enabled Learning”. It is certainly true that today’s digital technologies are a key element of TEL, but what is most important is how these technologies are used in order to support learning.

First, let’s consider what we are talking about when we use the broader phrase, “technology in education”. Technology in education has been defined by the Association for Educational Communications and Technology as, “the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources”. (Education Technology; <http://www.instructionaldesigncentral.com/whatisinstructionaldesign>).

So technology can refer to much more than computers, tablets, or the Internet. In this MOOC when we talk about technology enabled learning we are referring to digital tools and media rich resources. In other words, computers, the internet, social media, mobile and tablet devices, open education resources, online videos and documents, just to name a few. These digital technologies are the focus of this MOOC as they are what 21st-century learners will need in order to explore, understand and express themselves.

It’s important to remember that technology in education can be implemented in many different ways and for various purposes. An example of this diverse toolset is seen in the explosion of Web 2.0 or social media tools on the internet over the past several years. Regardless of the diversity of tools, when we look at the research and practice in teaching, there are six main uses for technology in education. These are: using the technology to communicate, search, collaborate, create, assess, and development. Let’s examine each purpose in greater detail.

Communicate. This happens with video conference tools and chat. These are particularly useful for connecting with others without being bound to physical space or geographic location.

Search. This uses search tools, libraries, databases and resources. Technology tools can often help filter information based on specific criteria and to cross-check sources for its reliability or origins. Search tools are used all around the world and are often widely available.

Collaboration. Shared documents on the cloud, Web 2.0 tools, Google Docs, Padlet are some examples. Many educational technologies utilize the internet as a way to create, share, and edit content collaboratively with multiple users. These tools allow for group brainstorming, distributing team roles, and providing immediate feedback in real time.

Create. Here we produce multimedia content, video scripts and infographics. A great deal of educational technology encourages learners to produce their own multimedia content, infographics, etc. Creating content allows learners to utilize higher order thinking and evaluate content critically, then share with others in a meaningful way.

Assess. Here you can use grading tools, Web 2.0 tools, and quizzes. Many educational technologies allow for greater customization of assessments for both teachers and learners. Assessment items can be designed to provide immediate and constructive feedback and also allows learners to work at their own pace. In addition, assessment tools or rubrics can be quickly revised, shared with others, and can perform calculations automatically to save marking time.

Professional development. These are things like teacher PD, networking, other kinds of resources. Technology tools can also be used to support and facilitate professional development. Some of these tools, Twitter as an example, allow teachers to connect with other professionals and share resources. Additionally, these tools can be used to help gather useful resources from conference events, etc.

Directions for your readings and discussions are available on the MOOC site. Remember that the learning model for this course is to create a Community of Inquiry. Connect with your fellow students. You have material to read but we will then discuss with others in the forums. There are additional learning activities for you to assist in your review of this topic, as well as some assessment opportunities. Enjoy.

2.1.2 ACTIVITIES

The read, review, and respond activities below are required. The explore and self-assessment activities are optional.

READ

The U.S. Department of Education identified evidence of the value of blended learning in its report, Evaluation of Evidence-Based Practices in Online Learning. Available in the course Resources section or at

<https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

REVIEW

1. The U.S. Department of Education also provides examples of K-12 schools using TEL. See <https://www.ed.gov/oii-news/use-technology-teaching-and-learning> for examples. Here is the first paragraph from the website to give a review of their position on TEL:
“Technology ushers in fundamental structural changes that can be integral to achieving significant improvements in productivity. Used to support both teaching and learning, technology infuses classrooms with digital learning tools, such as computers and handheld devices; expands course offerings, experiences, and learning materials; supports learning 24 hours a day, 7 days a week; builds 21st century skills; increases student engagement and motivation; and accelerates learning. Technology also has the power to transform teaching by ushering in a new model of connected teaching. This model links teachers to their students and to professional content, resources, and systems to help them improve their own instruction and personalize learning.”
2. Campbell County School District offers TEL to students. Review the district’s website at <http://web.ccsd.k12.wy.us/techcurr/index.html> to see a few examples of how it uses technology in different grades and different subjects.

RESPOND

Reply to the forum titled “Integrating Technology in Education: Activities” with your responses to:

What do teachers need to bring new technologies into the classroom? How can you, in your situation, get what you need to add technology that you feel is valuable into your classroom?

EXPLORE

Athabasca University offers a training program for teachers that leads to credit in graduate school. They are supported by CANLearn, the Canadian support group for TEL. See what they do at <http://canelearn.net/cider-session-november-4-2015-blended-and-online-learning-and-teaching-bolt-promoting-teaching-for-21st-century-learning/>

ASSESS YOUR LEARNING

Write a paragraph about the support available to you where you work: support that will provide more information, training, and perhaps resources for you to move forward with TEL. Share this paragraph in the forum titled “Integrating Technology in Education: Activities”.

Now use the forum titled “Integrating Technology in Education: Activities” to reply to the RESPOND question above.

2.2 Benefits of Technology in Education

2.2.1 VIDEO

2.2: Benefits of Technology in Education (3:41)

<https://www.youtube.com/watch?v=sdexy65bUs8>

Hi everyone. Welcome to Topic 2 for Week 2: Benefits of Technology in Education. How does technology add to teaching or learning? While there are many different kinds of learning activities in education, we can think of them as being in two main categories: activities that use the technology and activities that don’t.

In the past, teachers and other professionals including doctors and lawyers relied primarily on low technology tools: approaches such as reading, writing, speeches, manipulative visual aids, role play, games, and so on. Now technology is everywhere, so it's not only advantageous to include some in teaching and learning, it's critical to engaging learners in a meaningful and effective way.

Many K-to-12 schools now utilize online educational social networks to connect teachers, parents and students together to communicate or report attendance, academic progress, school events, and activities.

In 1996, Jonasson penned what is become a common way to categorize how students interact with technology: learning about technology or technology as a subject, learning from technology where technology is used as a delivery tool, and learning with technology - technology as a cognitive partner. In his seminal work on mind tools, Jonasson encouraged teachers to go beyond the typical uses of computers to engage students in what we term in this course as technology-enabled learning.

According to Jonasson and Reeves (1996), technology is best used when **students**, not teachers, use it as a cognitive partner or tool to access and analyze information, interpret and transform that information into their own personal knowledge, and then represent that knowledge to others.

This week in your reading, reflections, and discussion with others we want you to consider the value, the benefits, affordances and drawbacks of technology. Technology, knowledge, skills and application are key skills for the 21st-century. Using technology in schools prepares our students for this. Is there anything they might miss using new technology? Consider this and other possible drawbacks as you look at the benefits of technology.

Removing Obstacles to Pedagogical Changes Required by Jonasson's Vision of Authentic and Technology-Enabled Learning is your reading for this week. Make sure you remember to read, review, respond, and assess.
Thank you and enjoy.

2.2.2 ACTIVITIES

The read, review, and respond activities below are required. The explore and self-assessment activities are optional. The weekly quiz is required for a Certificate of Participation.

READ

Ertmer, P. A., & Ottenbreit-Leftwich, A. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning.

<http://lrc-ead.nutes.ufjf.br/constructore/objetos/2%ba%20artigo%20-%20Removing%20obstacles%20to%20the%20pedagogical%20changes.pdf>

REVIEW

Things have changed and new technology has been added since Jonasson talked about technology. Your reading this week says, "As noted by Greenhow, Robelia, and Hughes (2009), Web 2.0 tools have the capacity to connect learners to a wide network of critical others who can offer feedback or

support.” In keeping with Jonasson’s view that technology in the hands of the student enables cognition, Greenhow, Robelia, & Hughes apply this to Web 2.0 tools. Review this article at <http://journals.sagepub.com/doi/full/10.3102/0013189X09336671>

RESPOND

Reply to the forum titled “Benefits of Technology in Education: Activities” with your responses to:
Is there anything they might miss using new technology? Consider this and other possible drawbacks as you look at the benefits of technology.

EXPLORE

Where will you find other teachers involved in transforming education with new pedagogy and technology? Look for professional organizations in your area involved in TEL. You can also look for global organizations and review their websites. Membership fees can be a barrier, but websites are often full of references and resource ideas. Have a look at <https://www.iste.org>, the site for the International Society for Technology in Education, and <http://www.distancelearningportal.com/partners/eadtu>, the site for the European Association for Distance Teaching in Universities.

ASSESS YOUR LEARNING

Create a list of professional organizations you wish to explore. Identify, review, and share your ideas with participants. See <http://www.studying2.com/instructional-technology> for ideas on organizations, if you need it.

ASSESSMENT

Complete the quiz for this week. Passing the quiz with at least five correct answers is required for a Certificate of Participation.

Now use the forum titled “Benefits of Technology in Education: Activities” to reply to the RESPOND question above.

RESOURCES

Jonassen, D. H., & Reeves, T. C. (1996). Learning with technology: using computers as cognitive tools. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 693–719). Bloomington, IN: Association for Communications and Technology.

The U.S. Department of Education. *Evaluation of Evidence-Based Practices in Online Learning*. <https://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf>

The U.S. Department of Education. *Use of Technology in Teaching and Learning*. <https://www.ed.gov/oii-news/use-technology-teaching-and-learning>

The Campbell County School District. <http://web.ccsd.k12.wy.us/techcurr/index.html>

Athabasca University. *Blended and Online Learning and Teaching (BOLT): Promoting Teaching for 21st-Century Learning*. <http://canelearn.net/cider-session-november-4-2015-blended-and-online-learning-and-teaching-bolt-promoting-teaching-for-21st-century-learning/>

Ertmer, P. A., & Ottenbreit-Leftwich, A. (2013). Removing obstacles to the pedagogical changes required by Jonassen's vision of authentic technology-enabled learning. *Computers & Education*, 64, 175-182. Retrieved from <http://lta-cad.nutes.ufrj.br/constructore/objetos/2%ba%20artigo%20%20Removing%20obstacles%20to%20the%20pedagogical%20changes.pdf>

Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age Web 2.0 and classroom research: What path should we take now? *Educational Researcher*, 38(4), 246-259. Retrieved from <http://journals.sagepub.com/doi/full/10.3102/0013189X09336671>

International Society for Technology in Education. <https://www.iste.org>

European Association for Distance Teaching in Universities.
<http://www.distancelearningportal.com/partners/eadtu/>

Instructional Technology, Studying2.com, Education Directory.
<http://www.studying2.com/instructional-technology/>

WEEK 3: Open Educational Resources

Objectives

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.

3.1 Understanding Open Educational Resources (OER)

3.1.1 VIDEO

3.1: Understanding OER (3:48)

<https://www.youtube.com/watch?v=5UENJpQ3vzM>

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.

3.1.2 ACTIVITIES

The read, review, and respond activities below are required. The explore, self-assessment, and survey activities are optional.

READ

1. Kawachi, P. (2014). Quality assurance guidelines for open educational resources: TIPS framework. Available in the course Resources section or at http://cemca.org.in/ckfinder/userfiles/files/TIPS%20Framework_Version%202_0_Low.pdf
2. Habler, Neo, and Fraser (2014). Open Education and the Schools Sector. Available in the course Resources section or at http://oer.educ.cam.ac.uk/w/images/5/5a/G1_Open_Education_and_the_Schools_Sector.pdf

REVIEW

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

RESPOND

Reply to the forum titled "Understanding OER: Activities" 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 the 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/oermovement> to see what kinds of questions are being currently researched about OER.

Now use the forum titled “Understanding OER: Activities” to reply to the RESPOND question above.

3.2 Types of Open Licenses

3.2.1 VIDEO

3.2: Types of Open Licenses (3:12)

<https://www.youtube.com/watch?v=SYnA6hDKqAw>

Hello again. Now that you’ve been introduced to OER, we want to tell you about types of licenses. When we talk about OER, there are a variety of copyright terms that relate to the type of use the authors intended for their work. When exploring OER, you will likely come across terms like fair use, fair dealing, remixing, share alike, no derivatives, and many more. But what do these terms mean for you as an educator? In this topic we will take a closer look at these licenses.

Open education resources fall under a variety of license types with the **Creative Commons** license systems being one of the most widely used. There are six Creative Commons licenses that provide a wide range of acceptable uses for the OER, from 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 two main elements that determine the type of Creative Commons license attached to an OER are:

- whether or not the resource is available for commercial use
- whether the creator allows derivatives of the resource which means that the resources can be altered and reused or repurposed.

In order to better understand the Creative Commons licenses we would like you to spend a few minutes exploring the Creative Commons licenses on their website, which you’ll find in your resources in mooKIT. As well, the document *Understanding Open Licensing* is an excellent guide developed by Bjorn Hebler, Helen Neo and Josie Fraser. It’s published by the Leicester City Council and was published under a Creative Commons BY license.

Finally, we’ve included a short video that explains how to choose a Creative Commons license. Please take the time to review these three resources that you’ve been provided with so that you could have a full understanding of OER and its copyrights.

3.2.2 ACTIVITIES

The read, review, and respond activities below are required. The explore and self-assessment activities are optional.

READ

1. Habler, Neo, and Fraser (2014). *Understanding Open Licensing*. Available in the course Resources section or at http://oer.educ.cam.ac.uk/w/images/0/0b/G2_Understanding_Open_Licensing.pdf
2. Choosing a Creative Commons License (video). <https://www.youtube.com/watch?v=Fh8bEoOKFrg>

REVIEW

Spend some time reviewing the Creative Commons website descriptions of their licences. <https://creativecommons.org/licenses>

RESPOND

Reply to the forum titled “Types of Open Licenses: Activities” with your responses to:

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)?

EXPLORE

MOOCs are another type of open resource that can provide an excellent source of continuing professional development. Some MOOCs and MOOC platforms to explore are Participating in the Digital Age MOOC at <http://www.curtincommons.com>, FutureLearn in the UK, Open2Study in Australia, Canvas in US, and Learning to Learn Online.

ASSESS YOUR LEARNING

Think about the kinds of OER that you have found in your searches this week and think about what kind of modifications you will need to make in order to meet the educational and technological contexts where you teach.

Now use the forum titled “Types of Open Licenses: Activities” to reply to the RESPOND question above.

3.3 Finding OER

3.3.1 VIDEO

3.3: Finding OER (3:42)

<https://www.youtube.com/watch?v=mfl7HaI7lv0>

Hello again. By now you should be aware of how OER can fit when using technology enabled learning in your teaching. Now that we know more about OER and the copyright permissions that are attached to them, let’s start finding and sharing.

There are potential challenges to keep in mind when you search for OER. For example, a certain resource may work perfectly well on your computer system, but it doesn’t necessarily mean that it

will work well for your students. Or, does the resource have a suitable level of material for your students or the curriculum you're teaching? As we have pointed out at the beginning of the week, suitability for your curriculum and instructional purposes are two of the key elements of selecting OER. Just like searching for anything on the internet, finding good resources takes time and practice and this is what we want to help you with in this topic.

So where can you find quality OER on the internet? While many resources can be found using popular search engines like Google or Yahoo, OER are more effectively found in online repositories collected for that purpose. You've likely heard of open access videos; video repositories such as Khan Academy and Teacher Tube are repositories for open source videos, while dedicated and organized OER repositories are also starting to become more common.

So let's review a few questions to keep in mind when looking for OER. 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 some of the questions you should keep in mind when you search for OER. This is what we'd like you to spend some time doing for the remainder of this week.

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.

3.3.2 ACTIVITIES

The read, review, and respond activities below are required. The explore and self-assessment activities are optional. The weekly quiz is required for a Certificate of Participation.

READ

1. Watch the video OER Search Techniques.
https://www.youtube.com/watch?v=0dMJzt5w_dk.
2. Explore the OPEN website's page, Find OER. <https://open4us.org/find-oer/>

REVIEW

Explore the OER Commons Website. <https://www.oercommons.org>

RESPOND

After viewing the OER Search Techniques video, spend some time finding a couple OER that you can see trying out in your classroom over the next few months. Post the link to the OER as well as a short explanation of why you selected the OER in the forum titled "Finding OER: Activities".

EXPLORE

In this explore activity, we would like to curate a list of OER websites or repositories around the globe so that we can continue to share even after this course is over. Digital curation, which is the collection and organization of URLs, is one way in which we can share online resources with other teachers. One social media tool that help us with this sharing is Scoop.it. Take a few minutes to explore TEL MOOC's OER Scoop.it page at <http://www.scoop.it/t/open-education-resources-1>. If you would like to contribute a URL to your favorite OER website, post your link to the forum titled "Finding OER: Activities" and ask for it to be included in Scoop.it.

ASSESSMENT

Complete the quiz for this week. Passing the quiz with at least five correct answers is required for a Certificate of Participation.

Now use the forum titled "Finding OER: Activities" to reply to the RESPOND question above.

RESOURCES

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

Habler, Neo, and Fraser (2014). Open Education and the Schools Sector. http://oer.educ.cam.ac.uk/w/images/5/5a/G1_Open_Education_and_the_Schools_Sector.pdf

Ashish Kumar Awadhyla. Framework to Assess the Quality of OER. <http://www.slideshare.net/AshishKumar70/framework-to-assess-the-quality-of-open-education-resources-oer>

Wiley, D. TED Talk on Openness in Education. <https://youtu.be/Rb0syrgsH6M>

Habler, Neo, and Fraser (2014). Understanding Open Licencing. http://oer.educ.cam.ac.uk/w/images/0/0b/G2_Understanding_Open_Licensing.pdf

Choosing a Creative Commons License. <https://youtu.be/Fh8bEoOKFrg>

Creative Commons. <https://creativecommons.org/licenses/>

Participating in the Digital Age MOOC. <http://www.curtincommons.com>

OER Search Techniques. Commonwealth of Learning. https://youtu.be/0dMJzt5w_dk

OPEN. Find OER. <https://open4us.org/find-oer/>

OER Commons. <http://www.oercommons.org>

TELMOOC OER Scoop.it. <http://www.scoop.it/t/open-education-resources-1>

WEEK 4: Application of Technology

Objectives

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.

4.1 Practical Application of Technology

4.1.1 VIDEO

4.1: Practical Applications of Technology (4:40)

https://www.youtube.com/watch?v=tJXUo_6VuO8

Welcome to Week 4. This week in the TEL MOOC, our goal is to assist you in planning a technology-enabled learning activity in an educational context that is familiar to you. In order to plan technology-enabled activities that are pedagogically valuable and effective, we will consider four key elements. These four elements are: the technology, the media, the context, and the purpose.

By now you know what we mean by technology. Now we need to consider what to choose of the many technology options we have. Some examples of technology questions we need to consider when selecting the technology for educational activities are:

- Do we have enough hardware?
- Do we have access to software that is appropriate for the level of the students using it?
- Will there be access to the Internet or other communication devices?

The second element to consider is media. In the open access book that you've already looked at, *Teaching in a Digital Age*, Tony Bates refers to media as text, graphics, audio and video that provide ideas and images in order to convey meaning. This definition is helpful in understanding that media, while it may be dependent on technology for being transmitted, requires separate consideration when planning for use in education. We can look at media as either content or as a message that we are communicating.

The third element to consider when planning a technology-enabled activity is the learning context. What we are referring to by learning context are the specifics of who, what, and where the teaching is delivered. Who are the students and what grade level of education are they? What topic and subject is being taught? Where are the students while they're engaged in the learning activity: in a classroom, online, or some blend of the two? These aspects of the learning context allow us to make appropriate selections and we are considering the technology and media.

The fourth and final element that needs consideration for a technology-enabled activity is the purpose of the activity. A framework we introduced in Week 1 in this TEL MOOC was the TIM or **Technology Integration Matrix**. We mentioned that this framework incorporates five purposes of technology enabled activities. These five purposes are: active student engagement, student collaboration, construction of new understanding, authentic real world connections, and goal-directed activities. While there may be other ways to categorize purposes for using technology, the TIM framework is one effective way for understanding how technology needs to be tied to an educational purpose in order to develop a pedagogically sound plan.

What we would ask you to do now is to spend time exploring how teachers have been using technology-enabled learning in their classrooms. We've provided a link for you to the TIM digital tools index which presents a collection of videos organized by technology, context, and purpose, and ask that you take time now and explore some of these videos showcasing technology-enabled learning.

Please read chapter 6 in Bates' book. Respond to the forums with other participants to questions about these four elements of a technology-enabled activity plan. Review pedagogical models from Week 1 in reference to these decisions and assess your learning to date.

4.1.2 ACTIVITIES

The read, review, and respond activities below are required. The explore and self-assessment activities are optional.

READ

Read the following sections of Bates, T. (2016). Teaching in a Digital Age.

- Pages 6.1: Choosing technologies for teaching and learning.
<https://opentextbc.ca/teachinginadigitalage/chapter/section-8-2-choosing-technologies-for-teaching-and-learning-the-challenge/>
- Pages 6.4: Broadcast vs communicative media.
<https://opentextbc.ca/teachinginadigitalage/chapter/8-3-broadcast-vs-communicative-technologies/>
- Pages 7.1: Thinking about the pedagogical differences in media.
<https://opentextbc.ca/teachinginadigitalage/chapter/7-1-thinking-about-the-pedagogical-difference-sof-media/>

You can also find the full book at <https://opentextbc.ca/teachinginadigitalage>.

REVIEW

Review the Grade Level Index or the Digital Tools Index at the TIM website to find videos that provide examples of lessons in the content areas in which you teach.

- Grade Level Index. <http://fcit.usf.edu/matrix/gradelevel.php>
- Digital Tools Index. <http://fcit.usf.edu/matrix/digitaltools.php>

RESPOND

Reply to the forum titled “Practical Application of Technology: Activities” with your responses to:
Are there specific types of technology that are appropriate for certain grades, ages, or subject areas?

EXPLORE

Explore the TIM Matrix page at <http://fcit.usf.edu/matrix/matrix.php> and explore some of the Levels and Characteristics categories in the Matrix and explore the lesson videos available from the MA/SC/SS/LA content button links.

ASSESS YOUR LEARNING

Think about and consider the technology, the media, the context, and the purpose of your plan that you will begin to build as you move forward in the development of the TEL Activity Plan. You may want to download the TEL Activity Plan Template and Exemplar now for your reference (see the course Resources section).

Now use the forum titled “Practical Application of Technology: Activities” to reply to the RESPOND question above.

4.2 Getting Help with Technology

4.2.1 VIDEO

4.2: Getting Help with Technology (3:58)

<https://www.youtube.com/watch?v=14pUj2e6gfw>

Now that you’ve had an opportunity to explore some technology implementations in various classroom settings, we’ll focus our attention on one of the key elements not directly represented in the TIM framework, and that is media.

You will remember that in the previous week, we introduced the idea that there are four elements of pedagogically sound TEL activities. We further described media as text, graphics, audio and video, that provide ideas and images in order to convey meaning. So we can say that media is the content of the lesson or activity, but how do we as educators choose and select effective media for our technology-enabled learning activities?

Let’s look again at Tony Bates’ open access book, *Teaching in a Digital Age*. His description of educational media is helpful in this regard. Professor Bates points out that research about educational media has confirmed a few findings, and I quote, “The critical point is that different media can be used to assist learners learn in different ways and achieve different outcomes.”

An important research finding is that using many media are better than using one as it allows learners with different learning preferences to be accommodated. This results in deeper understanding or gaining a wider set of skills, knowing that media variety supports success and provides even more complexity. Being able to provide a wide variety of media even when accessing open educational resources like those we explored in Week 3 presents several significant challenges for educators. Whether it’s the monetary cost to access, create, or develop media, or the time and effort needed, selecting media can be quite difficult. So where can an educator get some support for this task? For this, we suggest you review Tony Bates’ **SECTIONS** model of media and technology selection (Bates, 2016). The **SECTIONS** model provides a set of criteria or questions that can help an educator make decisions about which media or technologies to use.

The SECTIONS model stands for Students, Ease-of-use, Costs, Teaching functions, Interaction, Organizational issues, Networking, and Security and privacy. Try using this model as you begin your selection of media and technology. Take some time to read and review the SECTIONS model in Professor Bates' book. As always we will discuss this topic with other participants in the forum.

Your main assignment in this TEL-MOOC is the creation and sharing of a technology enabled learning plan for your specific teaching context. Here's a hint: this topic, SECTIONS, will be very helpful and completing that assignment.

4.2.2 ACTIVITIES

The read, review, and respond activities below are required. The explore activity is optional. The weekly quiz is required for a Certificate of Participation, and a TEL Activity Plan is required for a Certificate of Completion.

READ

1. Review the TIM frameworks at <http://fcit.usf.edu/matrix/matrix.php> and select an area in which you would like to create a TEL activity plan. In particular, consider the Context Indicators and Purpose Indicators, and think about the context and purpose of your plan as you begin to develop it in your mind.

- Context Indicators. http://fcit.usf.edu/matrix/download/tim_table_of_setting_indicators.pdf
- Purpose Indicators. http://fcit.usf.edu/matrix/download/tim_table_of_student_indicators.pdf

2. Read about the SECTIONS Model in Chapter 8 of Bates (2016).

REVIEW

Explore other lessons and continue to develop your TEL Activity Plan. If you haven't already, download the TEL Activity Plan Template and Exemplar now for your reference (see the course Resources section).

RESPOND

Explore resources, technologies, media, and interactions that will contribute to your TEL Activity Plan and begin filling out your plan template. Discuss any issues or make suggestions to your fellow TEL MOOC participants in the forum titled "Getting Help with Technology: Activities".

EXPLORE

Visit the TEL Resources website at <http://www.telresources.org>, browse through other activity plans, and register in preparation for uploading your TEL Activity Plan in the Assessment activity below.

ASSESSMENT

There are two Assessment activities this week.

1. Complete the quiz for this week. Passing the quiz with at least five correct answers is required for a Certificate of Participation.
2. During this week and Week 5, complete and post your TEL Activity Plan onto the TEL Resources website and copy the link to the Assignments screen.

Now use the forum titled "Getting Help with Technology: Activities" to reply to the RESPOND question above.

RESOURCES

Bates, T. (2016). *Teaching in a Digital Age*.

- Chapter 8. <https://opentextbc.ca/teachinginadigitalage/chapter/9-1-models-for-media-selection/>
- Pages 6.1: Choosing technologies for teaching and learning. <https://opentextbc.ca/teachinginadigitalage/chapter/section-8-2-choosing-technologies-for-teaching-and-learning-the-challenge/>
- Pages 6.4: Broadcast VS communicative media. <https://opentextbc.ca/teachinginadigitalage/chapter/8-3-broadcast-vs-communicative-technologies/>
- Pages 7.1: Thinking about the pedagogical differences in media. <https://opentextbc.ca/teachinginadigitalage/chapter/7-1-thinking-about-the-pedagogical-difference-sof-media/>

Technology Integration Matrix.

- Grade Level Index. <http://fcit.usf.edu/matrix/gradelevel.php>
- Digital Tools Index. <http://fcit.usf.edu/matrix/digitaltools.php>
- Context indicators. [http://fcit.usf.edu/matrix/download/tim table of setting indicators.pdf](http://fcit.usf.edu/matrix/download/tim%20table%20of%20setting%20indicators.pdf)
- Purpose indicators. [http://fcit.usf.edu/matrix/download/tim table of student indicators.pdf](http://fcit.usf.edu/matrix/download/tim%20table%20of%20student%20indicators.pdf)

Lesson plans.

- <http://lessonplanspage.com>
- <http://www.scholastic.com/teachers/lesson-plans/lesson-plans-index>
- <http://www.telresources.org>

WEEK 5: Creating Technology-Enabled Learning

Objectives

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.

5.1 Creating Technology-Enabled Learning

5.1.1 VIDEO

5.1: Creating Technology enabled Learning (6:39)

https://www.youtube.com/watch?v=AteHzeR_67s

Hello, this is Dr. Marti again with your Week 5 video in your TEL MOOC. This TEL MOOC is designed to provide experience and understanding about collaborative and constructed learning environments using technology to create enabled learning.

Our objectives were to provide and teach you how to:

- encourage collaborative, reciprocal and cooperative contact among participants,
- design learning activities with technology for high engagement and active learning
- model and expect self-direction, responsibility and timeliness
- encourage and support access to and consideration of multiple forms of information, and
- communicate clear objectives and high expectations and respect diverse competencies and ways of learning.

As a foundation for these objectives, you reviewed the **Community of Inquiry** framework, a model for collaborative learning in technology-enabled environments and beyond. There are new roles required for teachers and students to foster technology-enabled learning. The Community of Inquiry framework is founded in contemporary learning theories and is well researched. In this MOOC you had the opportunity to experience social, cognitive, and teaching process as part of your TEL MOOC experience.

We said that technology, as defined for this course, refers to digital tools and media-rich resources; in other words, computers, the internet, social media, mobile and tablet devices, open educational resources, and online videos and documents. Frameworks assist you in understanding all the things you need to consider when integrating the technology. You reviewed the **TPACK** and **TIM** frameworks. They are models about how teachers can use technology to enable learning for K-to-12 students. Where the CoI was originally developed for higher education and is now being used and researched in K-to-12, TPACK and TIM were developed for K-to-12 teachers but can be viewed from the perspective of higher education and adjusted accordingly. All three models can be

considered when you create your TEL implementation plan. Don't forget to consider the indicators of teaching presence in your plan.

Although there are many uses of technology and the technology itself can be a subject, this course is about technology to enable learning. TEL may include the learning about technology where technology is the subject, but in reference to making technology access and use appropriate for the learning at hand, technology as a delivery tool may provide improved access and increased learning engagement.

The technology can also act to increase or improve cognitive presence. When considering which tools to use, the following purposes have also been recommended: communicate, search, collaborate, create, access, and develop. Technology enables learning where it offers more opportunity to engage via purposeful activities.

These technology-enabled, purposeful learning activities can be supported by **open educational resources**. You now have detailed information about what they are, how they are licensed, and what quality measures are available. Searching for OER is supported by a number of repositories. You can also create your own and share them to participate in this important education movement toward openness.

When choosing or creating OER, don't forget to consider the following questions:

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

Last week we discussed how planning your technology enabled learning can start by also taking into consideration four key elements to support learner success: technology, media, context, and purpose. We identified the TIM framework as a very good tool, one which provides a way for educators to see what different levels of technology integration look like. Finally, we looked at one way to guide the selection of media and technology, the **SECTIONS** framework.

With these tools to guide you, it's time for you to create and share your own TEL activity plan. Attached to this video is a template for your TEL activity plan which you may like to use. You can develop one educational activity for a teaching situation you have now or may have in the future. We look forward to your discussions and sharing of ideas while you create your plan, and have provided a few other links to documents that may guide your technology selection. Happy creating!

5.1.2 ACTIVITIES

The read, review, and respond activities below are required. The explore is optional. The final quiz is required for a Certificate of Participation.

READ

Anderson, T., & Dron, J. (2010). Three Generations of Distance Education Pedagogy. Available in the course Resources section or at <http://www.irrodl.org/index.php/irrodl/article/view/890/1663/>

This final reading for TEL MOOC provides more background for the choices you will make when using TEL in your classroom. Written by two well-known experts in distance education pedagogy, this reading provides a review of learning perspectives and how teachers use technology based on the learning perspective. Look for the chart at the end of the article, just before the references.

REVIEW

Go back to previous readings, responses to forum questions, any videos offered in the last four weeks and take note of things you want to remember or things you hadn't noticed before. Consider these notes when creating your plan.

RESPOND

Reflect on and respond to the following question in the forum titled "Creating Technology-Enabled Learning: Activities":

Which pedagogical view will guide the choices you make when creating your TEL activities? Explain why this is your first choice and when, if at all, you may use other perspectives on pedagogy to guide your choices when using technology.

EXPLORE

Now that your work in TEL MOOC is over, you will want to develop your own process for staying familiar with the research and practice being used in technology-enabled learning. You have looked at websites with models and organizations that can continue to support you on your teacher professional development journey. Please consider joining other teachers at the BOLT (Blended and Online Learning and Teaching) Multi-authored Blog. See <http://bolt.athabascau.ca> for great discussion about TEL and consider participating with information from your part of the world. This Blog is a great example of how technology can help spread information and practice ideas among teachers distributed in many places and, as such, enables learning!

ASSESSMENT

Complete the final quiz for TEL MOOC. You must have six correct answers to qualify for a Certificate of Participation.

Now use the forum titled "Creating Technology-Enabled Learning: Activities" to reply to the RESPOND question above.

RESOURCES

Anderson, T. & Dron, J. (2010). Three generations of distance education pedagogy. *The International Review of Research in Open and Distributed Learning*, 12(3), 80-97. Retrieved from: <http://www.irrodl.org/index.php/irrodl/article/view/890/1663/>

Blended and Online Learning and Teaching (BOLT) Multi-authored Blog.
<http://bolt.athabascau.ca>



4710 Kingsway, Suite 2500
Burnaby, BC V5H 4M2
Canada
Tel: +1 604 775 8200
Fax: +1 604 775 8210
E-mail: info@col.org
Web: www.col.org