COMMONWEALTH of LEARNING
learning for development

SchoolNet South Africa

Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

The Commonwealth of Learning (COL) is an intergovernmental organisation created by Commonwealth Heads of Government to encourage the development and sharing of open learning and distance education knowledge, resources and technologies.

Published by:

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About CCTI

The Commonwealth Certificate for Teacher ICT Integration (CCTI)has been developed to improve teachers' experience teaching in the classroom using a range of information and communication technologies (ICT) appropriately, and increase school manager's involvement in the ICT implementation process in the school. It challenges school managers and teachers to constantly reflect on what they do in their school and classrooms and how ICT can be integrated into their evolving management and teaching styles. The CCTI has been designed as a distance education course and is aligned with the UNESCO ICT Competency Framework for Teachers. It is an open educational resource (OER) that the Commonwealth of Learning (COL) is making available to teacher training institutions throughout the Commonwealth and beyond. The material can be used as is or can be adopted and/or adapted into existing programmes. The learning materials are developed, tested and revised by SchoolNet South Africa (SNSA) through extensive consultations with teachers and teacher educators around the world.

The CCTI is designed for online delivery, and the PDF distribution is only for information of the prospective institutions and tutors to adopt/adapt these materials.

The CCTI is typically a two-year part-time course consisting of selection from nine courses. After two years the successful student would have completed eight full courses. Institutions will make their own decisions about how this course should be conducted, accreditation, which technologies to use and what collaboration tools to deploy. COL does not provide accreditation for this course. A face-to-face orientation of at least one full day is recommended. The length of the orientation depends on the prior experience of the participants with technology.

Further CCTI is based on the philosophy of reflective teacher practice and continuous professional development without disturbing the working environment of the teacher. Major highlight of CCTI are:

- **Activities-driven:** Activities are at the centre of the courses and guide educators to read supporting content, plan and implement classroom activities, reflect on practice and share experiences with the group.
- **Classroom/school context:** The all-important context of learning is the educator's school, classroom and subject needs. These are specifically identified by the educators themselves during the courses. The activities and content do not refer to any specific context, but sometimes illustrate a point with a variety of sample contexts.
- **Uses ICT as a tool in the work place:** The emphasis is on how educators and learners use ICT as a tool and integrate ICT into teaching and learning.
- **Community of learners:** The educators share their experiences with a group of colleagues online, using the messaging and discussion tool in a learning management system and other online communication tools.

- **Sharing classroom experience:** The emphasis is on classroom experience, reflection on that experience, sharing thoughts with the group online, contemplating change and implementing new solutions.

Course Requirement:

- Learners must have an initial teacher qualification to enter the course.
- Learners should be practicing teachers.
- Learners must be at least moderately computer literate and be able to perform basic office suite skills, browse the Internet and use email.

Courses

1. Professional Development with Technology
2. Designing Learning
3. Technology-Enriched Teaching
4. Education in a Digital Society
5. Innovative Approaches to Learning with Technology
6. Planning Learning Through Projects
7. Managing Technology-Rich Learning Spaces
8. Planning for Technology Integration
9. Change Leadership for Technology Integration

Assessment:

- No examinations
- Submission of assignments
- Portfolio assessment including quality of collaboration and reflection on learning

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Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

1 PROFESSIONAL DEVELOPMENT WITH TECHNOLOGY

1 Professional Development with Technology

Research demonstrates that teacher professional development is most effective when it is school-based and when teachers see it as directly relevant to teaching and learning. In the digital age, professional development activities have become de-centralised and individualised. At the same time they have become globalised and collaborative. In this course, you will select a focus for your own professional development and experience the variety of resources and tools available.

You will develop recommendations for leading professional development at your school. This course builds foundational knowledge and technology skills useful for participating in the CCTI programme and for planning a school-wide professional development strategy in Course 8: Planning for Technology Integration.

Learning Objectives

If you successfully complete the course you should be able to:

1. Select a professional growth goal and reflect on the efficacy of the available professional development resources pertaining to your goal.
2. Collect, curate and share relevant online resources in support of a professional growth goal.
3. Participate in a professional learning community/network relevant to your goal.
4. Use technology tools/demonstrate technology skills in support of professional development.
5. Relate your professional development experience in the course to the professional development needs at your workplace.

Preparation

You will require Adobe Reader to read the PDF format of the course documents. Click on the icon to download the latest version of Adobe Reader.

Setting the Scene

The Challenge

You are an isolated teacher in a school in your country. You sometimes feel “lost” professionally. You know that there is so much you could do to enhance your teaching and manage learning and/or other education issues more effectively with technology, but you just do not know where to start looking for support. We challenge you to address this insecurity in your professional life and develop a platform for accumulating and sharing professional development resources and ideas.

Assessment

In addition to a final assessment you will be assessed on a portfolio of achievements as follows:

1. Submit a summary of your current state of progress in professional development.
2. Create your own professional learning network.
3. Upload a video to your YouTube channel.
4. Share your social bookmarking or content curation site.
5. Share your reflections in a personal blog or wiki.

As a final product of assessment you will prepare a multi-media presentation using the tool of your choice. In this presentation you will:

1. Convey your enthusiasm about technology resources for professional development;
2. Promote professional growth planning using ICT;
3. Tell the story of your own professional growth journey throughout this course;
4. Conclude with a set of recommendations for the entire school staff.

Note: You are not required to develop a school professional development plan in this module.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Lesson** on subsequent visits to this page.

1.1 Where Am I?

In this lesson you will explore models that designate levels of teacher competency for technology integration. You will establish a personal goal for your professional growth on which you will focus for the duration of this course. You will establish a personal reflection space online using a blog or a wiki.

Learning objective:

- Select a professional growth goal and reflect on the efficacy of the available professional development resources pertaining to your goal.

1.1.1 Prepare

An audit

In order to plot your progress with technology and its integration within the curriculum you have to ask yourself: "What are the factors that influence my progress with technology integration in my teaching and learning?"

Here are some factors that could influence a teacher's progress with technology:

- Attitude
- ICT competence (ICT in this case refers to devices such as computers, laptops, tablets and similar devices)
- Self-belief
- Gender
- Teaching experience
- Workload
- Professional development
- Accessibility to technology
- Technical support
- Leadership support

Do you think that these are all valid factors influencing teachers' progress? What could you add to and what would you remove from this list?

1. Access the group forum topic called "Factors influencing progress with technology". Provide your input to the discussion by indicating (with reasons) what you would add to and/or what you would remove from the list above.
2. **Click on this link** to a survey which covers all the items of the list above.
3. Complete the survey form and click on Submit. We will analyse the result later

4. Many Commonwealth countries align to the UNESCO ICT Competencies for Teachers (CFT).
5. Open and read the **UNESCO-ICT-CFT_Module chapter**. Note the structure of three stages of teacher competencies (three columns) and the six topics into which teacher ICT competencies for teachers are divided.
6. Make a note of which cells best describe your competency in each of the six topics.

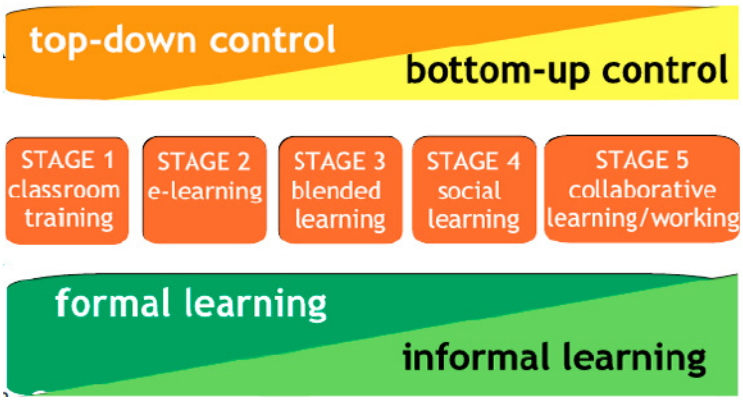
When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.1.2 Study

Social learning

In her blog **Learning in the Modern Social Workplace** Jane Hart posted an article called 5 Stages of Workplace Learning. These are shown as the 5 stages in Figure 1 below. You will be able to identify with instructor-led training at your school or other training venues (Stage 1) and you may have

experienced technology-based training, now known as e-learning (Stage 2). A blend of facilitator-led workshops and facilitated learning with technology is considered an evolution in professional development because there is less reliance on formal, controlled learning and you are beginning to be more in control of your own informal learning. Social learning (Stage 4) is (in the words of Jane Hart) "simply adding-on social (and even informal) functionality to the traditional model of learning". In this CCTI course we are trying to provide you with as many social and collaborative opportunities as possible, and assume that you will take control of your learning. Through conversations with you group you can add a significant component of very beneficial informal learning to your CCTI learning experience.



Adapted from: http://www.c4lpt.co.uk/blog/2011/12/06/5-stages-of-workplace-learning-revisited/

Figure 1: Evolution of approaches to professional development

1. Consider which stages of professional learning shown on the image you experienced prior to your participation in the CCTI courses.
2. Read **Professional Development in Social Learning: 3 different skill areas**
3. Use this article as the basis for discussion with your group in the group forum called "*Social Learning*". Through your discussion determine what actions your group members need to take to support each other as social learners.

4. Prepare a paragraph comment in which you summarise the main points of your discussion and relate these to your personal experience of professional development. Keep this for your assignment in the next section.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.1.3 Apply

1. Click here to see the survey results analysis. Compare your responses with the responses of all respondents. How do you rate your progress compared to this sample?
2. Create a document or media file of your choice in which you present a statement as follows:
   - Summarise your technology integration status in relation to previous respondents of this survey.

- Compare your initial comments with your notes on the UNESCO ICT-CFT (from the Prepare section) which further defines your state of ICT competence.
- Insert your conclusion about the CCTI approach to professional development (which you created in the Study section of the lesson).
- Save the document with the file name <yourname>_mystatus. e.g. Joe_Blogg_mystatus.doc

3. Click on the Upload Assignment link and upload the final version of your file. View your grade and a possible short feedback comment from your tutor by clicking on Check Grades under the Achievement tab in a few days' time.

Rubric for this assignment:

0-1	2-4	5-7	8-10
You have not compared your progress as outlined.	You have either significant omissions in the completeness of your comments or the reference to instruments.	You have commented about your progress as required, but could have made more reference to the instruments provided in this lesson.	You have made insightful comments about your progress in relation to the instruments provided in this lesson.

Once you have uploaded your document you will be able to click on **Mark Complete** (first time) or **Next Topic** and continue to the next activity.

1.1.4 Reflect

In this course you will use a blog or a wiki to reflect on your learning. Create a blog or a wiki using any free blog or wiki application of your choice as long as you are able to share it with the whole group and the tutor.

- You may like to explore **Edublogs**, **Blogger** or **WikiSpaces** or any other similar free applications of your choice.

4. Post your first reflection in which you reflect on your learning in the lesson. Consider this question:

What have you learned about your status of professional growth?

5. State your personal goal for your professional growth for the duration of this course. What do you aim to learn more about?
6. Finally, invite your tutor and friends to your blog/wiki.

Note: For guides on HOW TO do things with technology, conduct a search on **wikiHow.** This will contribute to solving your technical problems and enable you to help yourself when others are not around to support you.

Reflection Tasks Assessment Rubric

Level 1	Level 2	Level 3	Level 4
Demonstrates little or no understanding of how to implement ideas gained from the course.	Demonstrates minimal understanding of how to implement ideas gained from the course.	Demonstrates some understanding of how to implement ideas gained from the course, and a practical willingness to do so.	Demonstrates coherent understanding of how to implement ideas gained from the course, and a serious commitment to doing so
Total lack of reflection on own practice, attitudes and feelings.	Unwillingness to reflect on own practice, attitudes and feelings.	Rudimentary willingness to reflect on own practice, attitudes and feelings	Willingness to reflect seriously and honestly on own practice, attitudes and feelings

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.2 Smart Workers Network

In this lesson you will learn about professional learning communities/networks and join at least one related to your personal growth goal.

Learning objectives:

- Select a professional growth goal and reflect on the efficacy of the available professional development resources pertaining to your goal.
- Participate in a professional learning community/network relevant to your goal.
- Use technology tools and demonstrate technology skills in support of your professional development.

1.2.1 Prepare

Thinking about social media

Learning in the traditional workplace is often influenced by these ideas:

- Course designers believe that performance problems can only be solved by training solutions.
- Course designers believe the only valid solutions are those created/delivered by qualified trainers.
- Trainers ban access to social media resources – just to make sure.

- Course designers believe that courses (i.e. comprehensive solutions to problems) are the only way forward, and that there are no shortcuts.
- Trainers and course materials provide only instructionally-designed solutions.

Source: 2 – **The Smart Worker wants immediate access to solutions to his performance problems**

Who could you turn to when you need professional learning support? Take a moment to list these people/ organisations/tools. This list constitutes your current personal professional learning network. You could use social media to create and stay connected with this network.

What is social media? Watch the video **Social Media in Plain English**

"Social learning" refers to the use of social media for both formal and informal learning/training. If you use social media to enhance your professional competence you would include that social network in your Professional Learning Network (PLN).

Learning more informally requires a certain mindset and adopting such an approach may require you to change your current mindset to some extent. Table 1 shows eight key features of how a "Smart Worker" works and learns. How smart a worker are you? Print the page and use the table to tick off the column which most applies to your current practice.

Table 1: Key features - Smart Workers

	A Smart Worker…	I do this	I would like to do this	This is not important to me
1	recognises that s/he learns continuously as s/he does his/her job.			
2	wants immediate access to solutions to his/her performance problems.			
3	is happy to share what s/he knows.			
4	relies on a trusted network of friends and colleagues.			
5	learns best with and from others.			
6	keeps up-to-date with what is happening in his/her industry or profession.			
7	constantly strives to improve his/her productivity.			
8	thrives on autonomy.			

Can you identify areas in which you would like to grow professionally with social learning?

In the next lesson we will find answers to the question: "How can social media help me create a better personal learning network and be a smart worker?"

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.2.2 Study

Exploring social media networks

What do you look for in a professional development experience?

1. Access the group forum topic called "Professional development criteria" and explain the criteria you would want a successful professional development experience to meet.
2. Through your group discussion, develop a list of criteria you would use to evaluate a professional learning network.

You will now explore and evaluate at least two options of social media tools and their potential for meeting the criteria you have set up in the discussion.

Note: You are advised to read the terms of service and understand that there are privacy and copyright implications related to using commercial social media tools.

You may already be registered with one or more social media networks, but have you established their potential for your professional growth? You may choose any networks but some obvious choices could be:

Facebook

Many people have Facebook accounts for social reasons. If you create a second account for professional development you will be able to like pages and read the live feeds of blogs and websites on your wall. Here are some useful resources which you may like to study:

- **How to use Facebook**
- **14 Great Facebook Groups Every Teacher should Know about**
- **The Ultimate Guide to Facebook in Education**

Twitter

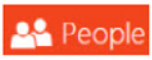
Twitter is one of the most popular resources for educators who want to connect with each other professionally. Read the following resources to learn more about Twitter:

- **Beginner's Guide to Twitter**
- This Edutopia blog is about how you can use Twitter, but especially how you can use it to invite more people to your blog: **How to Use Twitter to Grow Your PLN**.

 Google+

Follow the feeds others share and joining in the discussions held there.

- How to use Google+ (video)
- 10 Google+ communities teachers should know about
- Teacher tips on the use of Google+ in education



Microsoft Live.com – People

Microsoft offers you Skype which you can sync to other accounts such as Facebook, Twitter, Google etc.

Note: For other guides on HOW TO do things with technology, conduct a search on wikiHow. This will contribute to solving your problems and enable you to help yourself when others are not around to support you.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.2.3 Apply

Join social media networks

If you have not already done so, join or follow two social media networks which you researched in the previous lesson section. This should be in support of your own professional growth goal which you identified in the *Who Am I?* lesson.

In your own time, but before the end of this course, report to your tutor about your findings. This is your second assignment task. Use email to attach a simple document to your tutor in which you:

1. Provide the details (links to your account pages) of the networks you have joined;
2. Apply a checklist of your professional learning criteria (which you developed in the *Study* lesson section) to each network;
3. Mention some useful online resources and people that you have encountered and what they have had to offer you in achieving your professional development goal.

The document should be called “<yourname>_social_learning”.

Once you submit the document your tutor will use this rubric for this assignment:

0	1	2	
You have joined no social networks	You have joined one social network	You have joined two social networks	
0	1	2	
You have not applied your checklist to either network.	You have made some comments but not used a checklist	You have applied your checklist to both networks.	
0-1	2-4	5-7	8-10
You have not made many connections at all and have found no resources.	Even though you have made a few connections you have not found many useful resources.	You have found either human contacts or information resources (but not both) which are useful to your professional development goal.	The resources, both human and information, you have discovered through interaction with people will strongly enhance the pursuit of your professional development goal.

Once you are ready to proceed click on **Next Topic** to continue.

1.2.4 Reflect

Go to your blog/wiki and create a link to the social networks that you joined during or before this lesson.

Post a reflection in your blog /wiki in which you draw conclusions from this lesson and itemise the most useful lessons you have learned about social learning.

1. Do you feel you are a smarter worker/learner?
2. What makes you say that?
3. What next steps do you need to take to achieve your professional learning goal?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.3 Is it Better at the Movies?

In this lesson you will explore what is offered on the YouTube platform for professional development purposes and also become familiar with the variety of online, video-based services and collections for educators.

Learning objectives:

- Collect, curate and share relevant online resources in support of a professional growth goal.
- Use technology tools and demonstrate technology skills in support of professional development.

1.3.1 Prepare

Learn about YouTube

You have already encountered video resources in this course and no doubt in previous courses as well. As a teacher you have probably used some of these video resources in your subject teaching.

YouTube is one of the biggest collections of videos on the Internet. Will it prove to be a quality resource for achieving your professional development goal?

Take time to get to know the basics of YouTube before you proceed with the study and application of your learning. View this video for a full introduction to YouTube.

Full Introduction to YouTube (110Mb)

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.3.2 Study

Explore YouTube

During this lesson section you will explore and evaluate YouTube's potential for achieving your professional development goal.

1. Sign in to YouTube with your Google account details.
2. Conduct searches for resources that will provide support for your professional learning goal.
3. If you run out of time, mark the videos in which you are interested in the Watch Later category.
4. Create a playlist and add the best videos to your playlist. You may like to add a second playlist for other topics such as subject resources or technology tutorials.
5. Publish your YouTube channel on your blog together with a comment about how useful you found it to be in supporting your professional learning goals.
6. Share your playlist with your friends on the community site.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.3.3 Apply

Collaborating and exploring further

During this lesson we will work collaboratively as you apply the skills you developed in finding resources on YouTube. Our focus will be on other educational video collections.

Your tutor will place you in smaller groups (which we refer to as research groups) and invite you to join a group. You must do this before you are able to proceed.

Some recommended sites to explore and evaluate include:

- Vimeo
- TeacherTube
- TED Ed
- Khan Academy
- Pro Teachers Video
- Academic Earth
- Edutopia
- Teachers Media

Each team will be required to research two resources sites. The tutor will allocate your group two sites on a first-come, first-served basis, so put in your request as soon as you have made contact with your research group. Your group may select ONE site which is not listed above, in which case you should contact your tutor and request to use this alternative site.

1. Go to your research group forum and discuss the set of criteria you will use to evaluate the resource sites you will research. Assign one team member to set up a Google Drive document to collaboratively write these criteria. Share the document with all research group members and your tutor.

2. Discuss how you will divide up the work of researching the two sites. You may like to connect via a conference call using a video conferencing resource such as Skype or a Google Hangout.

3. Research the sites as planned and report back to the Google Drive document. What are the strong points of each resource site and what great resources did you uncover?
4. Your tutor will set up a wiki which you and the large group will populate with the information you have researched. A wiki page will be assigned to each educational site and the different research groups will all collaborate to write about the sites they have researched. More than one research group may have researched a particular site. Report on your findings by writing on the wiki page. The content can be organised in any way you would like but should at least include:

   - The pros and cons of the site.
   - A basic conclusion of your evaluation of the site – you will need to reach consensus with other authors who may not agree with you.
   - A list of some of the best resources that can be found on the site. Include a link and a one-sentence synopsis of each video.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.3.4 Reflect

Your reflection on this lesson will form part of the assessment for this course.

You must create a 1 minute video, which you will upload to your YouTube channel and then embed it in your personal blog. The content of the video must include:

1. A reference to your educational goal;
2. A reference to how your PLN is progressing;
3. A reference to both YouTube and other educational video resources that you have discovered and how these sites have helped you to achieve your goal;
4. A special recommendation on one of the best resources you have encountered.

Use the upload facility below the rubric to upload a file to your tutor once you have completed this. In this file, provide your tutor with the link to your YouTube Channel. The file name should be *<yourname>_Youtube*.

Assignment rubric:

0	1-2	3-4	5
Your video does not include any of the 4 required references	Your video includes less than 4 of the required references.	Your video includes all 4 required references.	Your video includes more than the 4 required references.
0-1	**2-4**	**5-7**	**8-10**
Your video comments are not providing useful information.	The quality of your video comments are useful at times but do not tell the story about your learning journey.	The quality of your video comments are useful and informative and viewers will get a sense of your learning journey.	The quality of your video comments shows deep insight into the value of the video resources you found and viewers will be inspired by your learning journey.
0	1	2	3
You video is not viewable.	Technically, your video has many disrupting flaws in sound and video quality.	Technically, your video is good with just one or two minor flaws in sound and video quality.	Technically, your video has perfect sound and video quality.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.4 Sharing is Caring

During this lesson you will learn to use online tools for managing and sharing the professional development resources you accumulate.

Learning objectives:

- Collect, curate and share relevant online resources in support of a professional growth goal.
- Use technology tools/demonstrate technology skills in support of professional development.

1.4.1 Prepare

Currently, in your personal blog/wiki, you may have been sharing some links to good resources. This may be reaching unmanageable proportions and/ or less attractive to readers. When including links in your blog/wiki, the least you should be doing is clearly annotating your links.

When you want to share a link make an entry in the post on your site that includes:

- The **title** of the resource
- A short **summary** of the resource
- An **image** clip from the resource
- A **link** to the original website (often the title is the active hyperlink as well)

If you add your own comments and notes about the article this will add extra value and originality to the post. Alternatively, you could just include links “inline” in the contexts of the paragraph text (such as the Diigo link in the next paragraph).

To help you manage large numbers of resource links we recommend online social bookmarking or curatorship of content.

Diigo

and

Delicious

Curatorship is more visual and organised than social bookmarking. Beth Kanter’s blog gives an excellent insight into content curating in the **Content Curation Primer**.

Curating or bookmarking content in this way will make you one of those educators on the web that so many other educators rely on for professional growth. It is time to start giving back to that community.

Spend this time understanding the difference between social bookmarking and content curation. Decide whether you want to create a social bookmarking site or curate content online. When you have made your decision you can proceed to the next part of the lesson.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.4.2 Study

Social bookmarking is one method of curation, but it does not encompass it. In particular, social bookmarking particularly lacks the ability for the curator to add significant context and commentary. It also offers curators a limited ability to organize content (through tags only).(*www.quora.com*)

What are the pros and cons of the various social bookmarking and curating options? Here is one page where you can start, then explore further by yourself.

Social Bookmarking vs Content Curation

Explore comments from reviewers and users online, then go into these sites and experience them. Make notes about the advantages and the limitations of the sites you visit.

Finally, go to the lesson discussion group called "*Curating Resources*" and share what you have learned with your group. Mention what sites you have accessed, what the reviewers said and what you experienced.

Make a decision on whether you will use a social bookmarking or a curator site based on what you have learned in your own exploration and the input you have received from your group.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.4.3 Apply

The task in this lesson will form part of the course assessment strategy.

You are required to sign up to either a social bookmarking site or a content curation site and populate it with resources. At this stage, the number of resources need not be large, but you should have at least 5-10 resources posted before you invite others to your site.

As you progress through this and other courses, you will now be in a position to share resources with the global community of educators integrating technology.

Important for assessment purposes: Once the site is created, create a simple document in which you invite your tutor to your site. Submit the document below.

Assessment rubric for this assignment:

0-1	2-4	5-7	8-10
You have created a site that cannot be shared.	You have created a site that can be shared but it is very plain and uninviting.	You have created an appealing site that can be shared.	You have created a very appealing and informative site that can be shared.
1	**2**	**3**	**4**
The site contains no more than one shared resource.	The site contains fewer than 5 resources.	The site contains at least 5 good resources.	The site contains 10 or more good resources.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.4.4 Reflect

Remember that you use your **personal blog/wiki** for your personal reflections on what you have learned. This is accessible to the people you invite.

The **course wiki** is a site where you and your research group are collaboratively creating the content for a website as you share and review the resources you find. This is accessible to a global audience.

Your **social bookmarking/content curation site** is where you share useful resources on your professional development goal with the global community.

Post a reflection in your personal blog/wiki entry in which you express the value of being a content curator as opposed to just being a content consumer. Do you feel ready and confident about this role? What will be the value to you of organising and sharing resources? Would you recommend this to all new users of technology?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.5 Trawling the Net

In this lesson you will explore online resources for professional development which are not focused on just the video format. This will include a variety of NGO, international and government resources for professional development.

You will continue to work in your smaller research groups and update the course wiki which is being constructed by all members of the course group.

Learning objectives:

- Select a professional growth goal and reflect on the efficacy of the available professional development resources pertaining to that goal.
- Collect, curate and share relevant online resources in support of a professional growth goal.
- Use technology tools/demonstrate technology skills in support of professional development.

1.5.1 Prepare

Static websites, blogs and wikis

In the various sections of this lesson you will be looking for sites that support teacher professional development. Some of these sites will be static information sites; others will be blogs or wikis. What is the difference between these three basic types of website? Table 2 summarises how these sites are typically used:

Table 2: Summary of uses for static websites, blogs and wikis

Static site	Blog	Wiki
Static information dissemination Promoting an organisation or point of view Links to other sites of information, blogs and wikis Interaction with readers often not high on the priority list May link to the organisation blog(s), Facebook page or Twitter channel Example: Edutopia website SchoolNet SA website	One primary author Expression of ideas and reflection Communicating successes and pitfalls Dissemination of information Facilitates "in the moment" thought Audience affirmation and reaction sought through comments Example: Edutopia Technology Integration blog SchoolNet SA blog	Collaboration between many authors Authors engage directly with the content Discussion between authors and readers Idea development Project collaboration Content creation by students Example: wikiHow

Can you think of some other differences? As you progress to the next part of the lesson, consider this table and what additions you can make to it. Consider which kind of sites are the most useful for teacher professional development.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.5.2 Study

Research staff development websites, blogs and wikis

1. Use the discussion group for this lesson and share ideas about the criteria one should use for evaluating educational websites.
2. Develop and upload your list of evaluation criteria and await your tutor's feedback.

3. Working on your own, locate five blogs, wikis or websites that support professional development for innovative teaching.

- Pay attention to the distinction between blogs/wikis used as resources for students and those for teachers.
- Consider sites that cater to both your professional development goal and to staff development in technology integration generally.

4. As you find and review these sites, add the best of these sites to your social bookmark or content curator site.
5. Share the real jewels you find with your friendship circle and/or discussion group.

You may like to look at some of these sites to start with, then explore more widely:

No reviews are given here because this is your task in this case.

- **Educational Technology and Mobile Learning**
- **Edutopia**–What works in Education
- **4Teachers.org** – Teach with Technology
- **Technology Integration for Teachers**
- **Education World**
- **Intel Education**
- **Microsoft Partners in Learning Network**
- **LiveBinders**
- **Classroom 2.0**
- **Teaching with Technology**
- **Education Channel**

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.5.3 Apply

Contribute to the course wiki

1. Now that you have completed your research, discuss with your research group how you will contribute to the course wiki. Assign each individual the responsibility of making a contribution to the wiki page(s) on Teacher Professional Development Sites and/or Teacher Professional Development Blogs and/or Teacher Professional Development Wikis.
2. Fulfill your assigned responsibility by editing the wiki page(s). Remember, the minimum requirements for an annotated entry are:
   - The title of the resource
   - A short summary of the resource

- An image clip from the resource
- A link to the original website (often the title is the active hyperlink as well)

If you add your own comments and notes about the article, this will add extra value and originality to the post.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.5.4 Reflect

Remember that you use your **personal blog/wiki** for your personal reflections on what you have learned. This is accessible to the people you invite.

The **course wiki** is a site where you and your research group are collaboratively creating the content for a website as you share and review the resources you find. This is accessible to a global audience.

Your social **bookmarking/content curation site** is where you share useful resources on your professional development goal with the global community.

Reflect on what you have learned during this lesson by posting your thoughts to your personal blog wiki.

- Do you still feel lost as an individual seeking professional development?
- How is your participation progressing in your PLN?
- How has your PLN helped you in completing the tasks of this lesson?
- What are your impressions of the power and pitfalls of collaboration with your research group and on the wiki page?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.6 Feeding the Need

In this lesson you will consider the technology integration professional development needs at your workplace. You will evaluate your own collection of resources, revise your presentation of the resources and prepare a strategy for supporting your peers in meeting their professional development needs.

Learning Objectives

- Collect, curate and share relevant online resources in support of a professional growth goal.
- Relate your professional development experience in the course to the professional development needs at your workplace.

1.6.1 Prepare

In this lesson you are going to consider and plan for the technology integration professional development needs of your colleagues in your institution.

Before you do that you will need to know the answers to questions such as:

- How well prepared are your colleagues for their own technology integration journey?
- What is the level of their technical skills?
- What is their understanding of technology-integrated teaching and learning?
- If you were to implement a professional development programme at your school, what social and infrastructure factors would you have to consider?
- Would the resources you've curated throughout this course be useful to your colleagues? How so?

What other information do you think is important to gather in order to establish their needs?

To find the answers to these questions you will need to survey your colleagues. If there is another CCTI student at your school doing this same module, work with him/her in designing a survey to establish the answers to the above questions. If someone has done this survey during the previous year, use that data and confine your survey only to missing data.

The survey will have to be non-digital because some colleagues who might need the most support may not have the necessary skills to access technology in order to complete the survey.

Do not gather unnecessary data such as gender and teaching experience; keep it short and just focus on establishing their needs.

Once you have drafted your survey questions, use the facility at the bottom of this page to upload it to your tutor for feedback before implementing it. This is not part of the assessment requirement.

Once you have received feedback from your tutor you can click on **Next Topic** to continue.

1.6.2 Study

Study the survey results

1. Wait until you have received the returns from your needs assessment survey.
2. Study the information you have gathered. If you conducted the survey together with a colleague, discuss the results with him/her.

3. It will be useful to include one or two charts showing the most significant survey results in your final assignment presentation (to be completed after this lesson). You may like to prepare these now so you can see the results more visually for your own benefit.
    - Idea: If you simulate the survey in a Google Drive Form (such as the one we used in the *Where Am I?* lesson) you can copy your survey results into the results spreadsheet and use the Google survey analysis graphs. **Click here to see how to do it**.
4. If there are aspects of the survey that puzzle you or you do not know how to address a specific need that has been expressed, share this with the group under the Survey Analysis forum topic.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

1.6.3 Apply

1. In concluding your analysis of the results, identify the specific actions you could take to support the needs of your colleagues. What would you recommend to your colleagues in order to promote a culture of technology-integrated staff development? You may like to **use this template** to assist your thinking.
2. Share your ideas on the group forum called Survey Analysis so you can mutually benefit from each others' ideas.

Once your tutor has sent you feedback, click on **Next Topic** and proceed to the Assignment.

1.6.4 Reflect

Post reflective comments in your personal blog/wiki in which you briefly summarise your understanding of your colleagues' technology integration professional development needs and record your recommendations for meeting these needs.

Reflect on how you have grown throughout this journey of staff development and in what ways you may now be able to provide a solution to the challenge that was presented to you in the first lesson.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

1.7 Final Assignment

As a final product of assessment you will prepare a multi-media presentation using the tool of your choice. This presentation should:

1. Convey your enthusiasm about technology resources for professional development;

2. Promote how technology can be used to plan professional growth;
3. Tell the story of your own professional growth journey throughout this course;
4. Conclude with a set of recommendations for the entire school staff.

How long must it be? As long as it takes to fulfill the above requirements. You should definitely not spend more than 4 hours on this assignment and, if you have participated well in the lessons, you should be able to complete it in far less time.

Note: You are **not** required to develop a school professional development plan.

Note: The file size limit for the assignment upload is 8Mb. If you are using online tools, upload a document that provides the link to this site. Make sure viewers have permission to view the presentation. It should not require the viewer to register on the site.

Assessment rubric for this assignment.

0-1	2-4	5-7	8-10
You have not indicated how technology can be used to meet your professional development goals.	Your presentation provides 1 or 2 items of evidence that your professional learning goals have been met.	Your presentation provides 3-4 good items of evidence that your professional learning goals have been met.	You have provided at least 5 items of excellent evidence of **how technology can be used to meet your professional development goals.**
0-1	**2-4**	**5-7**	**8-10**
You did not tell the story of your professional development journey in this course.	Your story of your professional development journey had major omissions and/or was not multimedia.	You told a good multimedia story of your professional development journey, with minor omissions.	You told a very compelling **multimedia story of your professional development journey in this course.**
0-1	**2-3**	**4-5**	**6**
Your enthusiasm for professional learning with technology was not evident.	You showed low levels of enthusiasm for professional learning with technology in your presentation.	You showed clear enthusiasm for professional learning with technology in your presentation.	Your enthusiasm for professional learning with technology was inspirational.
0-1	**2-4**	**5-7**	**8-10**
You made no recommendations to meet the needs of your colleagues.	You made recommendations to your colleagues, but many are not useful and/or practical and/or achievable.	You made good recommendations to your colleagues, but some are not useful and/or practical and/or achievable.	**The recommendations for meeting the needs of your colleagues** are all very useful, practical and achievable.

When you are ready to complete the course survey and submit your assignment, click **Mark Complete.**

COMMONWEALTH of LEARNING
learning for development

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Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

2 DESIGNING LEARNING

2 Designing Learning

The purpose of this course is to inspire you to explore the possibilities of teaching in innovative, educationally sound ways. It is a foundational course which can provide an impetus for a more detailed exploration of various aspects of innovative teaching and learning, both in terms of your own practice (as a stand-alone), but also specifically as a basis for the other modules. You will critically evaluate some current innovative approaches which are broadly constructivist in approach. By becoming familiar with some key concepts and some principles of instructional design, you will understand the need to adopt and foster a constructivist approach. You will be introduced to the habit of reflecting on your own practice, and also to discussion and collaboration within the group studying the module, thereby setting up those skills for future modules.

What is instructional design?

In this video, Dr Mark Bullen from the Commonwealth of Learning, provides an overview of the field of Instructional Design.

Video: **What is Instructional Design?** (5 min)

Learning Objectives

Once you have successfully completed this course you will be able to:

1. understand and apply some basic theoretical concepts and instructional design principles.
2. justify adopting a constructivist approach where you feel it is appropriate in your teaching.
3. approach your teaching in an innovative manner.
4. recognise the importance of being a reflective practitioner and have a personal blog to journal these reflections.
5. work in a collaborative manner with fellow-teachers.
6. analyse examples of good practice and draw out applicable principles and practical ideas for your own practice.
7. be familiar with and be able to use a set of useful online tools for thinking and for sharing ideas.

Your Blog

During this course, you will keep a blog. This blog will function as a portfolio for the course, and will, when taken as a whole, be the basis on which this course is assessed.

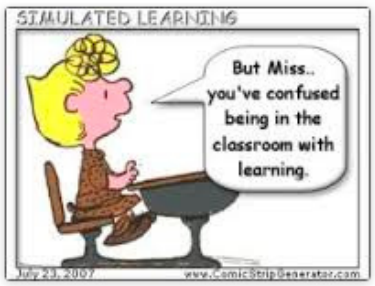
But it is also much more than a mere e-portfolio. It is intended that this blog will initiate an ongoing willingness to share ideas and resources, to reflect on success and failure, to contribute to the educational world beyond the walls of your own classroom and school.

Setting the Scene

Learning Focus

This lesson is the gateway to a new way of looking at teaching and learning.

- It invites you to become a reflective, questioning educator who thinks deeply about your own learning experiences.
- It encourages you to share ideas with other teachers.
- It calls into question traditional notions of learning as school-based, teacher-centred and highly structured.



Prepare

1: **Watch this video** which describes an experience of learning: **Sylvia Bahiga The experience of learning English** (10:25)

What are some key aspects of how Sylvia learned English? You might want to think about:

- How easy or difficult was it?
- How did she overcome the obstacles in her way?
- Who did most of the work?
- Where exactly did the learning take place?
- How important were school, teachers and classroom activities?
- How did she feel once she could understand and speak English well?

https://www.youtube.com/watch?v=UXKzSo1qXR8

2: **Think about your own learning experiences.** Think of a time where at the end you felt you had really learned something in a deep way.

Ask yourself the following questions, and any others you feel are relevant, about your experience:

- How easy or difficult was it?
- How did you overcome the obstacles in your way?
- Who did most of the work?

- Where exactly did the learning take place?
- How important were school, teachers and classroom activities?
- How did you feel once you had mastered what was being learned?

3: **Speak to colleagues and friends about their learning experiences.** Ask them similar questions to those above.

4: **Record your thoughts and feelings in your personal blog** which you set up in *Course 1: Professional Development with Technology.* Your blog post should have the heading: **Experiences of True Learning**

- Share your blog address with fellow course members.
- Visit others' blogs and comment on their experiences.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

Study

1: Read the following extract from an article entitled *Authentic Learning for the 21st Century: An Overview* by Marilyn M. Lombardi (2007):

Learning researchers have distilled the essence of the authentic learning experience down to 10 design elements, providing educators with a useful checklist that can be adapted to any subject matter domain.

1. *Real-world relevance: Authentic activities match the real-world tasks of professionals in practice as nearly as possible. Learning rises to the level of authenticity when it asks students to work actively with abstract concepts, facts, and formulae inside a realistic–and highly social – context mimicking "the ordinary practices of the [disciplinary] culture."*
2. *Ill-defined problem: Challenges cannot be solved easily by the application of an existing algorithm; instead, authentic activities are relatively undefined and open to multiple interpretations, requiring students to identify for themselves the tasks and subtasks needed to complete the major task.*
3. *Sustained investigation: Problems cannot be solved in a matter of minutes or even hours. Instead, authentic activities comprise complex tasks to be investigated by students over a sustained period of time, requiring significant investment of time and intellectual resources.*
4. *Multiple sources and perspectives: Learners are not given a list of resources. Authentic activities provide the opportunity for students to examine the task from a variety of theoretical and practical perspectives, using a variety of resources, and requires students to distinguish relevant from irrelevant information in the process.*
5. *Collaboration: Success is not achievable by an individual learner working alone. Authentic activities make collaboration integral to the task, both within the course and in the real world.*
6. *Reflection (metacognition): Authentic activities enable learners to make choices and reflect on their learning, both individually and as a team or community.*

7. *Interdisciplinary perspective: Relevance is not confined to a single domain or subject matter specialization. Instead, authentic activities have consequences that extend beyond a particular discipline, encouraging students to adopt diverse roles and think in interdisciplinary terms.*
8. *Integrated assessment: Assessment is not merely summative in authentic activities but is woven seamlessly into the major task in a manner that reflects real-world evaluation processes.*
9. *Polished products: Conclusions are not merely exercises or substeps in preparation for something else. Authentic activities culminate in the creation of a whole product, valuable in its own right.*
10. *Multiple interpretations and outcomes: Rather than yielding a single correct answer obtained by the application of rules and procedures, authentic activities allow for diverse interpretations and competing solutions.*

The full article can be obtained here: **http://engage.wisc.edu/dma/research/docs/Lombardi-AuthenticLearning.pdf**

- How do the ideas presented here compare with what you and your course colleagues have blogged about? Add ideas to your original blog, linking your ideas with those in the article.

2: After reading your fellow teachers' blog posts and the excerpt from Lombardi, **contribute to a shared mindmap "Key aspects of Authentic Learning"** by adding ideas, and sorting and organising the information. (Your tutor will provide details of where to find it; you could use this **example MindMeister mindmap** as a template.) Try to map real experiences to the key concepts given above.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

Apply

1: Watch this video of Richard Culatta at TEDxBeaconStreet. His talk is entitled *Reimagining Learning* (14:58). He presents a number of ideas on how education could be fundamentally changed.

- Which of the ideas presented by him fit with the ideas that you and the group have added to the group mindmap?
- Is he talking about Authentic Learning as set out in Lombardi's 10 points?

2: **Access the group forum topic** called " *To what extent do schools help or hinder real learning?"* Add your input to the discussion by indicating (with reasons) what you think about this topic.

3: **Make notes** on the main ideas in the Lombardi article excerpt and Culatta's TED Talk using a note-making app of your choice (eg OneNote, Evernote, etc.)

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

Reflect

Write another blog post. In this post, answer the following questions:

- As a teacher, to what extent do you create learning experiences in your classes?
- Is there anything you can immediately in your teaching to make your lessons more authentic learning experiences?

This blog post will be assessed according to the rubric below. **Submit your blog address in a document using the upload facility at the bottom of this page**. As the course progresses, your blog will be continuously evaluated.

Blog Post Rubric

Level 1	Level 2	Level 3	Level 4
Demonstrates little or no understanding of the topic at hand.	Demonstrates minimal understanding of the topic at hand.	Demonstrates some understanding of the topic at hand.	Demonstrates coherent understanding of the topic at hand.
Total lack of reflection on own practice, attitudes and feelings.	Insufficient reflection on own practice, attitudes and feelings.	Rudimentary willingness to reflect on own practice, attitudes and feelings.	Willingness to reflect seriously and honestly on own practice, attitudes and feelings.
Poor or non-existent technical proficiency.	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.1 Are You Seeing What I Am Seeing?

This lesson explores the idea that because we are all unique individuals, what we see is often not necessarily the same as what others see.

2.1.1 Study

The previous exercises in this lesson are making an important point:

People see the world differently because we are all unique.

This idea is a fundamental to the course.

Howard Gardner is one thinker who has promoted this idea in education in his Theory of Multiple Intelligences.

1: Watch this video of Gardner talking about his theory (7:55).

And/or **read this interview with Gardner: http://www.edutopia.org/multiple-intelligences-howard-gardner-interview**

2: Take a quiz to determine your unique balance of the various intelligences:

http://www.edutopia.org/multiple-intelligences-learning-styles-quiz

3: Make notes about Gardner's MI theory in your note-making app.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.1.2 Apply

1: Follow this teacher's journey as he attempted to put the theory into practice:

http://www.edutopia.org/multiple-intelligences-theory-teacher

2: Access the group forum topic "*Ideas for respecting individual's strengths in the classroom*." Provide your input to the discussion providing reasons for your opinions.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.1.3 Reflect

In your blog, write a post entitled: Using my strengths in my teaching. In your post, answer these two questions:

- What is your unique mix of intelligences, and how can you use that in your teaching to benefit the students in your class and not disadvantage them?
- How can you get to know your students' mix of intelligences better, and how can you use that knowledge to the benefit of each of them?

Read others' blog posts, and comment where appropriate.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.2 Does Learning (Need to) Happen in a School?

In this lesson:

- You are introduced to Sugata Mitra's "Hole in the Wall" experiments.
- You also reflect on your own experiences of learning in school.

It all boils down to this basic question:

Do schools provide the best conditions for learning to take place?

Image source: **http://exploringafrica.matrix.msu.edu/students/curriculum/m7b/activity3.php**

2.2.1 Prepare

The story so far…

In this course, we have touched on two important aspects of education:

- real learning happens when it is done in a way which allows us to experience something for ourselves, rather than just being told about it;
- we all have unique strengths and capacities, so our understanding of the world around us depends on who we are.

This brings us to **Constructivism** which is, broadly, an approach which attempts to promote this kind of education.

1: Watch this video of a **TED talk by Sugata Mitra** (22:32). He can be seen as a radical constructivist. What do you think?

2: What are the main points Mitra makes about:

- What the original purpose of schooling was?
- Why schooling is so resistant to change?
- What happens when children are given powerful resources and the space to learn in their own way?
- How should schools be run "in the cloud"?

Make notes in your note-making app.

3: Think, about your own schooling:

- How much freedom were you given to work things out for yourself in your own way?
- To what extent was your school a relic of the bureaucratic machine referred to by Mitra?

In your blog, write an entry entitled: *How my schooling encouraged me / did not encourage me to work things out for myself in my own way.*

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.2.2 Study

1: Read this excerpt which describes a Constructivist classroom:

A Classroom Example of Constructivist Teaching

As a researcher of constructivist teaching, I visited Pat Gray's classroom. His secondary language arts programme exemplified the attributes of constructivist teaching: learner-centered instruction in a democratic environment; active learners who build and create meaning and knowledge; learners who hypothesize, question, investigate, imagine and invent; learners who reflect and make associations with prior knowledge to reach new understandings.

Colourfully illustrated children's dictionaries, student-created serial postcards storying imaginary holiday adventures, and visual responses to poetry decorated the hallway leading into Pat's classroom. In the classroom itself, an abundance of student work was displayed throughout the room. Posted on all available bulletin board space was an uncommon and diverse array of written and visual student productions, sometimes several revised drafts of a written creation being exhibited to demonstrate the process involved in the product. In one corner of the ceiling was a compelling mobile, an imaginative and sensitive response to literature, as evidenced by the representation of characters, Laura, Amanda, Tom, and Jim, the characters from Tennessee Williams' The Glass Menagerie. There they hung, delicately suspended in their own separate worlds, connected only by a thin filament of thread, the infrangible ties of family and past history. And at the back and center of the room was an imposing five foot tall oak tree! With some ordinary construction paper, marking pens, and an interesting and resourceful treatment of various other types of art materials, an inventive group of students had depicted an intriguing and fascinating response to To Kill A Mockingbird . The oak tree was, in fact, a museum to house important artifacts from the story.

A number of years prior to this visit, I had been a guest in Pat's classroom, and the same kind of richness of student work and activity had greeted me at that time, and a warm image of an elementary classroom had been brought to mind. I remember the room was filled with red geraniums in terra cotta pots and contained round tables instead of the usual student desks, and although the first class of the day hadn't yet begun, the room already contained many configurations of grade nine students with an obvious sense of ownership of the classroom as they engaged themselves in an assortment of activities. One student busied herself watering the geraniums while two students, contorted faces pressed close to the aquarium glass, tried to engage the goldfish (Oscar and Syd Fishes, I was later informed) in a conversation. At a corner table, a huddled couple intently examined a Life magazine while next to them, a lively group of three or four students was occupied in transforming a rather large chunk of white bristol board into a lively looking collage. Their teacher was surrounded by a small group of laughing students involved in some discussion, and I remember I was impressed by the ease and comfort with which they interacted with him, and the affection they seemed to have for him, it being only the second week in September and Pat being new in the school. It was obvious to me that people enjoyed living there!

And now, as a graduate student, my research took me back to Pat's classroom where the experience, once again, was memorable.

A class of grade ten students arranged themselves in the groups in which they had been working the previous day. They were involved in a group translation into contemporary English of Julius Caesar, each of five groups translating a different act. In their attempts to modernize and present Shakespeare's work, students were required to come to an understanding of characters and events in the play, which would determine verbal and nonverbal representations. Later, the students would enact, in full costume, one scene of their choice from their contemporary constructions, with the remainder of the scenes to be presented in a readers' theatre. While the costumes for the enactment would be contemporary, the students had to make decisions regarding the most appropriate costumes for each character based on their own interpretations of and transactions with Shakespeare's text. The exercise was, as Pat later told me, an experience from which they would come to an understanding of linguistic evolution and character development. As I wandered from group to group, I encountered interesting and often entertaining discussions as students in the groups negotiated interpretations of Shakespearean discourse and debated how particular characters might say their new constructions. In the meantime, Pat was visiting each group, providing assistance where necessary, and probing to elicit personal responses and to encourage depth in their discussions.

Source: Constructivist Teaching and Learning, by Audrey Gray
http://www.saskschoolboards.ca/old/ResearchAndDevelopment/ResearchReports/Instruction/97-07.htm

2: Watch this video which gives a **brief introduction to the Constructivist approach** (4:23)

And/or **read this introductory article** on constructivism: **http://www.thirteen.org/edonline/concept2class/constructivism/**

3: Make summary notes for yourself in which you outline the key aspects of a constructivist approach to education.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.2.3 Apply

Constructivism Debate

1: Watch this video: If Students designed their own schools (14:26):

What does it tell you about student-directed learning? How does this feed into your understanding of Constructivist-inspired learning?

2: The Debate

To explore the ideas presented by a Constructivist approach to education, your group will **conduct a debate**. Access the group forum topic called "Constructivism Debate"

You will need to:

- Contribute at least two ideas as to why you think a Constructivist approach to education is a good idea and can work to make school a more effective learning environment;
- Contribute at least two ideas as to why you think a Constructivist approach to education is NOT a good idea and will NOT work to make school a more effective learning environment;
- Respond to at least one PRO-Constructivist contribution from another group member;
- Respond to at least one ANTI-Constructivist contribution from another group member.

In your blog, write a post entitled: *Summing up the Constructivism Debate*. You may choose either side of the debate.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.2.4 Reflect

Write a blog post entitled: *Lesson 2: Feelings*

In your blog, write a reflection on how you are feeling at this stage with regard to your own teaching. How has this course challenged your understanding, and how does that make you feel? Try to explore those feelings, and see why you might have those feelings. If you have positive feelings, explore where those might lead you in the future. If negative, how are you going to deal with the issues which are affecting you?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the **Lesson Page** and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.3 Something Old, Something New…

In this lesson, you explore John Dewey's major contributions to education. As you work through the materials, you will gain a critical perspective on traditional schooling and see that Dewey's approach was not a radical fad. Further, you will also see that the essence of educational practice that is in harmony with a constructivist approach, involves active, critical enquiry, and is based on the student's experience, rather than strict obedience and memorisation.

2.3.1 Prepare

> *All experience is an arch wherethrough*
> *gleams that untravelled world whose margin fades*
> *for ever and for ever when I move.*
>
> *Alfred Lord Tennyson* from his poem *Ulysses*

- What does this quote from Tennyson mean to you?
- What important experiences have made you who you are?

1: Access the group forum topic called " Learning through experience". Discuss the importance of experience in our lives.

2: Watch this video about **a school which tries to use experience in its teaching** (1:26).

What does this school do to respect and develop the children's learning through experience? **Access the group forum topic** called *"Learning through experience"*. Add more ideas to the earlier discussion.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.3.2 Study

John Dewey

"If we teach today's students as we taught yesterday's, we rob them of tomorrow."

John Dewey, who lived in the USA from 1859-1952, is considered one of America's leading philosophers, and was the founder of the Progressive Education movement.

1: Watch this video introducing his ideas about education (8:57), **and/or read one of the articles below**:

- **Alfie Kohn: 12 principles of Progressive Education**
- **Alfie Kohn: Progressive Education – Why It's Hard to Beat, But Also Hard to Find**
- By the way, you might want to follow **Alfie Kohn on Twitter**

Optional: If you would like to explore Dewey's education-philosophical ideas:

- A summary of Dewey's book *Experience and Education*
- The text of Dewey's book ***Experience and Education.***
- **Video: Noam Chomsky on Dewey** (2:57)
- **A video on Dewey and Experiential Learning** (6:08)

2: Make notes in your note-making app about Dewey, Progressive Education and Experiential Education.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.3.3 Apply

Collaborative Task

Using the **collaborative spreadsheet** set up for you by your tutor, add examples from your own experience of being a learner and a teacher to either the **"Traditional" or the "Progressive"** column. Put your initials (in brackets) after your contributions.

Click on this link for an **example of a Google Spreadsheet you could use as a template.**

This task will form part of your final assessment. Submit a document containing a link to the group's collaborative document in the upload facility provided at the bottom of this page.

Where possible, move your example next to ones on the opposite column that are related in some way – e.g. similar content matter, directly opposite, etc. Try to find at least 3 of each.

Here is a sample:

Collaborative Task Rubric

Level 1	Level 2	Level 3	Level 4
Does not contribute to collaborative exercises in any meaningful way.	Limited contribution of ideas; argues too much for own point of view, and/or battles to listen to other's.	Contributes some useful ideas; some hesitation in accepting others' contributions; argues too much for own point of view, and/or battles to listen to other's.	Contributes effectively and generously; accepts others' contributions openly; can argue for own point of view, and listen to other's.
Poor or non-existent technical proficiency.	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.3.4 Reflect

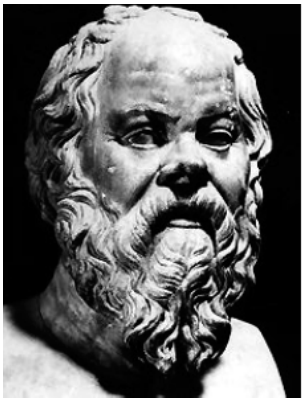
In your blog, reflect on the importance of experience in your own learning and teaching.

Answer at least one of these questions (bearing in mind that we are all a bit mixed-up as humans, so more than one might apply to you):

- If you are a traditionalist in your educational practice, and think you are unlikely to change, try to explain why.
- If you are a traditionalist in your educational practice, and would like to adopt more progressive approaches, what are the hurdles and roadblocks in your way? What can you do to overcome these?
- If you are progressive in your approach, what led you to this approach? In your honest moments, are there aspects of a progressive approach which you think might not actually work?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.4 So Many Questions…



Socrates

Source: http://edtheory.blogspot.com/2010/11/application-of-socratic-method-in.html

In this lesson, you examine Socrates' objections to the introduction of reading and writing. You come to see, again, that an approach which requires students to construct meaning, through thought- provoking questioning in this case, is not a fad. Further, you get to try out this approach in class, and then debate the challenges of technology by debating whether it is making our thinking more superficial.

2.4.1 Prepare

1: Watch this clip from the classic 1973 movie *The Paper Chase* . In it, the hated Professor Kingsfield explains his teaching method. **First Day of Class in The Paper Chase** (1:35)

- Why does he have to be so objectionable? It really seems as if he goes out of his way to be nasty. Is this a necessary part of the Socratic approach?
- Have you ever been taught in a way which left you feeling humiliated and stupid?
- What is Kingsfield's basic aim?

2: In your blog, reflect on the clip, and your response to the questions above.

You may want to watch this segment from the movie – it takes place shortly before the explanation above. **Excerpt from The Paper Chase – Kingsfield's teaching methods** (3:25)

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.4.2 Study

1: Socrates and the invention of writing

Writing is one of humanity's greatest inventions, and yet Socrates, who is one of the greatest of humanity's thinkers and teachers, was opposed to it. To find out why, **explore some or all of the following resources.**

Video: **Author Maryanne Wolf on the invention of writing (14:22).** Watch this clip from 7:40.

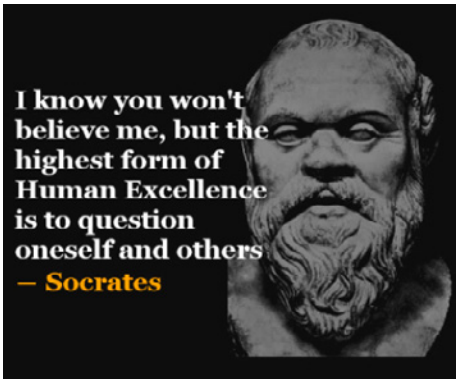
In this next clip, Maryanne Wolf talks about the death of rhetoric: **http://www.c-span.org/video/?c4388888/socrates-rhetoric**

Here is an article by her from the *New York Times*: **Socrates' nightmare by Maryanne Wolf**

- This quote from the article sums up her argument:

  At the core of Socrates' arguments lay his concerns for the young. He believed that the seeming permanence of the printed word would delude them into thinking they had accessed the heart of knowledge, rather than simply decoded it. To Socrates, only the arduous process of probing, analyzing and ultimately internalizing knowledge would enable the young to develop a lifelong approach to thinking that would lead them ultimately to wisdom, virtue and "friendship with [their] god."

  To Socrates, only the examined word and the "examined life" were worth pursuing, and literacy short-circuited both.



Source: *New York Times:* **http://www.nytimes.com/2007/09/06/opinion/06iht-edwolf.4.7405396.html**

For more Socrates quotes: **http://www.pinterest.com/maryalicehurst/socrates-quotes/**

For more on Socrates: **http://en.wikipedia.org/wiki/Socrates**

2: Read this article by **Nicholas Carr: Is Google Making us Stupid?** He makes a similar argument to Socrates' argument about writing, i.e., that new technologies are reducing our ability to think deeply and truly "examine life".

- What do you think?
- Can technology be used in ways that promote rather than undermine thinking?
- Write a paragraph with your ideas, and submit it to the course discussion page.

You can also refer to this article which argues that technology is seriously affecting our thinking: **http://www.creativitypost.com/technology/how_technology_is_warping_your_memory**

3: Study this infographic which sets out the six steps of Socratic questioning: **http://ticsyformacion.com/2012/03/24/el-proceso-socratico-infografia-infographic-education/**

- Make notes about the Socratic approach in your note-making app.
- Note particularly why this is important, and how you might go about it.

4: Try this out:

On your next school day, **in your teaching, try to be as Socratic as possible**. If you can, try to present everything you say to your students in the form of a question.

- Reflect on this experience in your blog
- Discuss with your classmates what this was like by taking part in this forum discussion.
- Consider: Was it difficult? What made it so?

This article can give you some good ideas on how to go about being more Socratic in your teaching: **http://www.criticalthinking.org/pages/the-role-of-socratic-questioning-in-thinking-teaching-learning/522**

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.4.3 Apply

Virtual field trip

While it is possible, although difficult, to run a Socratic classroom, it is very difficult to run a whole school based on principles of questioning and inquiry. To see an example of such a school, listen to **Chris Lehmann talking about the Science Leadership Academy** [SLA] (16:55)

You can visit the school's website here: **http://www.scienceleadership.org/**

Answer these questions in a new blog post:

- In what ways does SLA put into practice Constructivist principles?
- In what ways does SLA put into practice Socratic principles?

View and comment on each other's postings.

If you enjoyed his talk, here is another **TED talk by Chris** (21:30):

Infographic Assessment Task

Create an infographic which demonstrates your understanding of the principles you have explored in this lesson. **Your infographic will be assessed as part of your overall assessment for this course.** You need to consider:

- Socratic questioning
- Ways of promoting higher-order thinking through questioning and inquiry-based learning
- Constructivism in action

Your infographic should show how these principles can be applied in the classroom and to a whole school.

If you are unfamiliar with the concept of infographics, and/or do not know how to make one, you might find some **useful tools and ideas** in these links:

- If you choose to use PowerPoint, this site offers some ideas, tips and templates: **http://blog.hubspot.com/marketing/free-ppt-infographic-templates-designs-ht**
- You could alternatively use Google Drive Presentation
- This site offers links to some useful online tools: **http://www.freetech4teachers.com/2013/12/five-good-online-tools-for-creating.html#.U5Yo2_mSx8E**
- This site provides useful tips: **http://www.lifehack.org/articles/work/how-to-create-stunning-infographics-in-30-minutes.html**

When you are done, **submit your infographic using the upload facility provided at the bottom of this page**, or a document containing a link to where it can be found online. Also post links to this infographic on your blog, and share it with your group. Comment on each other's work.

Infographic Rubric

Level 1	Level 2	Level 3	Level 4
Creativity/Resourcefulness: inability to combine knowledge, ideas, tools, resources.	Creativity/Resourcefulness: limited ability to combine knowledge, ideas, tools, resources; no spark.	Creativity/Resourcefulness: combines knowledge, ideas, tools, resources, minimal spark of creativity.	Creativity/Resourcefulness: effectively combines knowledge, ideas, tools, resources in an aesthetically pleasing, innovative manner.

Does not show any clear understanding of key concepts.	Demonstrates minimal understanding of key concepts	Demonstrates some understanding of key concepts	Demonstrates understanding of key concepts
Poor or non-existent technical proficiency.	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.4.4 Reflect

In your blog, reflect on the processes you have experienced in this lesson.

- How did you enjoy having to do a more creative kind of task?
- How did you feel at having to tackle something with which you were unfamiliar?
- If you experienced negative emotions, try to explore those more deeply. What was it that led you to these feelings?
- How did you feel when you submitted the assignment?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as *Complete* as well. You will then be able to continue to the next lesson.

2.5 Killing Creativity

Source: http://blog.thechangeheroes.com/ted-talk-tuesday-do-schools-kill-creativity/

This lesson explores the idea that creativity and individuality are not well recognised in schools. Further, it offers a first-hand example of how school can be a crushing or enlivening experience, depending on the way the school is run.

2.5.1 Prepare

Ken Robinson: Creativity in Schools

Watch this video of Sir Ken Robinson (20.04):

Or, you might prefer to **read this** article from the Huffington Post: **http://www.huffingtonpost.com/sir-ken-robinson/do-schools-kill-creativity_b_2252942.html**

Or **read this** article from Educational Leadership: **http://www.ascd.org/publications/educational-leadership/sept09/vol67/num01/Why-Creativity-Now%C2%A2-A-Conversation-with-Sir-Ken-Robinson.aspx**

1: In your blog, reflect on these questions:

- "Many creative people think they are not because creativity is stigmatised in schools": In what ways (good and/or bad) were you taught about creativity?
- "If you are not prepared to be wrong, you will never come up with anything original". Do you allow yourself and your students to be wrong? How?

For optional enrichment:

In this longish interview (29:47), renowned intellectual **Noam Chomsky talks about education and creativity**. (By the way, note that he mentions that he himself attended a Deweyite school which fostered his creativity.)

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.5.2 Study

Larry Rosenstock: High Tech High

1: Watch this video of Larry Rosenstock from High Tech High (14:52).

- In what ways has this school adopted a constructivist approach?
- Do you believe that this school promotes creativity? If so, how?
- Does the school provide an inclusive environment?
- Do you think this is a realistic, "do-able" approach that you could introduce into your school?
- Do you believe that they really are able to cover their syllabus requirements?
- The school is called High Tech High – what is the role of technology in this school?
- Do you think the use of technology is making the students "stupid" (as Nicholas Carr would have us believe)?

Answer these and other questions you might have in a blog post.

Optional, for enrichment:

- **An Edutopia interview with Larry Rosenstock**
- **University of San Diego School of Leadership and Education Sciences: Remarkable Leaders in Education**

Erica McWilliam: The Meddler in the Middle

For Erica McWilliam creativity is not an "artsy", innate, individualistic characteristic which cannot be learned (the "first-generation" definition). Rather, it is a "hard" disposition which can be learned, and which is found in group activity (the "second-generation" definition). It is up to teachers to create opportunities where students can develop skills of creative problem-solving which facilitate their coming to see and understand the world in new ways.

Her current research and scholarship is directed towards building teacher capacity to shift from

'Sage on the Stage' and 'Guide on the Side' to 'Meddler in the Middle'. This means acquiring expertise in 'low-threat, high-challenge' pedagogy that is better aligned with new ways of living, learning and earning. For her, creativity is something which is hard-earned, which is developed not through telling kids that they are wonderful all the time, but rather by holding them to account – mental effort is key to creativity.

Watch this video of Erica McWilliam (27:18) (in particular from 16:40).

And/or you can read this article:

http://www.vcu.edu/cte/workshops/teaching_learning/2011_resources/sagetoguidetomeddler.pdf

- Do you agree with McWilliam? Should we as teachers be less ready to boost students' self-esteem when they don't really deserve it? How does this promote / not promote creativity?

Add your answers to the blog post you wrote in response to the above questions.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.5.3 Apply

Samantha Abeel: My Thirteenth Winter Samantha describes in evocative detail how her life has been affected by her learning difference before and after she was diagnosed. In seventh grade, she began to suffer anxiety attacks as she struggled with the pressures of junior high, from balancing schoolwork to remembering locker combinations, to social situations with her peers and explaining her learning difficulties with math to teachers who couldn't understand why a "good" student like Samantha wasn't excelling. Though signs of a learning difference were there all her life, she was not diagnosed with

dyscalculia, a learning disability that effects her capacity to learn skills based on sequential processing such as math, spelling, and grammar, until she was thirteen years old. Her story is honest, hopeful, and is ultimately an inspiring account of courage and strength.

Source: **http://www.samanthaabeel.com/**

1: Read this story from Samantha's memoir:

My whole being is quiet, while everyone else in the classroom seems to move and buzz. Outwardly, I work to appear poised and calm. My lips feel straight, tight, and irrevocably closed against my teeth. I am careful to keep the lines around my eyes expressionless. I watch Mr. Mummert's hand move with swift confidence, dragging and tapping the pale yellow chalk across the blackboard. A series of symbols appears in his wake: the interesting dashes, a multiplication sign, a division symbol, two horizontal lines meaning equals, numbers set around these in an orderly fashion, each group leading to the next as Mr. Mummert's words and gestures confirm.

Inside I sink, flutter, and tighten. I open my eyes wider and try, even though I know it is impossible, to stretch the opening of my ears. I work at not allowing myself to blink, convinced I must have blinked when Mr. Mummert went over the key part of the problem, or my ears must have missed a key phrase that would tie all of this together. Looking at the yellow marks on the board, I feel as if I am staring into the face of someone I should know but can't seem to remember. No matter how hauntingly familiar the figures are, they continue to remain anonymous strangers and a wave of guilt and embarrassment moves through me.

The guilt grows, along with an anxious burning that smoulders from my insides outward into my cheeks. I dart a look at the clearly comprehending faces of the rest of the class. I feel so far away from everyone, removed, alone in my ignorance. I am terrified there is something really wrong with me.

I understand most of my other subjects, and math seems to be so easy for my classmates. I feel like a liar, as if I have been leading them on. I have made everyone believe that I am smart. The teachers all like me: I am a good artist, I am creative. It must seem like I am good at almost everything, but they don't know how lost I feel inside, how helpless. I feel weighed down by the idea that it is too late to say anything.

I feel guilty for making it into the fourth grade without being able to consistently add or subtract. There are lots of things I didn't master along the way -I only pretended to. Was I supposed to tell someone the truth?

Terror begins to freeze up my entire frame as I realize that Mr. Mummert is going to call on someone for the final answer, that he is going to turn around and that he may call on me. There is a moment of silence as he makes a few last dashes with the chalk. Eager hands shoot up around me, and there is a general squirming toward the edge of seats and a few whispers:

"I know … I know what the answer is." Mr. Mummert finishes and turns around to face the class. I am paralyzed, .frozen like my pet rabbit when my dog walks past her cage in the yard. I drop my eyes away from Mr. Mummert, careful not to attract any attention to myself. The words in my head repeat themselves again and again as I hold my breath: Please don't call on me. Please … don't … call … on , .. me.

"Elizabeth," he asks, "why don't you come up here and show us how you got your answer." He hands her the chalk. I release the air I have been holding in my chest and my muscles relax with relief, as I sink back in my chair. For a few moments, while Elizabeth awkwardly scratches out her answer,

I am safe, until Mr. Mummert approaches the chalkboard again.

This lesson might seem like a normal lesson from a teacher's point of view. I am sure you have taught a class in a similar way many times. But this story really makes one think about the way we deal with students as individuals.

- Do you think there might be students in your classes who are genuinely unable to "get" certain concepts?
- Could they understand better if the class was run in a different way?

2: Now read this story from Samantha's memoir.

We are in desperate need of food and luckily our ship with the help of our pet humpback whales is going to land on the next island just in time. According to our charts, unfolded road maps from Heather's mother's car, we are due to see land at any moment. In preparation, Heather sweeps the planks of the ship while I look around for materials to rig a sink and cooking area. I select the place where there is a bend in the porch as the spot for our galley. Hanging an old putty bucket by its handle to a hook on one of the porch pillars, I am able to weave the hose up through the spokes in the porch railing and up the pillar so it hangs down and pours like a faucet into the bucket when it is turned on.

Our ship is fully equipped. We have bunk beds made out of two porch chairs set facing each other, old hanging flower baskets are used for food and specimen storage as well as for drying herbs. Heather, who is primarily in charge of navigation, has a large table for her charts, and I have a small desk of my own for our marine research. Our mission is to save humpback whales from poachers and help the endangered wildlife of the oceans. Both Heather and I have the power to call and to speak to the whales at will.

The sea whisks by the hull of our ship and, eventually, Heather gives the order to weigh anchor. Throwing an old cinder block tied to a string over the railing, we decide it is time to go explore and get supplies from the island where we have landed.

Picking up buckets and slinging them over our arms we make our way cautiously through Heather's backyard fence and look around. Hundreds of various food sources grow in the clumps of bushes and weedy growth at the edge of her yard, and we know from experience which ones will be the most useful. Both of us set to work harvesting. There are square-stemmed woody plants that, with their outside layer removed, reveal a soft reedy material that can be cut up into crab meat. There is also a plant with thick green leaves that, when dug out of the ground, has a bulby root system that can be peeled and chopped. We collect pinecones and red berries from shrubs for jam. We also pick various leaves and dandelion stems. Finding a few more broken, hanging flower baskets and string we make our way back to the ship and climb aboard. It is a good thing, too, because the wind has begun to change, and it is going to be all we can do to miss the oncoming storm.

- How is this lesson different from the previous one?
- In what ways does it meet her needs better?

3: Write a blog entry in which you reflect on the relationship between creativity, constructivism, and accommodation of difference.

Creative Response

Are you feeling creative? This article might help you: **http://www.edutopia.org/blog/7-tenets-of-creative-thinking-michael-michalko**

On your own, create a response to the ideas you have come across in this lesson. Your response should be a creative one, e.g.:

- make a video and upload it to YouTube;
- create a poster using a tool like PhotoShop;
- write a scene for a play;
- write a poem;
- etc.

This will form part of your final assessment. Submit your work or a document containing a link to it using the upload facility at the bottom of this page.

You should also share your creative effort with the group and on your blog.

Creative Response Rubric

Level 1	Level 2	Level 3	Level 4
Creativity/Resourcefulness: inability to combine knowledge, ideas, tools, resources.	Creativity/Resourcefulness: limited ability to combine knowledge, ideas, tools, resources; no spark.	Creativity/Resourcefulness: combines knowledge, ideas, tools, resources, minimal spark of creativity.	Creativity/Resourcefulness: effectively combines knowledge, ideas, tools, resources in an aesthetically pleasing, innovative and creative manner.
Does not show any clear understanding of key concepts.	Demonstrates minimal understanding of key concepts	Demonstrates some understanding of key concepts	Demonstrates understanding of key concepts
Poor or non-existent technical proficiency.	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.5.4 Reflect

Collaborative Task

As a group, create a collaborative document in which you pool advice and ideas for new or trainee teachers. Your tutor will direct you to a shared document which you can work on collaboratively. Here is a link to a **Google Document which you can use as a templat**e.

The document should be in the form of a table with 2 columns:

Column 1: "When we were trained to be teachers, and started working in schools, we… "
Column 2: "But our advice to you now is…"

See how many rows each of you can add. (Put your initials in brackets after each contribution you make).

This will form part of your final assessment.

Collaborative Task Rubric

Level 1	Level 2	Level 3	Level 4
Does not contribute to collaborative exercises in any meaningful way.	Limited contribution of ideas; argues too much for own point of view, and/or battles to listen to other's.	Contributes some useful ideas; some hesitation in accepting others' contributions; argues too much for own point of view, and/or battles to listen to other's.	Contributes effectively and generously; accepts others' contributions openly; can argue for own point of view, and listen to other's.
Poor or non-existent technical proficiency.	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

Submit a file with a link to the collaborative document using the upload facility at the bottom of this page. You should also share links to this on your blog.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.6 The Sweet Spot

What is the role of technology in promoting real learning? This lesson explores the ways in which technology can be used, along with excellent pedagogy, to create learning experiences for students which do more than merely pass on content. The lesson considers the work of Seymour Papert, and introduces the TPACK model as a way of understanding the relationship between Content, Pedagogy and Technology.

2.6.1 Prepare

Seymour Papert

Watch this clip from the early days of computers. Seymour Papert was one of the first people to see the potential of computers in education. His particular contribution was to bring a Constructivist approach to computers in education. **Seymour Papert** (6:23):

You can also read the preface to Papert's book *The Children's Machine* – **http://www.papert.org/articles/ChildrensMachine.html**

1: What ideas from Papert do you find intriguing?
Record your thoughts in your blog.

Piaget

Papert studied under Piaget who is one of the foundational educational thinkers.

Piaget describes how children's understanding of the world (**schemas**) get challenged, taking them out of **equilibrium** into **disequilibrium**. To resolve this, they either **assimilate** the new information into their existing schemas, or they **accommodate** the new information by creating new schemas.

Piaget: Assimilation and Accommodation (4:25)

As you can hear in the video, it is all about the child constructing meaning.

2: Do you encourage disequilibrium in your classes? Access the group forum topic called "Encouraging Disequilibrium". Think back to Erica McWilliam, and comment on the forum on this statement: "As teachers we tend to want to do the learning for the students. In doing this we do not allow them to experience disequilibrium".

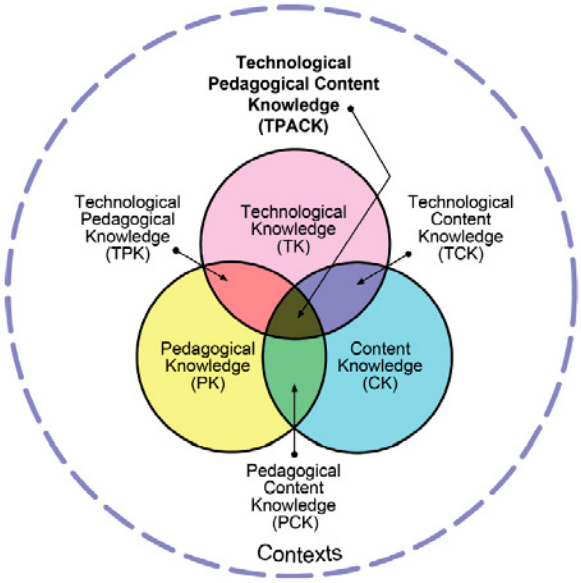
When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.6.2 Study

TPACK

Mishra & Koehler (2006) have put forward the model shown in the diagram below. **This video explains the TPACK model** (3:12):

You can also read this article: **http://www.matt-koehler.com/tpack/tpack-explained/**



Source: http://tpack.org Reproduced by permission of the publisher, © 2012 by tpack.org

1: Make notes in your note-making app about TPACK.

2: This site provides a game based on TPACK. h**ttp://www.matt-koehler.com/the-tpack-game/the-tpack-game-t/**

Play the game to generate examples of TPACK integration. Record your responses in a collaborative spreadsheet. For each contribution, record the Grade Level, Subject Area, and your example in response to the prompt in the game.

For more in-depth ideas about how to use TPACK to create innovative learning activities, you can view this site: **http://activitytypes.wm.edu/index.html**

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.6.3 Apply

The Technology Integration Matrix (TIM)

The Technology Integration Matrix (TIM) is a way of understanding various attempts at integrating technology into education. Note: the column headings indicate the teacher's readiness to transform his/her approach.

Explore the TIM: http://fcit.usf.edu/matrix/matrix.php

1: Find a lesson idea which you find interesting/useful/exciting, and adapt it to your subject and grade level. Choose a lesson which you can implement as soon as possible in class.

Write up your idea for a transformative lesson. Using Google Docs, share it with your partner assigned by your tutor. Comment on each other's lesson ideas using the commenting feature.

Once you have made any changes, try out the lesson idea in class.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.6.4 Reflect

Feedback on Transformative Lesson

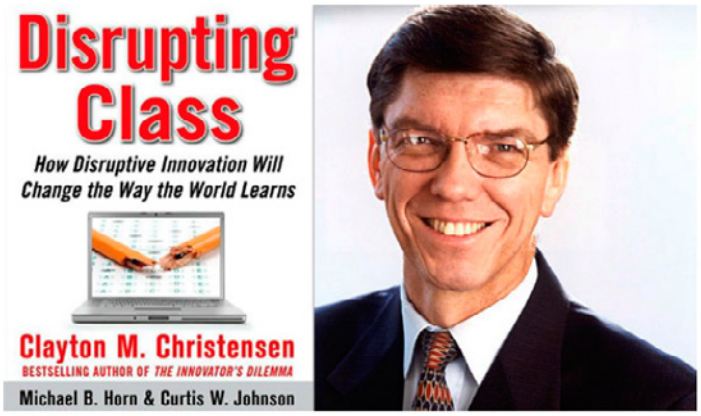
After trying out a transformative lesson–one which finds the "sweet spot" where Content, Pedagogy and Technology come together in an effective way–ask one or two students in your class how they experienced the lesson. Include their feedback on your blog. You can do this in the form of a video or written feedback.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as Complete as well. You will then be able to continue to the next lesson.

2.7 The Virtual School

Some see the future of education in online, virtual learning. This lesson invites you to scrutinise this idea in light of the concepts dealt with earlier, and introduces the blended learning concept of the Flipped Classroom. The reflective activities are an opportunity to reflect on your own real-life, lived experience of taking this module.

2.7.1 Prepare



Disrupting Class: Clayton Christensen

Disrupting Class offers an unusual perspective on innovation in education, with much of the thinking coming from outside education. Christensen considers what innovations education needs, and how these can be achieved by learning from major shifts in the business world, i.e. through disruptive innovations.

In his view, **what is wrong with education is that it is monolithic**: it requires students to move at a common pace through material which is aimed at a mind-set which is the generally accepted approach within a particular field. Students are grouped according to their age, and with greater or lesser success, work their way through a fixed curriculum at a set pace which probably does not suit most of the class members. The teaching itself is also not conducive to learning for all. For example, Mathematics teachers tend to think in the same way, because they have come through a system which has rewarded them for being able to think like their teachers, and so they are not very good at teaching other than in the same way themselves. Teachers are not usually open to other approaches which might incorporate other learning styles and intelligences. This is contrary to the assertion that all students are different in terms of their strengths and weaknesses, and so would benefit from a pace and approaches which suits them specifically.

The **solution** to this situation is for **each student to create a unique package for themselves** out of various online courses or modules which are suited to their level and learning style. The role of the teacher would, in this kind of learning, be that of a facilitator who assists with the choice and implementation of these modules so that the student can derive the most benefit. **Clayton Christensen: Disrupting Class** (4:58):

You can also read this article from the *New York Times*: **http://www.nytimes.com/2013/11/03/education/edlife/online-education-as-an-agent-of-transformation.html?_r=0**

What do you think about this solution? Do you think that school needs teachers, classrooms, etc? Blog your response.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.7.2 Study

Salman Khan: Flipping the classroom

In this video, **Salman Khan describes how he started off making videos for his relatives** (20:28), and ended up creating an approach to teaching which has been called the Flipped Classroom. What it entails is students watching videos at home, and then coming to class ready to take part in discussion or other activities. The teacher is no longer a lecturer, and is freed up to facilitate activities and help students on an individual basis. While this is not a new idea in principle, the availability of easy-to-use video technology, and the internet as a delivery platform, have made this “blended” approach more feasible.

Find a Khan Academy video or similar to be used in a lesson. Access the group forum topic called *"Flipping the Classroom"*, and then share with the group your ideas of how to use this video in a way which is still true to constructivist principles: **https://www.khanacademy.org/**

After reading each others' ideas, debate: is it possible to do constructivist education using a flipped model?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

2.7.3 Apply

Flip your Classroom

- Make your own (5 minute max.) 'flipped' video to be used in a lesson that you are preparing for anyway. **This task will form part of your final assessment.**
- Upload it to YouTube, and **submit a file with a link to your video using the upload facility at the bottom of this page.** Also share the link with the group. Comment on each others'.

Here is an article from Edutopia that could help you: **http://www.edutopia.org/blog/5-tips-flipping-pbl-classroom-andrew-miller**

Creative Task Rubric

Level 1	Level 2	Level 3	Level 4
Creativity/Resourcefulness: inability to combine knowledge, ideas, tools, resources.	Creativity/Resourcefulness: limited ability to combine knowledge, ideas, tools, resources; no spark.	Creativity/Resourcefulness: combines knowledge, ideas, tools, resources, minimal spark of creativity.	Creativity/Resourcefulness: effectively combines knowledge, ideas, tools, resources in an aesthetically pleasing, innovative manner.
Does not show any clear understanding of key concepts.	Demonstrates minimal understanding of key concepts	Demonstrates some understanding of key concepts	Demonstrates understanding of key concepts
Poor or non-existent technical proficiency	Minimal technical proficiency.	Acceptable technical proficiency.	Exceptional technical proficiency.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

COMMONWEALTH of LEARNING
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SchoolNet South Africa

Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

3 TECHNOLOGY-ENRICHED TEACHING

3 Technology-Enriched Teaching

You are probably very aware that technology infuses the everyday life of our learners. You may already have mastered basic computer-literacy skills and use computers for professional tasks such as typing exam papers and recording marks. However, you may need support to take the next step: selecting and using appropriate digital resources and tools for use in teaching. This course provides you with experiences to help you integrate technology resources with your teaching. Note: during this course our focus is on using technology for your teaching and not the students' use of technology for learning.

Learning Objectives

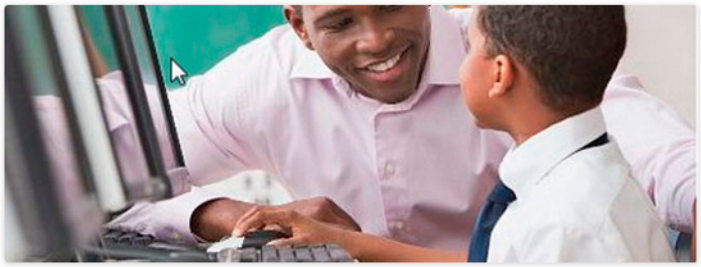
Once you have completed this course you should be able to:

1. Explain how your practice aligns with the SAMR and TPACK models for technology integration;
2. Create an online space to collect and organise resources to use in your own teaching;
3. Evaluate the use of basic office software for subject teaching;
4. Develop criteria for evaluating educational software;
5. Apply criteria to evaluate educational software;
6. Locate a variety of online resources for teaching and learning;
7. Evaluate online resources to judge their appropriateness and efficacy for classroom use;
8. Design a learning activity that integrates technology resources to support your teaching.
9. Evaluate learning activities that integrate technology to support teaching.

Setting the Scene

Which of the teachers represented in the images above best represents your current state as a teacher? Are books and scripts overwhelming you? Does technology sometimes frustrate you? Do you wish you could use technology more confidently in your preparation and lessons? If you answered yes to any one of the above you are one of millions of teachers worldwide who feel the same way. Do you want to step up and out of that group and become more confident? There is no time like the present to make that decision because we are going to challenge you to design one well-planned lesson in which technology supports you and leaves you feeling elated afterwards.

3.1 Where in Tech are We?



In this lesson we will explore models of technology integration that will help us understand:

a. the scope of this module, and

b. how these models fit into the CCTI as a programme of courses.

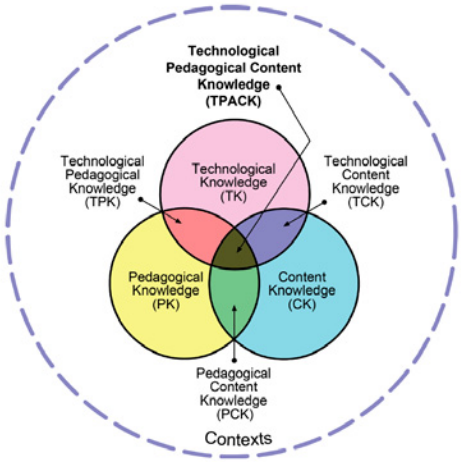
We will analyse lessons in which technology has been used by teachers to substitute and enhance various actions typical of teaching previously without technology.

Learning objective:

- Explain how your practice aligns with the SAMR and TPACK models for technology integration.

3.1.1 Prepare

Models of technology integration



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We are introducing you to two models that will help you to understand where technology fits in to

lessons when we talk about technology integration. This will not only prepare you for the rest of the lesson but also the CCTI course as a whole.

1. TPACK model

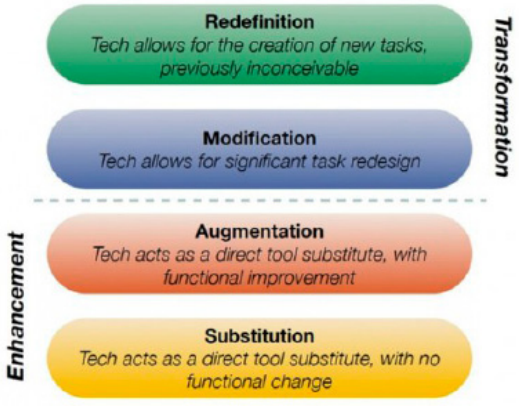
This model identifies three main areas of knowledge that come into play when we teach with technology, as shown in the diagram. The purple area of overlapping circles in the Venn diagram (Technology Knowledge and Content Knowledge overlap) refers to knowledge on how technology helps you to access and present the content of your subject. The dark pink area, which represents the overlap between the Technical and Pedagogical Knowledge circles, refers to knowledge on how technology can influence the way you teach. What the model is really wanting to communicate is that teachers should plan lessons holistically, taking all three areas of knowledge into account, so the knowledge you implement in planning and implementing the lesson represents that middle, dark green area where all three circles overlap.

Teachers will struggle to achieve this if they have a knowledge deficiency in one or more of the three knowledge areas. Most good practicing teachers experience this knowledge deficiency in the Technology Knowledge area when they first come into contact with technology. In this course we offered you an opportunity in Lesson 2 to take stock of this situation for yourself. The focus in the first four lessons is on how we can find and use technology resources for teaching (TCK). From lesson 5 onwards we expect you to plan lessons holistically (TPACK) by taking all three areas into account.

Watch this video from the 6:25 minute to the 7:31 minute stage: **Video: SAMR Model – Ruben Puentedura** (12:40)

As an optional extra, you may read more about the TPACK model by clicking on the Resources menu tab at the top of the page.

2. SAMR model



Perhaps a more practically applicable model for analysis of lessons is the SAMR model. Watch the same video above from the 1:55 minute to the 6:25 minute mark for an explanation of this model by its creator, Dr Ruben Puentadura. He will explain it fully, but if you cannot access the video you can read about it here: **Using SAMR to Teach Above the Line.**

In this course we will focus on the Substitution and Augmentation levels, looking at examples of the teacher using the technology to plan and present lessons. However, we do not exclude the Modification level.

In the courses that follow this one we will include all levels of the SAMR, with emphasis on the Modification and Redefinition levels.

3.1.2 Study

In this lesson you will continue to study the technology integration models and explore some example scenarios while discussing them with your group.

1. **Click here to open a list of simple scenarios** and decide how each scenario aligns to the TPACK and SAMR models.
2. Create a PDF of the page and then open it in the word processor to complete the table. Save it when you have completed your responses.
3. Join the group forum discussion called "Analysing lesson scenarios" and share your answers by uploading your document, preferably as a PDF file.
4. Download the responses and read them. If you see responses with which you disagree, post a polite comment and address the issue with the person involved. Read the comments and add your voice where you feel you can make an input.

Your tutor will keep an eye on your discussion and correct any serious misunderstandings.

3.1.3 Apply

Let's apply our understanding of the TPACK and SAMR model to generate ideas about how technology can be integrated in ways that add meaning to learning. **Webb's Depth of Knowledge Guide** is a good source of support in identifying increasing levels of cognitive complexity in learning activities. Use these ideas as a springboard during this collaborative activity and describe learning activities in which technology is used at various levels of the SAMR model. Also, identify which areas of TPACK knowledge are being included.

1. Your tutor will send you a message in which you will find a link to the Google Drive collaborative document. In the screenshot below we have used the first activity in Level 1 of Webb's document (p. 7) as an example to illustrate what you should do.
2. Make THREE contributions to this list. Try not to duplicate what has already been written.
3. Read the contributions of others and edit their writing where you see errors (this is a collaborative document).

Name	Learning Activity	Technology used	TPACK	SAMR	Explanation
Mr Example	Teacher uses Inspiration to record student input and create a concept map	Inspiration software projected	TCK	Substitution	The pedagogy has not changed = teacher still recording, some students contributing. Technology is being used only to record the content. Chalkboard/whiteboard is merely being substituted by Inspiration software.
Mrs Example	Students collaboratively develop a concept map to introduce a topic	Mindmeister online	TPACK	Modification	The pedagogy has changed = now collaborative and all students contribute simultaneously. Students generating content

3.1.4 Reflect

You will continue to make reflective comments in a personal blog/wiki as you have in previous courses.

Reflect on this lesson and how reference to technology integration models may have improved your understanding of how technology can impact learning at different levels.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.2 A Day at the Office

In this lesson you will consider what roles you perform as a teacher and what kind of activities could be supported by technology. We will focus on examples of how teachers use office software in support of their teaching. By "office software" we usually refer to a suite of programmes including at least the word processor, spreadsheet and presentation software/apps. Database and other software/ apps could also be included.

You will explore how to pursue some of the skills development needs you have identified. In the process of doing this you will prepare your social bookmarking / content curation sites for the kinds of resource collection you are likely to create in this course.

Learning Objectives

1. Populate an online space to collect and organise resources to use in your own teaching;
2. Evaluate the use of basic office software for subject teaching;
3. Locate a variety of online resources for teaching and learning.

3.2.1 Prepare

Identify a focus for this course

As a teacher you fulfill many roles. You are an administrator at times and a curriculum interpreter at other times. In each case you perform different functions and could be supported by technology in

different ways. In this course we are focusing on your role as a designer of learning experiences, but, if some of your immediate needs are related to other roles you are welcome to pursue those using the technology tip sheets you will find in the resources menu tab for this lesson.

1. Use this opportunity to reflect on your subject teaching. If you are not a subject teacher reflect on the primary role that you fulfill as an educator. What are the areas of your work where you feel you could most benefit from the introduction of technology or, if you already use technology, a more enhanced use of technology to make your role as an educator more effective? Make these areas a focus of your learning in the remaining lessons of this course.

2. Share your focus areas of learning with your group. You could work collaboratively with other participants who are planning to work on the same kind of topics. Post a comment in the group forum called "Study Focus". If you notice peers who are working on the same topic as you, consider creating a group and inviting them to collaborate with you.

Social Bookmarking / Content Curation

You created a content curation or social bookmark space online during the **Professional Development with Technology** course. Access that site and prepare it for curating resources related to this module; resources about how technology supports teaching roles in general, and your focus for teaching in the classroom in particular.

3.2.2 Study

The affordances of office software

In this lesson we will explore what we can do with office software as a teaching and learning resource.

At this stage, you should spend no longer than an hour studying the ideas and/or skills required to produce two examples of documents that could be useful to you in your lesson preparation, teaching or other roles you play as an educator. Remember your learning focus you identified in the previous lesson section.

1. **Explore some of these links** or research some ideas by yourself and identify two documents you would like to create. Set yourself a challenge – try to learn something new. Use different applications for each document e.g. a word processor and a spreadsheet.
2. Find out how to create these documents if there are skills you are lacking. Use the Technology Enhanced Teaching **Resources page** as a source of skill tip sheets or look for demonstrations and guidelines online. You will find the resources page under the Resources tab if ever you are looking for it again.

3.2.3 Apply

Peer Review

1. Create and save a draft of these two documents. You will share them and submit them in the next lesson section. Name each of your documents with a file name that starts with your own name, followed by a descriptive filename that describes the contents of the file (as you would with any file name).
2. Go to the group discussion named "Office Document Review" and upload your documents to the document section.

3. After you have uploaded the documents write a one-paragraph comment for each document in which you:
   - describe the activity in which the document will be used;
   - evaluate its effectiveness for teaching a concept or skill;
   - suggest ways the activity could be adapted for other age/grade levels.
4. Your tutor will allocate you two peers whose comments you will read and whose documents you will review.
5. Use the download button to download and review their documents.
6. Provide feedback to the author of the documents by clicking on the **Reply** link to the original comment.
7. Structure your feedback as follows:
   - Say what you liked about the document and its use.
   - Say what you think could be improved.
   - Suggest ways to make those improvements.

While you wait for your peers to submit their documents you may prepare for the next lesson.

3.2.4 Reflect

Use the opportunity to write a reflection in your personal blog/wiki in which you give your assessment of the value of office software for you as a teaching and learning resource in your areas of specialty in education.

Do you think that simple software/apps, such as the office applications, in anyway stifle the depth of knowledge of the activities that you can plan with their integration? Give examples to support your argument.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.3 Locate, Evaluate, Curate

In this lesson you will spend time on the Web locating, evaluating and curating Internet resources to use to support and/or enhance your teaching.

Lesson Objectives

By the end of the lesson you should be able to:

- Locate a variety of online resources for teaching and learning;
- Critically evaluate online resources to judge their appropriateness and efficacy for classroom use.

3.3.1 Prepare

In your first assignment you will evaluate and select three ICT instructional resources that may help learners overcome their struggle with a particular concept/skill. This should align with your focus area of study for this course. We will continue to look for resources for this purpose.

Prepare yourself to search for classroom resources to support your focus area(s) of study for this course.

This video will provide you with a basic background to key search terms.

Video: **Generating search terms** (1:49)

Click here to **read more about narrowing your search with search engine "maths"**.

Using good key search terms will narrow down your search but it will not guarantee you will find credible resources. What do we mean by that? Watch this video:

Video: **Evaluating web sites** (6:19)

3.3.2 Study

Before we actually start looking for and identifying what we think could be useful web resources, we need to think about how to measure that usefulness. This will depend on, amongst other things, what grade you teach, what level of skills and understanding your students have reached, and the purpose of the web resource found. Some resources are static and other resources are interactive. These things all affect the evaluation of the site's value as a resource for learning.

1. Join the group forum called "*Web Resource Evaluation*" and discuss how you would word criteria to measure the value of a website as a learning resource. Here is an **example of a web resource evaluation form** that looks at credibility criteria and a few learning resource criteria – it will provide you with a starting point.
2. Construct your own web resource evaluation form based on the example and the ensuing discussion.

3. Send your final draft to your tutor for feedback by using the upload facility at the bottom of this page. Remember to include your name in the file name e.g. Joe_Blogg _web_resource_evaluation

0-2	3-5	6-8	9-10
Your evaluation tool does not cover either credibility nor the value of the learning resource.	Your evaluation tool covers mainly the credibility or the value of the site as a learning resource, but the focus is not on learning. You do not identify criteria that will give an accurate indication of its value for learning.	Your evaluation tool covers both the credibility and the value of the site as a learning resource but the emphasis is not on its value as a learning resource. You identify some criteria that will give an accurate indication of its value for learning, but there are some omissions.	Your evaluation tool covers both the credibility and the value of the site as a learning resource. The emphasis is on its value as a learning resource. You identify clear criteria that will give an accurate indication of its value for learning.

Once you have uploaded the document, and your tutor has recorded this, you will be able to click on **Next Topic** to continue.

3.3.3 Apply

In this lesson activity you will use the evaluation tool you created in the previous lesson activity as you search the Internet for sites containing resources to teach your subject. Remember to try and maintain your selected focus because this will assist you with both your assignments.

1. You must find at least SIX resources. The resources you find and select should include at least three of the following resource categories:
   - sites that host content information to support teacher understanding or pedagogy;
   - sites that are predominantly information-based for learners;
   - sites with good technology-enhanced lesson plans;
   - sites with interactive educational activities for learners.

2. Use the evaluation tool to critically evaluate the resources to decide if they are valuable for classroom use.
3. Add the resources to your social bookmarking or content curation site.
4. Share really good general resources with your group by posting a comment to the group forum for this lesson called "*Web Resource Evaluation*".

3.3.4 Reflect

Use this opportunity to post a reflection in your blog/wiki. Think about the potential of web resources for your subject generally. What kind of resource do you value for its potential to enhance and modify teaching and learning? How about making a few good recommendations to your readers?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. **Return to the Lesson Page** and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.4 Apps and Software for Teaching

In this lesson you will consider various criteria that can be used to evaluate software or apps. You will develop an evaluation tool to use in your own local context and apply this evaluation tool to evaluate suggested free educational software/apps.

Learning Objectives

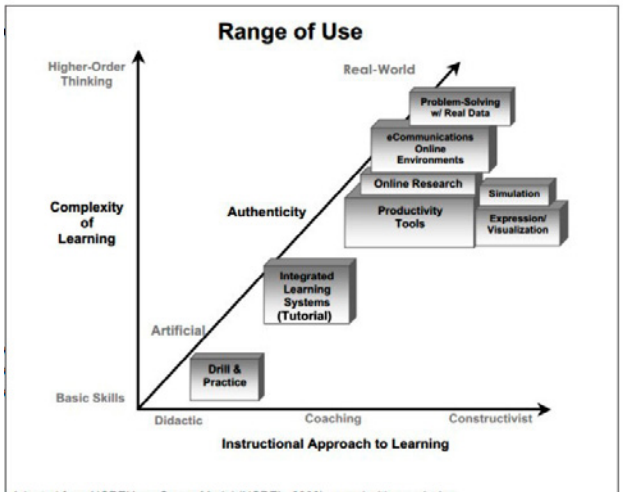
- Populate an online space to collect and organise resources to use in your own teaching;
- Develop criteria for evaluating educational software;
- Apply criteria to evaluate educational software.

3.4.1 Prepare

In your assignment after this lesson you will describe a scenario in your subject area in which learners struggle to understand a concept or master a skill required by your curriculum. You will evaluate and select three ICT instructional resources that may help students overcome their struggle with this concept/skill. You will continue to focus on the subject area you identified in lesson 2, or you may find it necessary to adapt it to suit your needs.

As we shift our attention to educational software or apps for tablets we are faced with one important question: "What criteria can I use to evaluate the effectiveness of educational software/apps for my classroom?'. There is no one simple answer to that question because it will depend on the students you teach and the kind of function you wish the software/apps to perform in the learning experience.

The NCREL Range of Use chart gives you an indication of some of the contexts of technology use in learning depending on the complexity of learning and instructional approach and which applications of technology can be a springboard to a real-world context for student learning (Authenticity Axis).



Original source: **www.ncrel.org/engauge/framewk/efp/range/efpranin.htm** (now inactive).

What other type of educational software/apps have you encountered and where would you place these on the grid? For instance, where would you place instructional games?

1. Join the group forum with the name *"Educational Software and Apps"* and start by sharing where you think instructional games belong – perhaps you can snip a screen copy of the image and annotate it to show the exact position of instructional games or any other categories of software/apps on the chart. If you (dis)agree with the first submitters, say why. Post your version. Remember to use a file name that starts with your name e.g. Joe_Blogg_range-of-use

As you can imagine, software/apps with such a range of cognitive and instructional goals would be difficult to compare and evaluate using a single set of criteria. In the next section we will collaboratively create lists of criteria for evaluating educational software/apps.

3.4.2 Study

In this lesson we will collaboratively design evaluation instruments for evaluating the kind of educational software/apps we would like to use. **Here is an example of a set of criteria for evaluating drill and practice software**. It is not necessarily exemplary, because each individual will have to adapt a set of criteria for his/her specific use before applying such an instrument. **Kathy Schrock's page on critical evaluation resources may have some useful resources** for your purposes.

1. Let's have a practice round and comment on this drill and practice instrument. How would you change this set of criteria? Join the group forum called *"Evaluating Drill and Practice Software"*. Comment on the set of criteria in the evaluation instrument. Do you think they are comprehensive? What would you omit, and why? What would you add, and why?

2. In order to form groups that will develop criteria for the same kind of educational software, **complete this online survey** in which you can record your area(s) of interest.
3. Your tutor will place you in groups based on the responses in your survey. A group will be formed and you will be invited to join it. Join the group. Decide on what kind of collaborative space you will use to collaboratively develop an educational software evaluation tool. **Use this set of criteria to start your thinking** about what you would like to include in your evaluation instrument.
4. Once you have completed the evaluation instrument as a group, customise it for your own use.
5. Use the assignment upload link at the bottom of the page to upload your customised evaluation instrument to your tutor for feedback (this is not an assessment). Remember to name your file <yourname><description> e.g. Joe_Blogg_educational_game_evaluation_instrument.

Once your tutor has received the document and recorded it you will be able to find and click on the **Next topic** link. In the meantime, start researching free educational software and/or apps you would like to review.

3.4.3 Apply

In this lesson you will find and evaluate at least **two** examples of educational software/apps without buying them. You may search for your own resources in this activity but may like to look at **what Common Sense Media (a non-profit NGO) suggests in their reviews** (you may have to register first but you will not be sorry).

1. Search the Internet for software/apps that suit your needs but try to cover more than one of the categories. If necessary, adapt and use the evaluation tools that have been shared by the other teams. In the case of commercial products, use the software publishers' commercial descriptions, online reviews, and online communities to make a judgment about whether or not the software/app may be useful for your purposes.
2. Write a recommendation on each application you review. Review at least **two** applications.
3. Post your software recommendations to the group forum called "*Educational Software and Apps*". Remember to start the file name with your name and to add a descriptive element to the file name. e.g. Joe_Blogg_Review_Memoires_App

3.4.4 Reflect

Use this opportunity to reflect in your blog/wiki on the principles of learning presented in the *Designing Learning* course and comment on how well different kinds of educational software engage learners generally. What do you find to be the most engaging type of educational software?

Include your review in your blog/wiki.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.5 First Assignment

You may do this assignment using any format of your choice, but your final submission must be in ONE file which is no larger than 8Mb in size.

Requirement

Describe a scenario in your subject area in which students struggle to understand a concept or master a skill that is required by your curriculum. Evaluate and select three ICT instructional resources that may help learners overcome their struggle with this concept/skill.

Include the following in your scenario:

1. Describe the concept or skill required by your curriculum that you want to augment with additional resources. Name the underlying concepts and skills needed for students to understand the concept/master the skill.
2. Describe the three ICT resources you will use to enhance your teaching of this
3. concept/skill. Include the evaluation of the resources and the evaluation instruments that you used.
4. Explain, with reference to models of learning referred to in the Designing Learning course, why these resources will be very effective in supporting student learning. Explain how the technology tools will meet the needs of all learners and promote deeper understanding of key concepts/skills in the subject area.
5. Mention what other technologies will be needed to implement the resources. Name any challenges you might experience with implementing these resources (e.g. cost, other infrastructure, time, etc.).

Assessment

0-2	3-5	6-7	8-10
You have not clearly described the concept/skill you have identified nor the context in which it needs to be supported by technology resources.	You have described the concept/skill you have identified but not the context in which it needs to be supported by technology resources.	You have not fully described the concept/skill you have identified and/or the context in which it needs to be supported by technology resources.	You have fully described the concept/skill you have identified and the context in which it needs to be supported by technology resources.
0-5	**6-10**	**11-15**	**16-20**

0-2	3-5	6-7	8-10
You have not given an evaluation of more than one resource and not included an effective evaluation instrument.	You have given an evaluation of two resources and included a largely ineffective evaluation instrument.	You have given an evaluation of three resources and included an evaluation instrument with some minor shortcomings.	You have given a detailed evaluation of the three resources with reference to a detailed and insightful evaluation instrument.
0-5	**6-10**	**11-15**	**16-20**
You have not adequately explained why you regard the resource to be effective and inclusive, and not referred to models of learning referred to in the Designing Learning course.	You have explained why you regard the resource to be effective and inclusive, but not referred to models of learning referred to in the Designing Learning course.	You have adequately explained why you regard the resource to be effective and inclusive, with some limited reference to models of learning referred to in the Designing Learning course.	You have explained in detail why you regard the resource to be effective and inclusive, with accurate reference to models of learning referred to in the Designing Learning course.
0-2	**3-5**	**6-7**	**8-10**
You have made little or no mention of the requirements and challenges of implementing each of these three resources.	You have made some mention of the requirements and challenges of implementing each of these three resources, but there are major omissions.	You have mentioned the most important requirements and challenges of implementing each of these three resources, but with some omissions.	You have thought deeply about the requirements and challenges of implementing each of these three resources.

Submit

1. Name your file using the format <yourname>_<country>_course3_assignment1 e.g. Joe_Blogg_Uganda_course3_assignment1
2. Submit the file by uploading it through the facility at the bottom of this page.

3.6 Rest ASSUREd

In this lesson we introduce the ASSURE model of lesson design, which you will use to design a lesson that integrates technology in a number of ways. The final product of the next three lessons will be reviewed by your peers and submitted as part of your final assignment.

Learning Objectives

- Use a lesson-planning model to design a learning activity that integrates technology resources to support your teaching.

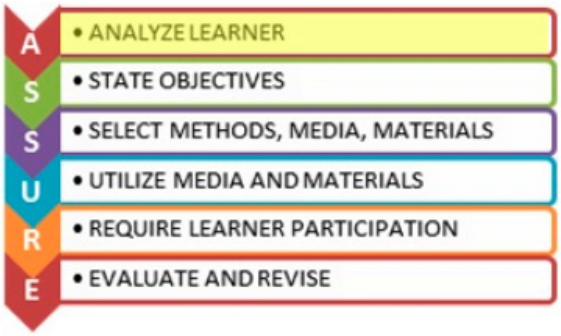
3.6.1 Prepare

Phase 2: ASSURE Model

This is the first lesson of the second phase of this course. This phase will focus on designing a lessons augmented by technology with emphasis on the teaching resources you found and evaluated during the previous lessons in this course. This phase culminates in the final assignment. Your preparation for that assignment starts here. **Click here to read the final assignment brief** and note that you must produce a lesson structured according to the ASSURE lesson design model.

What is the ASSURE model?

In a nutshell, ASSURE stands for 6 steps in lesson designed identified as:



We will work through these steps during the next four lessons, starting now with the Analyse step. Before we proceed, you may like to read more about the ASSURE model. Bear in mind that it is often used to describe e-learning lessons, but we will apply it to classroom learning.

This short paper, **The ASSURE Learning Model Lesson**, will provide a simple summary.

A. Analyse learner

General Characteristics

This is a description of the class as a whole. This includes such information as the number of students, grade or age level, gender, socio-economic factors and cultural or other types of diversity.

Entry Competencies

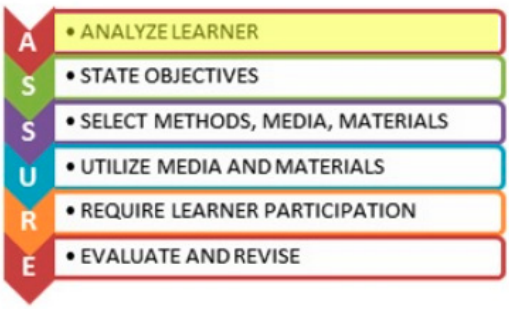
This is a description of the types of knowledge expected of the learners. Ask questions such as: "Do the students…

- Do the students have the knowledge base required to enter the lesson?
- Do the students have the entry competencies and technical vocabulary for this lesson?
- Are the students competent in the skills you are expecting them to apply during the lesson?
- Do the students have biases or misconceptions about the topic?

Learning Styles:

This is a description of the learning style preferences of the members of the class. The main choices are auditory, visual, and tactile/kinesthetic. Students with learning challenges tend to prefer kinesthetic experiences. Also determine how students tend to approach the cognitive processing of information. Finally, determine the motivational and physiological factors of the students. When it comes to motivational factors you should consider things such as anxiety, degree of structure, achievement motivation, social motivation, cautiousness, and competitiveness. The most prominent influences in physiological factors are sexual differences, health, and environmental conditions.

3.6.2 Study



Let's have a look at a lesson plan which illustrates the Analyse stage. Slides 2 and 3 of the slideshow below show the general characteristics and slide 4 the competencies and learning styles. Try to resist looking further at this stage (just to save time).

Source (iPad users use this link): **http://www.slideshare.net/tasilmt/ocean-food-web-assure-lesson-plan**

Here are some presentations of lessons using the ASSURE model (you are welcome to search for others):

- **Grade 1 Poetry**
- **Grade 3 Science**
- **Grade 6 Poetry**
- **Grade 8 Office Practice**
- **Grade 8 Algebra**
- **Grade 8 Science**

Here are lessons that do NOT use the ASSURE model:

- **Technology-supported lessons**

1. Open at least one example of a lesson plan that has been designed according to the ASSURE module and (optionally) one that has not used the ASSURE model.

2. Join the group forum called “ASSURE- Analyse”.
3. Discuss the examples you have studied and comment on how thorough the analysis of students has been. Refer to the lesson at the beginning of your comment. If you use a lesson that is not listed, remember to include the URL of the lesson.

Once you feel confident you understand what is required in the Analyse section of the ASSURE lesson plan you may continue to the next lesson topic.

3.6.3 Apply

You will now prepare the “Analyse learners” section of the lesson plan in alignment with the requirements for the final assignment, which is to “Use the ASSURE Model to develop a technology-integrated learning activity for your subject”. You should therefore finally decide on the topic of that lesson so you will be in a position to know what prior understanding your students have of that topic.

You may wish to use these lesson plans templates for planning, but your final assignment may be in any format of your choice.

Word document template | **PDF template**

Once you have drafted the section, upload the template to your tutor for feedback.

Remember to preface the lesson plan filename with your own name.

	0-2	3-5	6-8	9-10
Curriculum objectives	Not included or not at all aligned.	Learning objectives are included but rudimentary/not defined (too many).	Learning objectives are provided, but key information is missing.	Learning objectives include behaviour to be demonstrated; conditions under which behaviour will be observed; degree to which learned skills are to be mastered.

Once your tutor has received the template and recorded this you will be able to proceed to the next lesson topic.

3.6.4 Reflect

Now that you have had some exposure to the ASSURE lesson-plan template, comment in your blog/wiki on the value of analysing your students before you proceed with a lesson-design process, especially when your are integrating technology in the lesson.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.7 Lesson Design

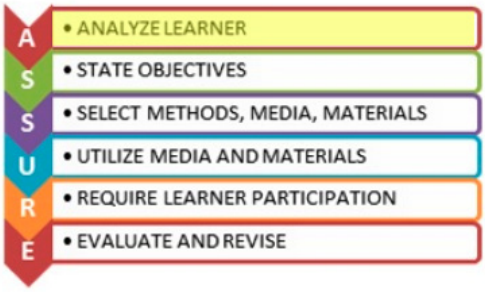
In this lesson we continue our work with the ASSURE model of lesson design which you are using to design a lesson that integrates technology in a number of ways. The S-S-U items of the module are about the basic bridge-building of lesson design – setting learning objectives and ensuring that you select the methods, media and materials to achieve those objectives in the most suitable way for your particular students' needs.

Learning Objectives

- Use a lesson-planning model to design a learning activity that integrates technology resources to support your teaching.

3.7.1 Prepare

In this lesson activity we will introduce you to the next three steps of the ASSURE model which all fall under the description of lesson design.



S. State objectives

Objectives are descriptions aligned to the national curriculum objectives and are written using the ABCD format.

- Audience: Name the learners for whom the objective is intended.
- Behaviour: State what you want them to do. This learner performance is an observable and measurable action. You should therefore carefully select an action verb to describe this.
- Condition: State the circumstances or conditions under which the learners are to demonstrate the skill being taught. Include tools or refer to conditions under which the learners have to perform (if applicable).
- Degree: State the degree to which the new performance must be mastered (if applicable).

For example:

(A) The Drama class (B) will be able to identify and draw stage directions (C) using pencils and rulers (D) with 100% accuracy.

(A) The kindergarten class (B) will identify the colors, red, green, and blue (C) using blocks (D) 9 times out of 10.

Use as many objective statements needed in order to meet the different objectives for the lesson.

S. Select methods, media and materials

In this section you build a bridge between the audience and the objectives. You decide **what** method you will primarily use to lead learning (pedagogy), **what** media and resources you will use, including technology, and **what** other materials you will need to prepare. You may adopt several methods in the lesson and at first you may identify more resources than you will finally use. You are basically establishing what you have and what you will need to prepare in order for these students to achieve the objectives through the method you have chosen. **Consider this checklist for media selection**.

U. Use the media and materials

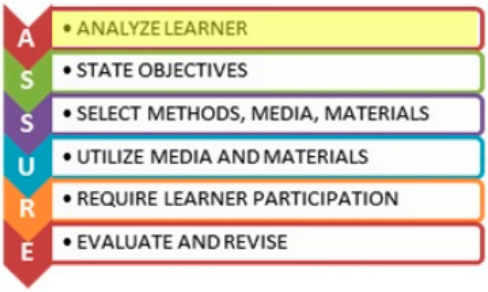
For each type of media and/or materials you should describe in detail **how** you are going to implement them into your lesson to help your learners meet the lesson's objective.

It almost goes without saying that you should include plans to:

- Prepare the material – make sure you have everything you need and that it all works.
- Prepare the environment – set up the classroom so whatever you are doing will work in the space you have.
- Prepare the students–if the students need to use resources in a specific way or it requires a specific skill, how will you support this?
- Prepare for the worst – what is your Plan B if resources fail you?

Continue to the next lesson topic to look at some examples.

3.7.2 Study



Let's have a look at a lesson plan which illustrates the **S-S-U** stages. Start at slide 5. Slides 5 to 7 of the slideshow below show the learning objectives, slides 8-10 list **what** methods and media will be used, and slides 11-13 indicate **how** this media will be used. Try to resist looking further at this stage (just to save time).

Source: **http://www.slideshare.net/tasilmt/ocean-food-web-assure-lesson-plan**

Return to your ASSURE discussion group and consider these questions:

1. Do the objectives identify what the expectations are for the students?
2. Do the objectives identify the necessary requirements for the learning environment?
3. Do the objectives assess learning?
4. Do they determine needs for appropriate media or materials?
5. How would you classify the objectives? Are the they primarily cognitive, affective, psychomotor, interpersonal or intrapersonal?
6. How does the checklist for media selection hold up in this example?
7. Is the teacher making the best possible use of the media and other technology resources?

Here are some presentations of lessons using the ASSURE model (you are welcome to search for others):

- **Grade 1 Poetry**
- **Grade 3 Science**
- **Grade 6 Poetry**
- **Grade 8 Office Practice**
- **Grade 8 Algebra**
- **Grade 8 Science**

Here are lessons that do NOT use the ASSURE model:

- **Technology-supported lessons**

Once you are ready to start planning this part of your own lesson activity, continue to the next lesson topic.

3.7.3 Apply

Return to your lesson-planning template and add the sections for learning objectives, what methods and media to use and how you will use the media and other resources. Consult the guidelines in the Prepare activity and be guided by the comments from your group in the Study activity.

Once you have completed the final draft of these 3 sections, upload the template to your tutor for feedback. Use the same template you uploaded in the last lesson so your tutor can see your student analysis as well.

ASSURE Model Rubric

	0-2	3-5	6-8	9-10
Curriculum objectives	Not included or not aligned.	Learning objectives are included but rudimentary/not defined (too many).	Learning objectives are provided, but key information is missing.	Learning objectives include behaviour to be demonstrated; conditions under which behaviour will be observed; degree to which learned skills are to be mastered.
	0-2	**3-5**	**6-8**	**9-10**
Select instructional methods, media, and materials	Not completed or very little evidence.	Inappropriate technology is included and/or no explanation is provided.	Appropriate technology is included, but not well described.	Appropriate technology hardware/ software are fully integrated. Media implementation is described and an explanation for how media helps to meet objectives is provided.
	0-2	**3-5**	**6-8**	**9-10**
Utilise media and materials	Not completed or very little evidence.	Evaluation of technology use is poorly written and inadequate.	A technology evaluation is included, but is not sufficient to fulfill lesson objectives	Evaluation of how technology is used to meet the learning objectives is detailed and complete.

Once your tutor has received the template and recorded this you will be able to proceed to the next lesson topic.

3.7.4 Reflect

Make use of this opportunity to reflect on the learning you have experienced in this lesson. Has using the ASSURE model helped you think more systematically about designing technology-enhanced lessons?

What are the most valuable lessons you learned from your peers in the group discussions?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

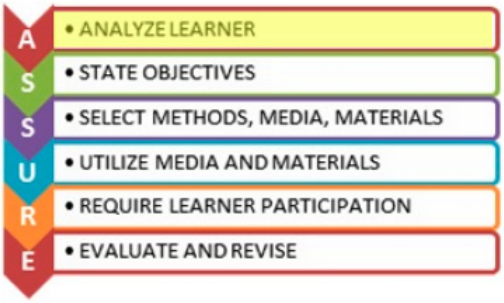
3.8 Plan Participation

In this lesson you will continue planning your technology-enhanced lesson. This is the R of ASSURE which you might remember stands for Require Learner Participation. You are now ready to focus on how you are going to get each student actively and individually involved in the lesson.

Learning Objectives

- Use a lesson-planning model to design a learning activity that integrates technology resources to support your teaching.

3.8.1 Prepare



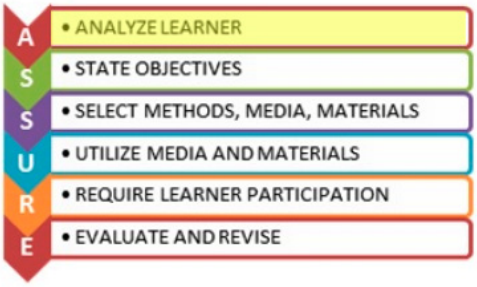
So far in this phase of the course you have given some thought to your learning objectives and what media and technology resources you have at your disposal or would need to find. Now you need to think about how you are going to engage the students in learning while these resources are integrated into their learning experience. Remember the focus must be on student learning and not on the resources.

R. Require Learner Participation

As you learned in the *Designing Learning* module, students learn best when they are actively involved in the learning experience. Whatever your teaching strategy, be sure to incorporate hands- on activities, discussions, group work,and other ways of getting students actively involved. Consider ways in which the students can use the technology resources to create expressions of the knowledge they have gained during the lesson. Refer to the potential activities of Webb's *Depth of Knowledge* guide, specifically at Level 2 – Working with Skills and Concepts on page 9 and the level that follows that on page 11, Short-term Strategic Thinking.

When you are ready to move on to look at some examples, continue to the next lesson activity.

3.8.2 Study



We return to the same lesson plan and look at how the teacher has planned participation. Slides 14 -19 describe ways in which the students actively participate. You will notice this is a lesson unit which takes more than one lesson to complete. Jot down the various cognitive levels of activity in which these students are engaged during the unit.

Source (iPad users use this link): **http://www.slideshare.net/tasilmt/ocean-food-web-assure-lesson-plan**

Here are some presentations of lessons using the ASSURE model (you are welcome to search for others):

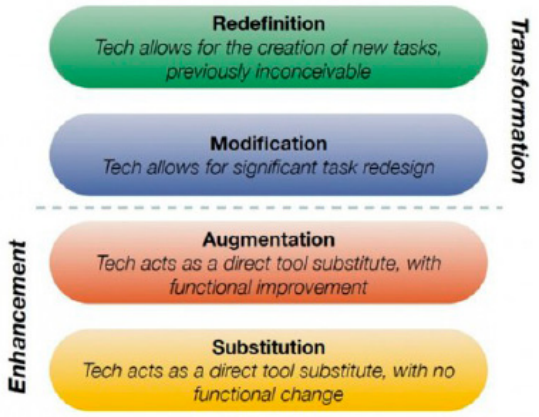
- **Grade 1 Poetry**
- **Grade 3 Science**
- **Grade 6 Poetry**
- **Grade 8 Office Practice**
- **Grade 8 Algebra**
- **Grade 8 Science**

Here are lessons that do NOT use the ASSURE model:

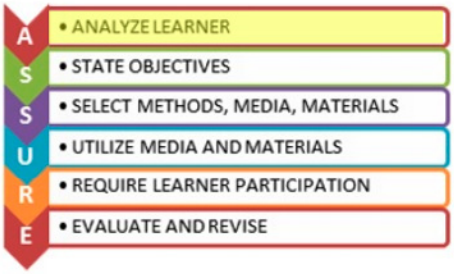
- **Technology-supported lessons**

Return to your ASSURE discussion group and consider these questions:

1. In what ways are students constructing knowledge?
2. Are these activities aligned with the age group and other characteristics of the students?
3. Do the activities make best use of the media and resources?
4. Are the activities contributing to the learning objectives? Can you give examples where the activity does not achieve this?
5. What levels of the SAMR model do these activities represent?



3.8.3 Apply



Return to your lesson-planning template and add the section for student participation. Consult the guidelines in the Prepare activity and be guided by the questions and responses from your group in the Study activity.

Once you have completed the final draft of this section, upload the template to your tutor for feedback. Use the same template you uploaded in the last lesson so your tutor can see your student analysis as well.

ASSURE Model Rubric

	0-2	3-5	6-8	9-10
Require learner participation	Not completed or very little evidence.	Individual acquisition of lesson information.	Individual OR group activities are planned, but learning does not fully represent a constructivist approach to learning	Individual and small/large group activities are planned and the lesson incorporates excellent constructivist approach to learning.

Once your tutor receives your uploaded document and records it you will be able to proceed to the next lesson topic.

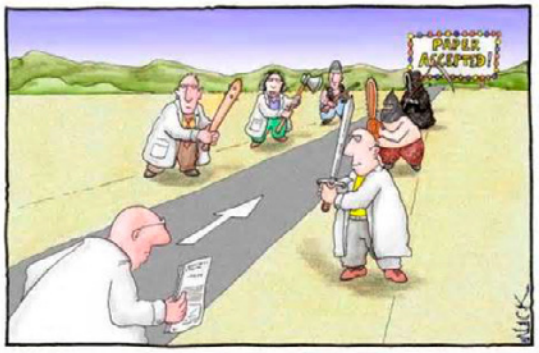
3.8.4 Reflect

Use this opportunity to reflect in your blog/wiki on your lesson planning thus far. Have you succeeded in planning for your students to be actively engaged? In what ways will they be involved in activities you have not previously tried in your classes?

Do you think that it is an effective way of planning a technology-enhanced lesson? How would you change the process to make it more effective?

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

3.9 Lesson Peer Review



Most scientists regarded the new streamlined peer-review process as 'quite an improvement.'

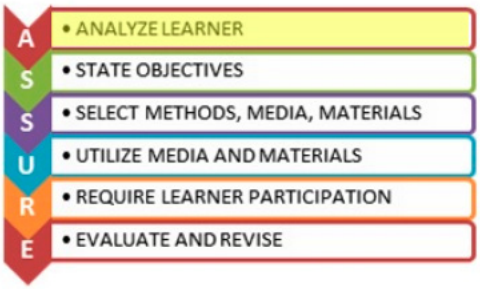
During this lesson we will look at the final step in the ASSURE process, the E for Evaluation and Revision. Your peers are going to review and evaluate your lesson before you prepare it for the final assignment, but before you do that you will prepare an assessment rubric for your lesson.

Learning Objectives

Once you have completed this course you should be able to:

1. Design a learning activity that integrates technology resources to support your teaching;
2. Evaluate learning activities that integrate technology to support teaching.

3.9.1 Prepare



There are two ways of looking at Evaluate and Revise:

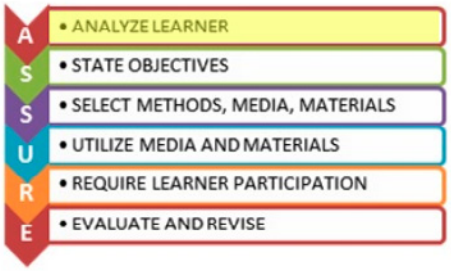
1. You assess your students and revise what they have not understood well, in which case you would;
2. Evaluate and revise the lesson after you have taught it so next time it is more effective.

E. Evaluate and Revise

After the lesson, you must evaluate the entire learning experience. You must reflect upon the lesson, the stated objectives, the learning strategy, the materials and the assessment. If there are discrepancies between what you intended and what actually happened during the lesson, make appropriate revisions before using the lesson again. This is not something you can include in your lesson plan, but what you should include as an assessment tool so you know whether your students have achieved the learning objectives of the lesson.

You should have some way of assessing each learning objective. Include the assessment tools you will use during and after the lesson.

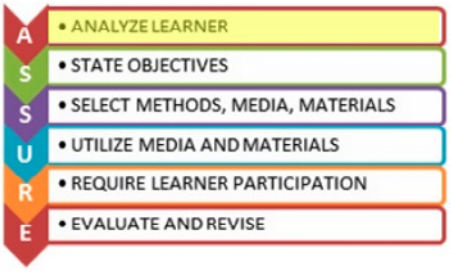
3.9.2 Study



We return to the same lesson plan one final time and record how we will assess the students' learning according to the learning objectives. Slides 22 and 23 in the example below describe the evidence the teacher must gather from the students when assessing the learning objectives. Do you think this teacher has covered all the learning objectives in this assessment tool? Have a look at slides 5-7 again to see what the learning objectives are.

Source (for iPad users): **http://www.slideshare.net/tasilmt/ocean-food-web-assure-lesson-plan**

3.9.3 Apply



Before starting the peer review process, add your assessment tool(s) to your lesson plan and save it.

ASSURE Model Rubric

1. Your tutor will set up an **online collaborative document in Google Drive** containing the basic assessment rubric below. Follow the link to that document and use the commenting feature in Google Drive to comment on the rubric and make changes. It is a collaborative document, so feel free to make changes and add comments.

	0-2	3-5	6-8	9-10
Evaluate and revise	Not completed or very little evidence.	Criteria for evaluating the effectiveness of the are poorly explained.	Criteria for evaluating the effectiveness of the lesson are partially explained.	Criteria for measuring the effectiveness of the lesson are clearly explained.
Assessment	Not completed or very little evidence.	Criteria for success are barely described.	Criteria for success are at least partially described.	Criteria for success are clearly stated in the form of a rubric. Criteria include qualitative as well as quantitative descriptors. The evaluation instrument clearly measures what students must know and be able to do to accomplish the task.

2. Once you have had a chance to finalise the rubric your tutor will place you in peer review pairs. You will swap lesson plans with each other using the OneDrive site. One of you will create a folder and invite your peer to the folder. Both of you will upload your lessons plans.
3. Use the rubric to assess the lesson plan and give feedback in the following format:
    1. Point out what you like about the lesson plan;
    2. Say what you think could be improved;
    3. Suggest a way that it could be improved.
4. Upload the assessed lesson plan to the shared OneDrive folder and notify your peer.
5. Consider the comments your peer has made and make final updates.

When you are ready to continue to the final assignment, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page.

3.9.4 Reflect

You may want to return to this final reflection after you have completed you assignment.

In your final post for this course reflect on what you have learned during this course and how it has changed the way you think about how technology can support you as a teacher in the classroom.

When you are ready to continue to the next activity, click on the **Mark Complete** button below (first time) and **Next Topic** on subsequent visits to this page. Return to the Lesson Page and mark the lesson as complete as well. You will then be able to continue to the next lesson.

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4 EDUCATION IN A DIGITAL SOCIETY

4 Education in a Digital Society

Today's learners can use a variety of technologies to access knowledge resources and interact globally with people. These interactions create a digital society that affords learners opportunities for education, entertainment and social interaction. Most of today's children are comfortable using technology, but may not use it efficiently, effectively or appropriately. Teachers can create learning experiences that foster specific digital literacy skills. They can also help learners understand their roles and responsibilities as responsible digital citizens who can participate in the knowledge economy.

Learning Objectives

Participants who successfully complete the course will be able to:

1. Explain the scope and impact of digital literacy.
2. Evaluate pedagogical approaches that support the education of digital literacies.
3. Teach advanced navigation and evaluation web resources.
4. Create media to express an idea.
5. Explain the principles of media literacy.
6. Analyse media messages.
7. Explain the responsibilities of digital citizenship.
8. Develop a school plan for teaching digital literacy and digital citizenship.

Setting the Scene

View these videos before proceeding.

1. Listen to this male student complain to his friend about his low grade for a university assignment. Listen up to the 2:06-minute stage.

Video: **Why can't I just use Google? (3:12)**

2. Listen to what Michelle Bachmann, a Republican Party member of the United States House of Representatives, and an unnamed Fox Channel presenter say, and what Rachel Maddow thinks about that.

Video: **Media Literacy Clip (2:50)**

3. Watch this news item about a cyber-bullying incident.

Video: **Six students arrested for Cyber Bully Incident (2:11)**

NOW CONSIDER THIS:

What if all of the people involved in these video clips, the male student, the member of the US House of Representatives, the Fox Channel presenter, the six students and the deceased girl, were all current or past students of your school? Would that be a crisis for your school? Why?

The problem we are presenting to you is that your school has not transformed its technology plan to systematically address the challenges of digital literacies, including media literacy and digital citizenship. Yet you are educating students in a digital society! To avoid tragedy you are tasked with the responsibility of developing a school-based strategy for education in a digital society.

4.1 A Changing Landscape

In this lesson you will explore how society and the education landscape are being influenced socially and culturally by technology. You will develop an understanding of the scope of digital literacies, how the media influences communication and reflect on what pedagogical approaches best support your responsibilities as an educator of digital literacies.

Learning objectives:

- Explain the scope and impact of digital literacy.
- Evaluate pedagogical approaches that support the education of digital literacies.
- Create media to express an idea.

4.1.1 Prepare

While you watch the videos and read the texts of this lesson you must record, in text, the key ideas and understanding you gather from the media. Focus your thoughts on the influences on education of a digital society and, in particular, the implications of the changing educational paradigms as discussed by Sir Ken Robinson in the first video. Save it all in one note or document. In the last activity of the lesson we will represent this text visually.

Let's start with the big picture and take a few steps back to examine where we are coming from in education and what may be on the horizon.

Watch this animated talk on *Changing Education Paradigms* in which Sir Ken Robinson interprets the old paradigm and suggests how this should be changing.

Video: **Changing Education Paradigms (11:41)**

Watch this animated talk called *The Internet in Society: Empowering or Censoring Citizens?* in which Evgeny Morozov presents an alternative take on 'cyber-utopianism', suggesting that the internet plays a largely emancipatory role in global politics. What are the implications of this for education in the school?

Video: **The Internet in Society: Empowering or Censoring Citizens? (10:59)**

1. Join the discussion group for this lesson called Changing Landscape.
2. Discuss your conclusions about these two videos in terms of how the digital landscape in which our learners are growing is offering them opportunities to influence society, while the education landscape is still calling for increasing conformity. Where do we stand as teachers in this apparent mismatch and what can we do to educate our learners in a changing landscape?

4.1.2 Study

You will now focus your study on literacies and pedagogy in a digital society. Continue to use the same document/note from the previous activity to capture your ideas and understanding about the key elements of digital literacies and digital pedagogy – the challenges to the transformation of your teaching.

Digital literacies

Watch this TED Talk by Dr Doug Belshaw (a Researcher/Analyst at JISC Advance at the time where he researched and advised on issues around open education and innovation) *The Essential Elements of Digital Literacies*. A summary of the eight elements follows the video.

Video: **The Essential Elements of Digital Literacies (17:29)**

Belshaw said: "Every time you're given a new tool it gives you a new method of impacting on the world." Think about the **8 elements of digital literacies** he introduces and what new methods the tools used in these elements would encourage.

Join the group discussion for this lesson called "*Changing Landscape*". Share your ideas about what "new" tools and changing methods could be employed in educating for digital literacies. Do you think that the eight elements provide a comprehensive framework for digital literacies?

Transforming Learning

Watch University of South California media professor Henry Jenkins (part of the The Digital Generation Project) describe the role of digital media in the cultural transformation of learning. What would you be willing to explore to bring real value to learning in your classroom?

Video: **Big Thinkers: Henry Jenkins on New Media and Implications for Learning and Teaching (9:29)**

To be digitally literate is to have access to a broad range of practices and cultural resources that youare able to apply to digital tools. It is the ability to make, represent and share meaning in different modes and formats; to create, collaborate and communicate effectively and to understand how and when digital technologies can best be used to support these processes.

Digital Pedagogy

Prof Marion Milton of La Trobe University, Australia writes about digital pedagogy as follows:

> *"Digital pedagogy includes several axiomatic changes to traditional pedagogy and has more in common with a constructivist approach, in which students construct their own knowledge in a social context. However, digital pedagogy goes beyond that to include teaching about and for*
>
> *digital technology for learning. Central to digital pedagogy is the co-construction of knowledge. A digital pedagogy includes planning for learning which is less content than problem-solving based. It can present knowledge as problematic rather than as fixed. As such it promotes higher-order thinking skills and students move from remembering content to gaining a deep understanding of concepts (Kent & Holdway, 2009). It develops critical analysis, metacognition and reflection, often through creation, editing and publishing online (Luckin et al, 2009). Further, digital pedagogies can include Web 2.0 technology for social networking, with the use of blogs, wikis, i-phones and i-pads for learning. In this way digital pedagogies help to promote connectedness to the wider world. (Kent & Holdway, 2009).*
>
> *In order to embrace digital pedagogies teachers may find they are no longer the experts and that they need to change from being users of technology, such as when they find and print off activities for students, or information for themselves to use in teaching, to becoming co- creators (Poore, 2011)."*

Source: Milton, M. Digital literacy and digital pedagogies for teaching literacy: Pre-service teachers' experience on teaching rounds, Journal of Literacy andTechnology 77 Volume 14, Number 1: March 2013

Read the TeachThought blog article called **As Digital Influence Changes, Let Students Create The New Internet**. If you are short of time skip the slideshare and just focus on the five ideas listed. How does this compare with how you view the Internet with your students? As a learning professional, do you think you are given sufficient opportunities such as this?

1. Return to the group discussion for this lesson called "Changing Landscape". To what extent do you agree with the definition of digital pedagogy? What is your view about what digital pedagogy should be?

4.1.3 Apply

Making it more visual

1. Spend some time completing your notes about the lesson so far. Do not spend time on formatting because this is not required, but do check your spelling.
2. Go to **http://www.wordle.net/** and click on Create your own. Copy and paste your notes and create the most creative Wordle you can.

3. Save the Wordle as a PDF (via the Print menu – see FAQ in Wordle). Save it to a file starting with your name.
4. Share the Wordle with your group in the documents folder of the group discussion area. Add a comment on your interpretation of the result. Does the result surprise you or what words/phrases do you think have not come through sufficiently?

4.1.4 Reflect

End this lesson by reflecting in your blog/wiki on how a changing education landscape is affecting you and your teaching practice. What perspectives have you learned in this lesson that will influence you to reconsider some aspects of your teaching?

Publish your Wordle in your blog/wiki.

4.2 OMG it's TXTing

In this lesson you will consider viewpoints on the question of digital media's impact on traditional text literacy and then use a non-traditional combination of text, images, and digital tools to discuss your take on the issue.

Learning objective

- Explain the scope and impact of digital literacy.
- Create media to express an idea.

4.2.1 Prepare

OMG, dis lessn S bout d influence
of txtN by sms n im on literacy.
wadya tink. cn u handl it. lol prep by
wotchN dis vid n readN deez 2 articles.

As u do so, 4mulate an opiniN on hw
u tink TXT n IM S influencing literacy.
Let's go, CU l8r.

Does texting mean the death of good writing skills? John McWhorter, a linguist, political commentator and author of a number of books on language provides a linguistic and cultural perspective.

Video: **Txtng is killing language. JK!!! (13:49)**

Read the Education World blog post **"Do Texting and "Cyber Slang" Harm Students' Writing Skills?"**

On what grounds to they identify this as a problem and do you agree with their suggested solution?

In an ASCD publication **"Are Digital Media Changing Language?"** (March 2009 | Volume 66 | Number 6) Naomi Baron writes that "It's natural for languages to evolve. But what should really concern us is the way computers and mobile phones are changing our attitudes toward language." Do you think that technology is to blame for attitudes towards language?

4.2.2 Study

Unpack the issues

In this activity you will use Mindmeister, the online mind-mapping tool in a collaborative group exercise in which you identify and classify the issues related to social media communication and literacy.

Let's take literacy to mean "the ability to read for knowledge, write coherently and think critically about the written word." (Wikipedia)

1. Your tutor will provide you with an invitation by email to join the mind map. For best use of the mind map it would be advisable to join and participate at the same time or soon after your peers.
2. Follow the invitation link to the Mindmeister site and participate in creating the mind map. Your task is to brainstorm all the issues, concepts and key ideas related to the question of whether texting by SMS, IM and other social media tools is harmful or beneficial to literacy.
3. Once the mind map starts becoming populated with words, feel free to re-arrange them and group them under headings, or to use the existing words as springboards for the new ideas.

4. The activity will have a begin and start date, after which it may become deactivated. Plan your participation times carefully.

Wait until the end date before progressing to the next activity. It may be to your benefit to view this mind map in its most complete form before proceeding.

4.2.3 Apply

Your task in this activity is to work with a partner to create a comic strip about the effects of digital media on language and writing. Your tutor will allocate you a partner by a random method. Be aware that this is true collaboration, so you will be relying on your partner as much as he/she will be relying on you to produce a common product.

The comic strip may be serious or humorous. It may express an opinion, facts or highlight etiquette or comical situations, but the underlying message should be a commentary on the issue and express your joint opinion about the issue.

1. Spend a bit of time exploring the comic creation site at **http://www.makebeliefscomix.com/**
2. With your partner, decide on how you are going to collaborate on this project. How will you share this comic with the group and your tutor?
3. Decide on a story for your comic.
4. Design a storyboard.
5. Create your comic collaboratively.
6. Use the rubric items below to:
    1. Conduct a self-assessment of your collaboration skills;
    2. Conduct a peer assessment of your partner's collaboration.
7. Individually, submit your assessments to your tutor by copying and pasting it to a document which you should submit below. Remember to start the file name with your own name.
8. Share your comic as a PDF file with your group using the OneDrive folder set up for this purpose. Include both your names in the file name.

Assessment: Collaboration

0-1	2-4	5-7	8-10
Sometimes chooses not to participate and does not complete assigned tasks.	Sometimes a satisfactory group member who does what is required	A strong group member who tries hard	A true **team member** who contributes a lot of effort and encourages and supports the efforts of others in the group.

Seldom or never follows through on assigned tasks. Depends on others to do all of the work.	Does not follow through on most assigned tasks and sometimes depends on others to do the work.	Follows through on most assigned tasks.	Follows through on assigned tasks and does not depend on others to do the work, **responsibility** for tasks is shared evenly.

Assessment: Comic

0-1	2-4	5-7	8-10
The **story line** is poor and and shows no **understanding of the issue.**	The story line exposes some misunderstanding of the issue.	The story line shows some understanding of the issue without appearing remarkable.	The **story line** is clever and reflects a deep **understanding of the issue**.
The comic does not communicate a clear message at all.	The comic communicates a message but with some lack of clarity at times.	The comic communicates a clear message without being remarkable.	The comic very effectively **communicates a message** about the issue.
The creation is **not original, engaging,** or **creative**.	The creation is not always original and/or interesting and does not fully engage the reader fully.	The creation is original but somehow lacks either engagement or creativity.	The creation is **original** and **engaging**, perhaps humorous, perhaps serious, but very **creative.**

When you have submitted your assessment and your tutor has recorded it, you will be able to proceed to the next lesson topic.

4.2.4 Reflect

Reflect on the experience you had in this lesson and post your thoughts to your blog/wiki. Have you ever collaborated online with someone in this way before? What did you think about the challenges of doing this as well as presenting your understanding through a medium such as a comic strip? What potential does this hold for digital pedagogy?

4.3 Cool Schools

In this lesson you will analyse case studies of schools that teach digital literacies. You will identify the methods used and assess how teaching digital literacies can influence education in a digital society.

Learning objectives

- Explain the scope and impact of digital literacy.
- Evaluate pedagogical approaches that support the education of digital literacies.

4.3.1 Prepare

Ask the right questions

In this lesson we will analyse case studies of schools presented as examples of digital literacy teaching in action. We will evaluate the impact of these lessons on developing effective digital literacy skills and habits.

Before we proceed, we have to establish how we will go about this analysis and evaluation. Here are some questions we could ask:

- How would you evaluate a lesson in which teaching digital literacy is infused?
- What kind of teaching and learning opportunities would you expect to see?
- How will you know whether the lesson has a positive impact on digital literacy?

What other questions do you think need asking?

1. Join the group discussion for this lesson called *"Evaluating cool schools"*.
2. Identify what questions you need to ask and answer before you proceed.

4.3.2 Study

Develop an evaluation tool

In this activity you will collaboratively create an evaluation tool for analysing and evaluating case studies of lessons that infuse the teaching of digital literacies.

1. Your tutor will send you a link to a Google Drive document, which you will use to convert your best questions from the previous activity to an evaluation tool. **This is an example of the document.**
2. Start by transferring the most appropriate questions from your previous discussion to the first column.
3. Respond to the questions in the second column.
4. Draft a rubric item in the third column. Do not be afraid to edit each other's writing in true collaborative style.
5. After a few days, depending on your peers' collaborative responses, use the table to create your own evaluation tool.
6. Submit your tool to your tutor for feedback using the upload link at the bottom of this page.

Assessment rubric

0-1	2-4	5-7	8-10
Your evaluation tool does not refer to a lesson infused with digital literacies. It does not recognise unique pedagogy and the role of digital media and resources in the lesson. A lesson using thesecriteria will not be a good example of education in a digital society.	Your evaluation tool captures 1-2 elements of a lesson infused with digital literacies, but with many notable omission(s). It does not describe pedagogy and the role of digital media and resources in thelesson that is typical of a technology-supported lesson.	Your evaluation tool captures 3-4 elements of a lesson infused with digital literacies, but with some omission(s). It describes pedagogy and the role of digital media and resources in the lesson that are normal for a technology-supported lesson.	Your evaluation tool captures the essence of a lesson infused with digital literacies. It recognises unique pedagogy and the role of digital media and resources in the lesson. A lesson using these criteria will be perfect for education in a digital society.

Once your tutor has recorded your submission and given you feedback you will be able to proceed to the next lesson topic.

4.3.3 Apply

In this activity you will use the evaluation tool you developed in the previous activity to evaluate three lesson plans or case studies. Choose one from each of the following three categories: A, B and C below.

A. Media literacy lessons from FutureLab and digital citizenship lessons from common sense media®.

Online Safety (from common sense media®)

1 **K-2: Staying Safe Online**
2. **Gr 3-5: Talking Safely Online**
3. **Gr 6-8: Safe Online Talk**
4. **Gr 9-12: Over-exposed Sexting and Relationships**

Media and gender (from common sense media®)

5. **Gr 3-5: Picture Perfect**
6. **Gr 3-5: Selling Stereotypes**
7. **Gr 6-8: Cracking the Gender Code (5Mb)**
8. **Gr 6-8: Gender Stereotypes Online**
9. **Gr 6-8: The Reality of Digital Drama**

10. **Gr 9-12: Feeling on Display**
11. **Gr 9-12: Risky Online Relationships**
12. **Gr 9-12: Becoming a Web Celeb**

Digital Literacies (from FutureLab)

13. **Gr 5-6 Literacy and Science: Captain's Log**
14. **Gr 6-7 Science: Electricity**
15. **Gr 7 Cross-curricular: Online School Prospectus**
16. **Gr 8 Maths: 3-D Modelling**
17. **Gr 8 Literacy: Animated Stories**
18. **Gr 8 Geography: Our Fractured Earth**
19. **Gr 8 Language: Newspaper Project**
20. **Gr 8 Religious Studies: Rites of Passage**
21. **Gr 9 Science: Why is DNA the Molecule of Life**
22. **Gr 9 Geography: The Dangers of Volcanoes**

B. A source of technology-supported lessons or any other technology-supported lessons you may find on the Web.

Technology-supported lesson plans

C. A lesson from your own subject that has been designed and implemented by you or a colleague.

1. Administer the evaluations using the evaluation tool and then write a review of each lesson.
2. Log in to your personal blog/wiki and post your reviews of lessons from A and B (C will be done in the next activity).
   - Give the name of the lesson.
   - Include the URL of the lesson (see the reference for the FutureLab case studies in the Resources section).

4.3.4 Reflect

Reflect in your blog/wiki on what you have learned about lessons that infuse digital literacies and educate about digital citizenship. Give a review of your own lesson (C from the previous activity) and mention how you would change your lessons now that you have gained better insight from the case studies and lessons.

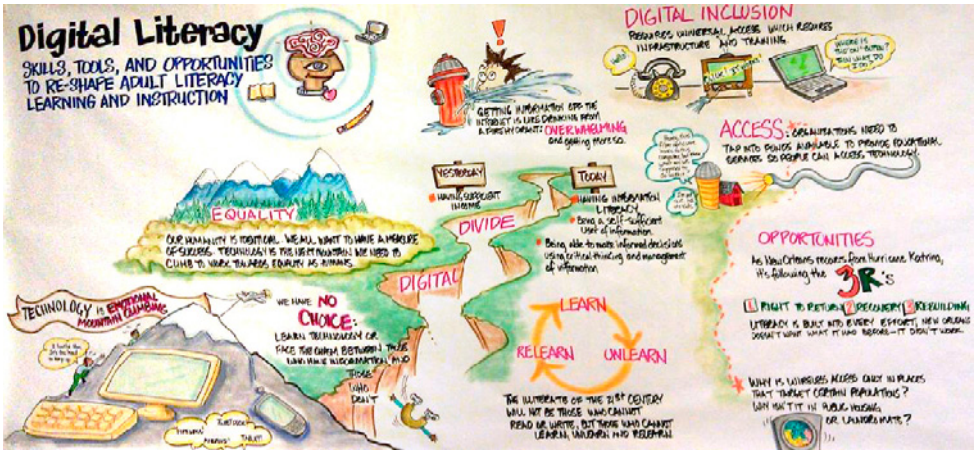
4.4 Digital Literacy

During this lesson you will define the scope of digital literacy by drawing on your understanding of what it includes and comparing this to visual representations created by others who have considered the same thing.

Learning objectives

- Explain the scope and impact of digital literacy;
- Create media to express an idea.

4.4.1 Prepare



You have already had quite a lot of exposure to digital literacy in this course so far. Now you have an opportunity to express your understanding in a visual way.

Watch one of these FutureLab videos to see a snapshot of what is happening in schools regarding the development of digital literacy awareness.

Secondary School

Video: **Digital Literacy: Secondary (9:21)**

Primary School (watch from 1:16)

Video: **Digital Literacy: Primary (7:46)**

1. Use the image search facility of your favourite search engine to look for infographics and other visual representations of digital literacy.
2. Save the images you think are most informative and most completely define digital literacy in your view. You will use these in the next lesson activity.

4.4.2 Study

Watch this video in which the founder of Chicago's pioneering Digital Youth Network (DYN), Nicole Pinkard, describes how the organisation empowers young people with critical digital literacy skills. This may help to broaden your understanding of the scope of digital literacy.

Video: **Nichole Pinkard on Digital Literacy (Big Thinkers Series) (7:06)**

1. Your tutor will place you in pairs by opening new comments for each pair in the group discussion area. Confine your conversation to replies in the same comment area.
2. Use the document upload folder in the group area to share your favourite image of digital literacy and explain to your partner why you think it is so effective. Remember to name the image starting with your name.
3. Discuss each other's ideas and reach consensus on what you consider to be the scope of digital literacy and its important associated concepts.

4.4.3 Apply

In this activity you will express the product of your research, reflection and discussion about digital literacy in a visual way. You should not use a Wordle, but you may use any other static visual expression. Be creative and have fun.

1. Create your visual image.
2. Save it in a file that should not exceed 8Mb. Your file name should start with your personal name.
3. Submit the file to your tutor for feedback using the upload area at the bottom of this page

Assessment rubric

0-1	2-4	5-7	8-10
The information is portrayed in text format and presented in a way that makes it difficult to understand.	The information is portrayed mostly in text format and/ or presented in a way that could at times lead to misunderstanding.	The information is mostly portrayed visually in a plain way, but the viewer will be able to understand the information.	The information is **portrayed** in a **visually creative** way and the viewer will easily **understand** the information.
0-1	**2**	**3**	**4-5**
The layout of the image is very confusing and no main ideas come through strongly.	The layout of the image is is confusing in places and few main ideas are highlighted. Supporting information is not clearly linked to main ideas.	The layout of the image highlights most main points and supporting ideas are mostly well organised in relation to the main ideas.	The **layout** of the image makes it clear what the **main points** are and what **supporting ideas** relate to them.

Once you have submitted your file and your tutor has recorded it you will be able to continue to the next lesson topic.

4.4.4 Reflect

Use this opportunity to reflect in your blog/wiki about your new understanding of digital literacy. Include your visual representation of your understanding and describe areas which are new to your understanding.

4.5 Media Literacy

In this lesson you will focus on one dimension of digital literacy, namely: media literacy, by using the National Association for Media Literacy Education's (NAMLE) key questions. You will create a learning experience using your own selected media resources.

Learning objectives

When you complete the lesson you will be able to:

- Evaluate pedagogical approaches that supports the education of digital literacies.
- Explain the principles of media literacy.
- Analyse media messages

4.5.1 Prepare

You were exposed to the term 'media literacy' in your visual representation during the previous lesson. You may still have some unresolved questions about media literacy such as:

- How significant a component of digital literacy is media literacy?
- Does media literacy refer only to advertisements and news media?
- What other forms of media are included in media literacy?

What is media literacy?

Video: **What is Media Literacy?** (3:06)

MediaSmarts is Canada's Centre for Digital and Media Literacy. On their website they describe media literacy as follows:

"Media literacy reflects our ability to access, analyze, evaluate and produce media through understanding and appreciation of:

- the art, meaning and messaging of various forms of media texts
- the impact and influence of mass media and popular culture
- how media texts are constructed and why they are produced
- how media can be used to communicate our own ideas effectively

Critical thinking is central to both digital and media literacy."

Source: **MediaSmarts**

Click here to read the **key concepts of media literacy** on the MediaSmarts website. Just read that one paragraph, but read it carefully and extract the main responsibilities for teachers in media literacy and the kind of questions that media consumers must learn to ask. Compare this with the US-based **National Association for Media Literacy Education's (NAMLE)** list of key questions. Do you see the overlap?

Now watch Andrea Quijada's TED Talk called "Creating critical thinkers through media literacy". Which of the media literacy concepts and questions did she mention? How does media literacy develop critical thinking?

Video: **Creating critical thinkers through media literacy (7:03)**

4.5.2 Study

Decoding media messages

In this activity you will collaborate in a small group, select an item of media and apply a list of key questions to this item.

1. Your tutor will have placed you into groups of four using the lesson group called "Media Literacy Analysis". Each group will have been allocated one of the media clips listed below. Use the comment area to conduct the analysis (in steps 2 to 4).
2. You may use the **NAMLE key questions** in this activity. Discuss whether you think additional questions need to be added and in what section they should appear. Note that not all questions are relevant to every item of media (see next step).
3. Based on the media, decide which questions should be asked to analyse this media.
4. Apply the selected questions to the media item and share your responses with each other.

Your group will be allocated one of these clips:

- **AXE Apollo – Lifeguard TV Commercial**
- **Pfizer Commercial**
- **Bank of India home loan commercial**
- **Diane shoe commercial**
- **Nando's Chicken commercial**
- **The Force: Volkswagen commercial**

4.5.3 Apply

This activity will be assessed and form part of your final assignment.

During this activity you will design a full lesson that integrates media literacy learning objectives with your own subject objectives. If your subject does not really lend itself to this, then design a media literacy education lesson. Remember that media can refer to any kind of media.

Use the ASSURE lesson plan model to design this lesson. When you get to the second S for Set media, identify the one or more media items you will use. When you get to the R for Require student participation you must include the key media literacy questions you are going to ask.

Here is an example lesson which does not use the ASSURE model but will give you a good idea of the kind of lesson to which we are referring.

1. Use a word processor document to design this lesson and save it as a PDF. Remember to include your name at the start of the file name.
2. Once you have saved the PDF file, upload it to your tutor for feedback.

Assessment rubric

	0-1	2-4	5-7	8-10
Curriculum objectives	Not included	Learning objectives do not refer to media literacy objectives.	Learning objectives refer to one media literacy objective.	Learning objectives include reference to more than one media literacy objective.
Select instructional methods, media, and materials	Not completed	Inappropriate media was selected and it is not likely to elicit much response.	The media selected is appropriate but would not necessarily give rise to deep discussion.	Appropriate media has been selected to stimulate deep discussion. Note: the number of media items is of no significance here.
Require learner participation	Not completed	The key questions selected were mostly not appropriate for the media.	The key questions are good but one important question was omitted.	The key questions selected are a perfect match for the media.

Once you have submitted your PDF file and your tutor has recorded it you will be able to continue to the next lesson topic.

4.5.4 Reflect

Use your blog/wiki to post an entry in which you reflect on media literacy and how you can regularly integrate the principles in your own teaching.

4.6 Information Literacy

You will be quite familiar with some aspects of information literacy, especially if you have completed the course "Professional Development with Technology", which included basic web search and evaluation skills. In this lesson we delve deeper and explore some more advanced and refined skills.

Learning objectives

- Explain the scope and impact of digital literacy.
- Evaluate pedagogical approaches that supports the education of digital literacies.
- Use advanced navigation and evaluation web resources.

4.6.1 Prepare

Search Literacy

One of the most common things we think of and do when we engage in information literacy is searching websites using popular search engines such as Google or Bing. Remind yourself how search engines work by watching this video from Google:

Video: **How Search Works** (3:14)

You may be an ace at searching the web, but have you ever used Google Advanced search to refine your searches?

Video: **Google Advanced Search** (3:09)

When you participated in the *Professional Development with Technology* course you would have learned about simple searches and website evaluation tools. Here are three evaluation tools developed by the world-renowned Kathy Schrock **(http://www.schrockguide.net)**

- **Elementary school level**
- **Middle school level**
- **High school level**

Use one of these tools to evaluate the following two websites:

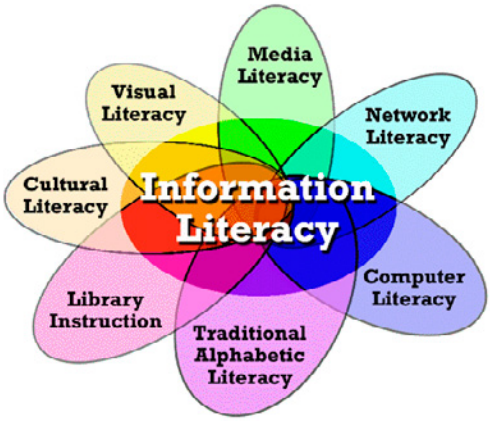
1. **All About Explorers**
2. **Dihydrogen Monoxide Research Division**

Compare your findings with your group using the group discussion for this lesson called *"Information Literacy"*.

4.6.2 Study

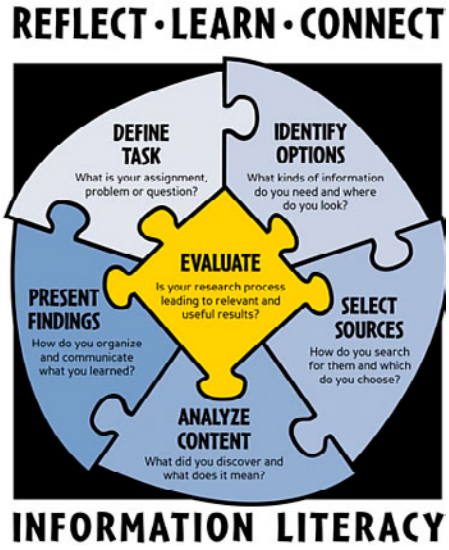
Key Elements of Information Literacy

Information literacy came up before when you created your visuals for digital literacies. How would you draw a visual representation for information literacy? Do any of these three images tell the whole story?



Visual A

Visual B



Visual C

1. Join the group discussion for this lesson called "*Information Literacy*".
2. Discuss these three visual representations of information literacy and identify what message each is portraying.
    - Are there missing elements?
    - Do some elements belong elsewhere?
    - What is the essential difference between these visuals?
3. Try to reach consensus on what the key elements of information literacy are.

4.6.3 Apply

As we draw towards the end of this part of the course it would be appropriate to use your search literacy skills to look for and evaluate resources that could contribute towards your final assignment. You may remember that you will be required to develop a strategy and guidelines for your school regarding the education of digital literacies, including digital citizenship (which is the topic of the next lesson).

1. Working on your own, refine a website evaluation form to suit your needs for this activity.
2. Develop search strategies, find and evaluate websites that will provide you with support in determining the best digital literacies education strategy for your school. Focus on how to integrate digital literacies into lessons and school programmes.
3. After you have found and evaluated great resources, share them with your peers in the group discussion area.

Once you have completed this activity click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

4.6.4 Reflect

Use this opportunity to reflect in your blog/wiki on how you would integrate the teaching of search literacy and information literacy skills in your teaching.

4.7 Digital Citizenship

In this lesson you will explore dimensions of digital citizenship and consider ways to engender positive digital citizenship in students.

Learning objectives

- Explain the scope and impact of digital literacy.
- Evaluate pedagogical approaches that support the education of digital literacies.
- Explain the responsibilities of digital citizenship.

4.7.1 Prepare

1. Click on the infographic (above) to enlarge it and absorb the information it offers.
   - How does this compare to your understanding of digital citizenship?
   - Do you think this is a separate set of skills to those that fall under the umbrella of digital literacies?
2. It seems that digital citizenship offers many opportunities for educating our students for a digital society. Here is a Piktochart (below). Click on the image to enlarge it and reflect on what these opportunities might be. What other teachable moments can you think of that align to your own subject?

Sources: Digital Citizenship Infographic: http://www.educatorstechnology.com/2014/01/a-wonderful-free-classroom-poster-on.html

Teachable Moments Piktochart: http://d20innovation.d20blogs.org/files/2013/07/Digital-Citizenship-infographic.jpg

4.7.2 Study

In this activity you will start a jigsaw group activity that will culminate in the next activity. Your final product will be to put together a series of wiki pages in which you review digital citizenship resources and make specific recommendations on how students could be educated about the associated issues.

In this activity you will do the research.

1. **Go to this survey to select your preferences,** complete it and submit it.
2. Your tutor will place you into groups and invite you to the groups. An email message will announce when these groups are ready for you to join.
3. While you wait, start doing some research on the topics that interest you.
4. 

Once you have made contact with your group, discuss how you could break up the task of researching for a) information resources and b) educational resources for your topic. Note: by "educational resource" we mean resources that would assist in educating students about the topic. A good place to start with searching for educational resources is the **curriculum of common sense media®.** Register for access to the free educational resources on media literacy and digital citizenship. **Cable in the Classroom** has links to good free resources on Safety and Ethics issues. During the Digital Citizenship Week Edutopia produced a Technology Integration blog article **Digital Citizenship Week: 6 Resources for Educators**. Search for further resources in your groups.
5. Report back to your group and share your resources, giving reasons why you think they are credible and valuable.
6. Decide who will write about which resources in the wiki, which you will do in the next lesson activity.

4.7.3 Apply

Before you proceed with the activity you should have discussed how to proceed with your group from the previous lesson activity.

1. Discuss with your group members how you will show accountability to each other. Note the wiki peer assessment rubric below.


2. Log in to the course wiki and open the pages that have been named according to your topic.
3. Publish your reviews and recommendations. Make sure you are accountable to your group.
4. Use the wiki peer assessment rubric below to assess your peers. Submit your assessment of each team member, in a document, to your tutor.


Your group will be assessed for the product in the wiki and each group member will be awarded that mark multiplied by the average peer assessment mark. For example if the peer assessment mark is 2 and your wiki publication receives a 6, your final mark for this activity will be 6×2=12.

Wiki Peer Assessment

1	2	3
Does not follow through on most assigned tasks and depends on others to do the work.	Follows through on most assigned tasks but does not show full responsibility.	Follows through on assigned tasks and does not depend on others to do the work, shows full responsibility for tasks assigned.

Wiki publication assessment

0-1	2-4	5-7	8-10
The work is not original and very plainly presented.	The work lacks originality and/or is presented with little attention to presentation.	The work is original and clearly presented in an interesting way.	The work is **original** and very **creatively** presented.
0-1	**2-4**	**5-7**	**8-10**
The depth of useful knowledge shared is minimal.	The depth of useful knowledge shared is inadequate and there are significant omissions.	The depth of useful knowledge shared is adequate enough for the page to be informative.	The **depth of useful knowledge** shared is remarkable, with great attention paid to detail.

Once you have completed your publication, submitted your peer assessment and your tutor has recorded this, you will be able to continue to the next lesson topic.

4.7.4 Reflect

This is the final prompt to reflect on your learning in this course, although we hope you will keep your blog active after this.

- Reflect on the collaborative process you experienced in this lesson.
- What are the unique challenges to collaborating online?
- Which of the resources you discovered do you intend using in your classroom and how will you adapt them to your needs?

4.8 Final Assignment

Welcome to your final assignment in which you draw on the resources you created during this course. Remember the challenge we set you at the start of the course? You are now about to present your suggested solution.

What to do

Apply your understanding of digital literacies as a whole and develop a school-wide approach for educating digital citizens.

You may use any format to present this assignment but the final assignment file you submit must be less than 8Mb in size. Your submission must provide the evidence required to fully assess the work (see the rubric below).

These are the elements of the assignment you must include:

1. Your own clear definitions of the scope and skills used in digital literacy, media literacy, information literacy and digital citizenship. Hint: you could try infographics or other visual media.
2. Clear recommendations to the school on why a programme for education in a digital society should be adopted.
3. A curriculum which makes recommendations about:
    - What will be taught
    - In what grade/subject? By whom?
    - How? When?
4. Include recommendations for resources (with links to the resources), but do not create any resources.

Assessment rubric

0-1	2-4	5-7	8-10
The definitions of scope and skills are not comprehensive nor credible.	The definitions of scope and skills either lack comprehensiveness or credibility.	The definitions of scope and skills are comprehensive and accurate in terms of credible literature with one or two significant omissions.	The **definitions** of scope and skills are fully **comprehensive** and accurate in terms of **credible** literature.
0-1	**2-4**	**5-7**	**8-10**
The recommendations about why the school should adopt the programme are neither clear nor logical.	The recommendations about why the school should adopt the programme are either clear or logical (but not both).	The recommendations about why the school should adopt the programme are clear and logical.	The **recommendations about why** the school should adopt the programme are **compelling** and **powerfully expressed.**

0-1	2-4	5-7	8-10
The curriculum content does not cover any major issues.	The curriculum content covers major issues with more than three significant omissions.	The curriculum content covers most major issues with one to three significant omissions.	The **curriculum content** covers all the major issues without any significant omissions.
0-1	**2-4**	**5-7**	**8-10**
The curriculum plan is not doable nor includes any good ideas for implementation.	The curriculum plan is either not doable or includes no good ideas for implementation..	The curriculum plan is doable and includes a few good ideas for implementation.	The **curriculum plan** is **doable** and includes very **creative** ideas for implementation.

Submit

1. You must submit a file which either contains your assignment or the details of where your assignment can be found.
2. If your assignment is posted in another location it MUST be shared and accessible to the tutor and assessor.
3. The file you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_SVG_Final_Assignment

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Preparing Teachers for ICT Integration into Teaching and Learning

5 INNOVATIVE APPROACHES TO LEARNING WITH TECHNOLOGY

5 Innovative Approaches to Learning with Technology

Teachers require the competencies and knowledge to implement learner-centred classrooms that integrate technology and foster innovative teaching and learning practices. This course builds on the foundations of knowledge of learning theories and basic technology-enhanced teaching to focus on more innovative classroom activities. This course also focuses on learner engagement, developing

21st Century skills and engaging learners in knowledge-building tasks.

In his TED talk, Michael Wesch introduces many of the ideas this course encompasses. He suggests we prepare youth to move from being just knowledgeable to knowledge-able; that is able to find, analyse, criticise information and create new knowledge. In order to embrace real-world problems our learners must know how to harness and leverage relevant tools. This will engage them in ways we often fail to do in today's classroom.

Video: Michael Wesch – **From Knowledgeable to Knowledge-Able**

Learning Objectives

Participants who successfully complete the module can:

- Express an opinion about the "digital native/digital immigrant" debate supported by evidence from the participant's context and personal experiences;
- Critically examine how technology tools engage learners;
- Describe a typically innovative learning activity;
- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities;
- Design an innovative knowledge-building learning activity where the technology integration is focused on the learners;
- Design formative assessment strategies that can be used in innovative classrooms.

Setting the Scene

The Challenge

'Innovation' sounds like such a creative and extraordinary word and you may well be one of those teachers who think it is something unachievable. Being innovative can mean a lot of things, but the most common element to all interpretations of its meaning is that it does not refer to something teachers have been doing for the last 50 years or more. It suggests something different, something

that is a response to change. How is the world of your learners changing? How are you responding as an educator? Do these questions make you feel threatened or defensive? Our challenge to you is to make a response to the changing world in the way you teach with technology.

Identify one specific topic you teach and explore how you can teach that topic more "innovatively" with technology and digital resources as support. Then design that lesson.

Assessment

Your assessment for this module will include your interactions with your group. You will see minor assessment activities as you work through the module. Some will refer to your discussions and some to various other activities, including the reflective entries you make in your personal blog about this course. You will see reference to your blog in the "Reflect" stage of every lesson.

In your final assignment (Lesson 9) you will be required to submit a lesson designed to showcase the characteristics of an innovative learning activity. Use that opportunity to implement all the ideas you will have generated in the lessons leading up to the final assignment.

5.1 Rationale for Innovative Teaching

Engage in a debate on the topic of digital natives and digital immigrants. You will be sensitised to the needs of learners in a digital world where digital tools and media are transforming society. How are we transforming our school learning environment?

Learning Objective:

By the end of this lesson you will be able to:

- Express an opinion about the "digital native/digital immigrant" debate supported by evidence from your context and personal experiences.

5.1.1 Prepare

The debate about digital natives/digital immigrants raises quite a few questions about whether we should label people as such, but also provides valuable insight into the digital environment and how it might affect the nature of learning. Watch these two videos and, while doing so, consider these questions which you will draw on in your discussion in the next activity:

1. Is it fair, or even relevant, to use labels such as "digital native" and "digital immigrant", or similar?
2. What are some of the ways in which our learners use technology?
3. What kind of learners are we teaching?

Watch this video of Dr Mark Bullen's critical response to the claims made in the Digital Natives/ Digital Immigrants debate.

Video: **Deconstructing the Digital Natives** (7:57)

Listen to the discussion on the update of findings in a project conducted between Dave White of Oxford University and Lynn Connoway OCLC on *Visitors and Residents: What Motivates Engagement with the Digital Information Environment?*

Video: **Digital Visitors and Residents: What Motivates Engagement with the Digital Information Environment?** (21:22)

1. Join the discussion group for this lesson called Rationale for Innovative Teaching.
2. Discuss the perspectives of these two videos:
   - Do they support each other's views?
   - What conclusions can we draw from these videos?
   - What are the questions we must ask ourselves as teachers when integrating technology in our lessons?
   - What is our rationale for teaching more innovatively?

Optional viewing:

You may like to watch the video interview of Marc Prensky called **What is the role of the teacher in today's world?** (4:01)

5.1.2 Study

Complete this questionnaire and then read the responses of your colleagues.

As you do so:

1. Consider to what extent your learners are the kind of digital learners who have been described in this lesson so far.
2. Is there a gap between your use of digital resources for teaching and learning and the digital environment to which your students are accustomed?
3. Discuss this with your learners to gain an insight into their perspective of the difference between their informal home learning environment and the formal classroom learning environment.

Note: If you have already completed this questionnaire and wish to take a shortcut to the responses **click here**.

5.1.3 Apply

In this activity you will apply all your insight gained from your own experience and what you have learned so far in this lesson.

1. Join the online discussion group called *Rationale for Innovation*.
2. Discuss this question: *What is the role of teachers and schools in preparing learners to succeed in a digital society?*
3. Provide your own view point in a reply if it is unique. If it supports or supplements a view that has already been expressed, reply to that post and add supporting comments.

Your participation in this discussion and other discussions will be assessed as follows:

0-1	2	3	4
You have not stated your view clearly or at all. You clearly do not understand the issue of the topic.	You stated your view in a confused or incoherent way and show little understanding of the topic and issues involved in the discussion.	You stated your view clearly, but show inconsistent understanding of the topic and issues involved in the discussion.	You **stated your view clearly and concisely,** showing understanding of the topic and issues involved in the discussion.
You are not an active "listener", showing no regard for or reference to what has been written when adding your comments.	You are not a good active "listener", making limited reference to what has been written when adding comments to the view.	You are an active "listener", making some reference to what has been written when adding comments to the view.	You are an **active "listener"**, showing excellent comprehension of what has been written and adding relevant comments to the view.
You do not make more than one response to what others have written.	You make 1 to 3 average responses to what others have written and add meaning to other viewpoints.	You make 4 to 5 average responses to what others have written and add meaning to other viewpoints.	You **keep the discussion going** and are very active in making good responses and adding meaning to other viewpoints.

See the **Resources** tab for more resources on assessing discussion groups.

5.1.4 Reflect

Log in to your personal CCTI learning blog and post reflective comments about

1. The kind of learners you teach;
2. How effectively you and your school prepares learners/students for the digital society;
3. What achievable changes you would like to make in order to be more innovative in this regard.

Reflection Tasks Assessment Rubric

Level 1	Level 2	Level 3	Level 4
Demonstrates little or no understanding of how to implement ideas gained from the course.	Demonstrates minimal understanding of how to implement ideas gained from the course.	Demonstrates some understanding of how to implement ideas gained from the course, and a practical willingness to do so.	Demonstrates coherent understanding of how to implement ideas gained from the course, and a serious commitment to doing so.
Total lack of reflection on own practice, attitudes and feelings.	Unwillingness to reflect on own practice, attitudes and feelings.	Rudimentary willingness to reflect on own practice, attitudes and feelings.	Willingness to reflect seriously and honestly on own practice, attitudes and feelings.

5.2 What is an Innovative Learning Activity?

In this lesson you will refine your understanding of what is included in an innovative learning activity. You will develop a set of criteria to use as a tool for evaluating the degree of innovation in a lesson activity.

Learning objective:

By the end of this lesson you will be able to:

- Describe a typically innovative learning activity

5.2.1 Prepare

In a July 2011 study by eSchoolNews, readers were asked what they wanted in a school. Here is what students said:

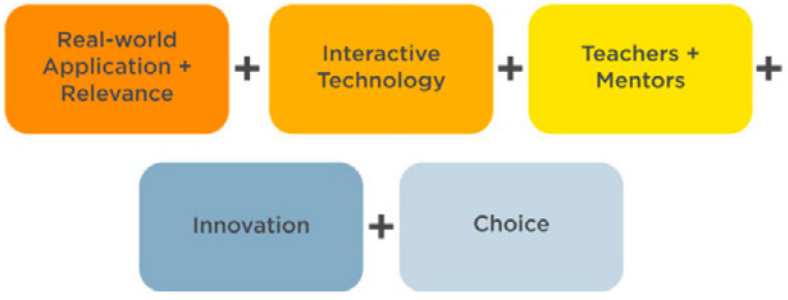


Image from EdTech MichaelDFlint

Read Michael Flint's brief explanation of each. (online)

What do we mean by "innovative" in the context of learning?

A quote from Mrs Cruz's Homepage:

> *"To us, innovative learning means that our students will engage in real work that has a real purpose and will be shared with a real audience. . . Making our students' work relevant, authentic and collaborative results in a high level of engagement and pride . . ."*

1. Find one quote from any source, online or offline, which typifies your understanding of innovative learning.
2. Share the quote with your colleagues in this Google Drive document online.
3. Read the quotes others have shared. Does this clarify your opinion about what innovative learning should be?

What are the trends at work in the classroom?

Read Five Research-Driven Trends At Work in Classrooms. Take notes on the basic ideas driving these trends and bookmark this page for later reference as you work through this course.

5.2.2 Study

Create a mind map

1. Your tutor will set up a mind map on Mindmeister and send you a message with the invitation to the page.
2. Identify KEY WORDS from the quotes and from your own understanding of innovation and arrange them in a mind map so a more common understanding of innovation emerges within the group.

Create your own checklist

1. Think critically about the concept of innovative learning and draw on the input from your group about this topic.
2. Create a checklist of at least six and no more than 10 items. Each item should represent a characteristic you think is essential for an innovative learning activity.
3. Save this checklist in a word processor using the file name <yourname>_innovative-learning-checklist and submit it to your tutor for feedback.
4. Wait for feedback before continuing to the next activity.

5.2.3 Apply

Evaluate learning activities for innovative quality

1. Find a partner of your choice (from within the group) and decide on a medium for working together on this activity.
2. Use your checklist from the previous activity to evaluate the learning activities listed below.
   - Minecraft in School
   - World Peace
   - Visit to d'Orsay
   - Soil Superheroes
3. Through discussion with your partner and consensus building, rank each learning activity from MOST innovative to LEAST innovative.
4. Enter your top-ranked learning activity in the poll below.

Sharing with the whole group

1. Save your checklist with the rating for the top learning activity inserted - use a file name starting with your own name.
2. Share the checklist with the whole group by joining the Innovative Learning Activity group online.
3. Upload the document to the document folder for that group.
4. Write your rationale for your choice as a group message.

5.2.4 Reflect

Log in to your personal CCTI learning blog and write reflective comments about innovative learning activities. Comment on the new perspectives you have gained and how you can adapt your teaching to include more elements of innovative learning in your own lessons.

5.3 Terms of Engagement

Learner engagement is one of the key phrases that emerged from the debate in the previous lesson. While learner-centred approaches are effective in keeping learners involved in the lesson, this does not necessarily mean that they are engaged. For instance, giving learners worksheets to complete may be a learner-centred approach, but it is possible that this will not truly engage the learner. Technology plays a role in engaging learners, but how sustainable and meaningful is that engagement? What exactly do we mean by "engagement" and how can technology facilitate such engagement?

Learning objectives:

By the end of this lesson you will be able to:

- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities;
- Critically examine how technology tools engage learners.

5.3.1 Prepare

1. Pick the key words from this workshop extract in **Meaningful Engaged Learning**. If you want to access the entire workshop video see the link in **Resources** tab at a later stage.
2. Learners from Robin Hood primary school, Birmingham, worked with a film crew from the National College for School Leadership to express their desire to use their favourite technologies for learning in school. What are the big thoughts behind these ideas? Make a note of the key ideas as you watch the video.

Video: **Engage me or enrage me** (14:59)

1. Construct a Venn diagram (or any other appropriate graphic representation) in which you record key ideas from the three sources: the workshop extract, the video and the articles you read. Show what these sources have in common with each other and which ideas are unique to a particular source.
2. Save the Venn diagram using a filename that starts with your name.
3. Share the diagram with your tutor by submitting it here below; also publish a copy to our blog.

Assessment

1	2	3	4
You have not used technology to produce an original graphic presentation.	You have used basic technology to produce an original graphic presentation.	You have used technology to produce an interesting and original graphic presentation.	You have u**sed technology** innovatively to produce **creative** and original graphic presentation.
You have demonstrated little or no understanding with key words that have been used.	You have demonstrated some understanding with key words that have been used but with notable omissions.	You have demonstrated your understanding with a good range of key words but there are one or two errors.	You have **demonstrated your understanding** with a wide range of key words that are arranged without error in the diagram.

5.3.2 Study

In the previous activity you used technology to be creative and innovative in the way you presented ideas graphically. How many elements of innovative learning were involved in that graphic presentation?

In this activity we will study the role of technology in engaging learners directly or supporting other ways of learner engagement.

1. Read **Defining Student Engagement with Technology**. As you read this article identify the following: a) why technology may engage learners per se and b) how technology can support other forms of learner engagement.
2. Join the online discussion group called *Learner Engagement* and share ideas on what criteria should be used to evaluate the role of technology in innovative learning activities.
3. Develop a list of between five and 10 criteria which you will use to conduct such an evaluation.

Share this with your peers and give each other feedback. Give feedback to peers whose surnames start with letters in the same group as yours. The groups are:

- A-H
- I-O
- P-Z

We will use the example of Clicker technology as a case study to test our criteria for evaluating whether technology plays a positive role in learner engagement.

1. Read **Clickers: A Teaching Gimmick that Works**. Start on the second page at the paragraph beginning with *"I became sold on clickers in teaching Developmental Biology.."*
2. Experiment with using Kahoot! (an online tool that mimics the functionality of a clicker) in a class or with a group of colleagues. Observe their behaviour and responses.
3. Apply your evaluation criteria to this experience of using technology.
4. Return to the online discussion group called *Learner Engagement* and share your evaluation scores and conclusions with the group.

5.3.3 Apply

Continue your study of evaluating the role of technology in learner engagement by applying your knowledge to a technology of your choice.

1. Think about which technology you would like to evaluate and communicate this decision with your group by registering your choice on the form below.
2. Find one or more partners who have chosen the same technology and co-operate with them in this study by personal arrangement.
3. If you are the only one who selected a specific technology, consider changing or work alone.

Note: If you want to take shortcut to the responses **click here.**

Guidelines for your study

Here are some examples of the kinds of resources you could access:

- **How Twitter in the classroom is boosting student engagement**
- **Why Twitter and FaceBook are not good instructional tools**
- **Student engagement using Podcasts** - watch up to but not including the "planning of podcasts" section of the video
- **Play it Forward**: New XBOX games for learning

Structure your study so you can produce results that include mention of:

- the role of the teacher when the technology is used;
- the role of the learner when the technology is used;
- the kind of tasks typically given to students;
- best strategies used for engaged learning using technology;
- your evaluation of how meaningful and sustainable the technology is for learner engagement.

Include a reference list of the resources you used.

Report

1. Produce a personal report of your results in a format of your choice.
2. Save the report using your name at the beginning of the filename. If your report has been done online, place a link to that report (which must be shared and publicly accessible) in a word processor document and save it.
3. Submit the report to your tutor using the upload link at the bottom of this page.

Assessment

1	2	3	4
You have not described the roles of the teacher and learner with any detail or accuracy.	You have either not described the roles of the teacher or the learner with any detail or accuracy.	You have described the roles of the teacher and learner. There are just a few obvious omissions.	You have described the roles of the teacher and learner fully and accurately.
You have not described the tasks given to learners and strategies for engagement with any detail or accuracy.	You have either not described the tasks given to learners or the strategies for engagement with adequate detail.	You have described the tasks given to learners as best strategies for engagement, but with one or two omissions or inaccuracies.	You have fully described the tasks given to learners as best strategies for engagement.

You have not provided a clear evaluation of the technology.	You have provided an evaluation of the technology, but with significant omissions.	You have provided a clear evaluation of the technology as a sustainable and meaningful tool for engagement.	You have provided a clear and insightful evaluation of the technology as a sustainable and meaningful tool for engagement.
You have not included a reference list.	You have included a minimal reference list with significant omissions.	You have included an adequate reference list.	You have included a detailed reference list showing a wide range of sources.

5.3.4 Reflect

Log in to your personal CCTI learning blog and post reflective comments about learner engagement. Include your Venn diagram. Reflect on these questions:

- What is the essence of engaged learning?
- Is technology a critical role-player in engaging learners?
- What are the limitations of technology in engaging learners?

Prepare for final assignment

Use this opportunity to start thinking about a topic for your final assignment, which you will present using the **ASSURE model**. Think about how you plan to engage learners during this lesson.

5.4 Building Knowledge about Knowledge Building

In this lesson you will build your knowledge about knowledge building using a variety of collaborative techniques.

Learning objectives:

- Describe a typically innovative learning activity
- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities;
- Design an innovative knowledge-building learning activity where the focus is on technology integration by learners.

5.4.1 Prepare

Read this **description of basic knowledge building** which represents the perspective of SLR Research Corporation for Microsoft Innovative Teaching and Learning (ITL) research. While the ITL research document is quite prescriptive it does help you relate the idea of knowledge building to your teaching.

Gerry Stahl, while at the Institute of Cognitive Science, University of Colorado, wrote a paper on collaborative knowledge building and used an image of social knowledge building (Figure 1). The convention in the diagram is that arrows represent transformative processes and rectangles represent the products of these processes, i.e. forms of knowledge.

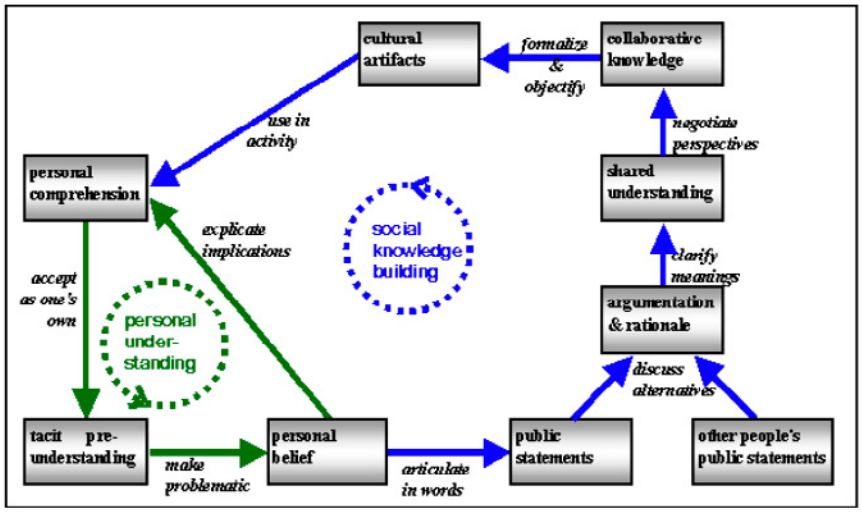


Figure 1

Source: Stahl, G. (2000). A Model of Collaborative Knowledge-Building. In B. Fishman & S. O'Connor-Divelbiss Eds.), Fourth International Conference of the Learning Sciences (pp. 70-77). Mahwah, NJ: Erlbaum.

How does this suggested process describe the process of social knowledge building you experience in the CCTI courses such as *Innovative Approaches to Learning with Technology*?

1. Join the online discussion group for this lesson called *Knowledge Building* and share your personal understanding of knowledge building with the group. Consider alternative perspectives and attempt to clarify what you do not fully understand before refining your personal understanding. As you proceed with this discussion, make reference to Figure 1 and plot where you are in the process. Note: Stahl does not intend this image to be seriously debated. It has limitations as a model, which you can attempt to identify in your discussion.

5.4.2 Study

Critical thinking

Watch this video of a Grade 7-10 Language / Environmental Studies project and make notes about what you think is the role of critical thinking in knowledge building.

Critical Thinking Wins the Day at a KIPP High School (5:26)

Collaborative knowledge building

If you were asked to evaluate a project for its knowledge-building you may have to find an assessment tool to use. This would be an example of using someone else's knowledge and applying it in a routine assessment. However, if you designed your own assessment tool, based on your own understanding of knowledge building, this would be an example of knowledge building. Let's do just that. In the next activity you will be asked to evaluate four projects and to pick the one with the best knowledge-building attributes.

We will use a wiki to collaboratively build this knowledge. Our task is to design a four-column rubric containing at least five items which describe knowledge-building learning activities.

Your tutor will set up the wiki and invite you to join it. Go to the page called *Knowledge-building rubric* on the wiki. Other than that, there will be no guidance. Let's see what happens. Of course, with collaboration your group will rely on you as much as you depend on them. Everyone must contribute.

5.4.3 Apply

Here is a list of four projects to evaluate for their knowledge building potential. Use the rubric that was collaboratively designed during the previous activity. Once you have completed your evaluations, vote for the best example using the poll below this list.

1. Gr 7-10 Language / Environmental Studies **Connecting Thinking** (PPT)
2. Gr 7-9 Interdisciplinary **Birds of Bray** (PPT with embedded documents)
3. Gr 10-12 Biological Science **Keeping it R.E.A.L** (PPT with embedded video)
4. Gr 10-12 Business/Economics **When Fish Fly** (PPT)

Cast your vote for the best project using the poll below:

Sharing ideas

Work collaboratively on the wiki page called Ideas for knowledge building to add examples of knowledge-building lesson ideas. These are the four columns on the wiki page to which you will be asked to contribute:

Participant's name	Lesson idea (include source)	How do learners build knowledge?	What technology tools will be employed?

5.4.4 Reflect

Log in to your personal blog and make comments about knowledge building and the power of collaborative knowledge building as experienced by you during this activity.

Prepare for final assignment

Use this opportunity to continue thinking about your final assignment, which you will present using the **ASSURE model**. Think about how you plan to challenge learners to engage in knowledge-building tasks during this lesson.

5.5 Real-World Collaboration

During the previous lesson on knowledge building you were exposed to the idea of collaboration and its role in a social type of knowledge building. It would have become clear that collaboration is more than just team work. Collaboration has a value in innovative teaching and learning that connects people with ideas.

It should also be apparent by now that problem-solving in real-world contexts is one of the key elements of 21st century education and engaged learning. It is also the kind of activity that is very likely to engage students in critical thinking and knowledge building. These are all inter-related elements of innovative approaches to learning.

In this lesson we explore the value of real-world collaboration and the technologies that can facilitate the processes of collaboration.

Note: We will define **collaboration** as "working together on a common goal for mutual benefit". Accordingly, sending out a poll and asking people to respond is a request for communication, rather than a form of collaboration. The respondents have *co-operated* with you.

Learning objectives:

- Describe a typically innovative learning activity;
- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities.

5.5.1 Prepare

Watch this animation which refers to the demands of collaboration in a changing society. As you watch make notes in answer to the following questions:

1. What are the key components of collaboration?
2. How is collaboration "more than just teamwork"?
3. What roles can technology play in collaboration?
4. How can collaboration enhance learning?

Video: **The Collaborative Challenge: Making Quality Decisions Together in the Age of Complexity** (16:33)

As you read the following two articles, make the connection between collaboration, innovative learning and real- world contexts

- Read more about what we mean by **problem-solving in real-world contexts**.
- Read more about how **real-world issues motivate learners**.

5.5.2 Study

Your tutor will invite you to a collaborative brainstorming session on MindMeister. On that whiteboard you will start by recording all the concepts and key ideas related to real-world collaboration. Once the group has had a few days to make contributions your tutor will prompt you to make meaning of this by:

1. Joining the group discussion called Real World Collaboration and sharing how you feel key ideas are related to each other;
2. Returning to the MindMeister page and re-organising ideas into groups.
3. Using this **Google Drive document to collaboratively create an assessment rubric** with which you can evaluate the real-world collaborative potential of a learı activity.

5.5.3 Apply

Apply the rubric you developed collaboratively in the previous activity as you evaluate the potential for real-world collaboration in the following four projects:

1. **The DNA of Learning**
2. **Elementary Science: Journey North** (focus on migration project)
3. **The Happy Eating Place**
4. **Classroom Connections Project**

Vote for your best project by completing the poll below.

Work collaboratively on the wiki page called Real-world collaboration to add examples of collaboration lesson ideas. These are the four columns on the wiki page to which you will be asked to contribute:

Participant's name	Lesson idea (include source)	How do learners collaborate in the real world ?	What technology tools will be employed?

5.5.4 Reflect

Log in to your personal course blog and post a reflective comment on how you experienced collaboration during this lesson and the various collaborative technology tools used. How can you use these tools and ideas in your classroom?

Prepare for final assignment

Use this opportunity to continue thinking about your final assignment, which you will present using the **ASSURE model**. Think about how you plan to include real-world collaboration in this lesson.

5.6 Communication through Social Learning

As we have progressed through each lesson in this course we have found inter-connectivity between the key elements of innovative approaches to teaching and learning. In the last lesson we learned that good communication is a critical element of collaboration, and in the lesson on knowledge building we learned the value of social and collaborative knowledge building. Communication is the means through which this exchange of ideas takes place and the tools for communication are rapidly changing, but still fall within the realm of social media.

You will probably agree that social media is being used increasingly by your learners. However, you may be skeptical about the benefits of social media as a tool to support learning activities. As with all issues of this nature, you are left to reach your own conclusions, but remember the assets of critical thinking. Ensure your opinion is well-grounded in reliable evidence.

Note: For purposes of this activity we will define **communication** as "conveying information or knowledge so it is satisfactorily received or understood".

5.6.1 Prepare

See how an Advanced Literature class uses social media to enhance learning. While you watch this video, list the number of positive ways in which social media is being applied in the classroom. Ask your self why this class' use of social media is so successful?

Video: **Social Media and Technology in the Classroom** (1:31)

Read **Why Twitter and Facebook Are Not Good Instructional Tools** for a viewpoint on the possible pitfalls of social media. Do you think there are valid and insurmountable challenges?

Read this formal **debate about the value of social media** for a balanced view of the issues involved and note the arguments being made by the debaters.

Think

1. Remember the number of times you have been told during this course that our learners are living in a digital society and that we must know our learners to be able to make an innovative response in the classroom. Think about **what you know** and **what you do not know** about your learners and their opinions about communicating through social media in the classroom.

2. Formulate some questions you think you should ask your learners and share these with your group in the discussion group called Communication through Social Learning.
    - What do learners know about digital footprints and the relatively permanent nature of the content they upload to sites like Twitter and Facebook?
    - Have they read and understood the **Terms of Service of Twitter** and the **FaceBook Terms and Conditions**?
3. Bring the findings from your student discussions back to your group and decide on a strategy to address some of the issues that are flagged in this discussion.

5.6.2 Study

Let's communicate with our learners during this lesson. You will have gained some ideas about what kind of questions you would like to ask them about communicatin through social media.

1. Now discuss with your learners how they would best like you to communicate these questions to them.
2. Create a short survey/questionnaire and post this to your learners using the medium for which they have stated a preference.
3. Include a question asking your learners for ideas on how they think social media could be used in their various classes.
4. Study the responses and draw conclusions about:
   - the popularity social media might enjoy as a learning resource;
   - the challenges you would have to overcome to integrate social media in learning activities; the feasibility of integrating social media – based on your ideas and those of your learners, do you think communicating through social media has educational value for you and your learners?
5. Upload your questions and your findings to your tutor in a format of your choice.

Your file must start with your name and it should not exceed 8Mb.

Assessment

0-2	3-5	6-8	9-10
The questions are mostly unclear and their relevance is not evident.	The questions are somewhat vague and significance to the topic is unclear.	The questions are mostly clearly stated and significant to the topic.	The **questions** are all clearly stated and significant to the topic.
0-2	**3-5**	**6-8**	**9-10**
Content is poorly developed and disorganised.	Content is partially developed but somewhat disorganised.	Content is adequately developed and generally well organised	**Communication** - Content is thoroughly developed and well organised.
0-2	**3-5**	**6-8**	**9-10**
Few, if any, ideas are pertinent to the topic. Few, if any, examples are used to illustrate the conclusions presented. Conclusions, if offered, are largely illogical or inaccurate.	Some ideas pertinent to the topic are used. Some examples are used to illustrate the conclusions presented. Conclusions may be somewhat illogical or inaccurate.	Important ideas pertinent to the topic are accurately explained.Examples used adequately illustrate the conclusions presented. Conclusions are generally logical and accurate.	**Understanding** – Important ideas pertinent to the topic are skillfully explained. Examples used enhance understanding of the conclusions presented. Conclusions are logical and accurate, and may be insightful.

5.6.3 Apply

Collaboratively write the wiki page entitled: *What learners want to do with social media in the classroom.*

On the same page, in addition to the text you contribute to the content, share your learners' ideas in a table with headings such as these:

Idea	How will the use of social media enhance an innovative approach to learning?	Technology used

5.6.4 Reflect

Log in to your personal course blog and post a reflective comment in which you come to a conclusion on the potential of social media as a communication tool for learning. Include some references to your interaction with your learners. Mention how you will integrate social media in teaching and learning in your classroom.

Prepare for final assignment

Use this opportunity to continue thinking about your final assignment, which you will present using the **ASSURE model.** Think about how learners will engage in social learning communication during this lesson.

5.7 Let the Games Begin

> *"**Game-based learning** is a type of game play that has defined learning outcomes. Generally, game-based learning is designed to balance subject matter with game play and the ability of the player to retain and apply said subject matter to the real world.*
>
> *While similar, **gamification** … takes game elements (such as points, badges, leader boards, competition, achievements) and applies them to a non-game setting. It has the potential to turn routine, mundane tasks into refreshing, motivating experiences."*

Source: EdTechReview

In this lesson you will explore both game-based learning and gamification's potential for contributing to innovative learning environments. As we do so you should consider these questions:

- In what ways do these approaches address curriculum standards?
- In what ways do they address 21st Century skills?
- Would you include these approaches under the umbrella of knowledge-building activities?
- Is it more important for learners to play games or create games?
- How can games-based learning be incorporated into your subject/grade?

Learning objectives:

- Critically examine how technology tools engage learners.
- Describe a typically innovative learning activity
- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities.

5.7.1 Prepare

Join the discussion group called Games and share:

- your understanding of what game-based learning brings to learning;
- your previous experience of game-based learning.

You will work in groups of three during this lesson. Go to the groups page and create your own group of three by "friending" those you want to join your group (if you have not already "friended" them) and invite them to join. Only create one group of three. If you cannot find a group to join or any partners to join you, message your tutor

1. Read the first chapter of Marc Prensky's book **The Digital Game-Based Learning Revolution.** (PDF) Source
2. Read pp24-27 (minimum) or pp19-33 (chapter) of Nicola Whitton's **Learning with Games** (PDF) Source
3. Watch these videos on gaming before proceeding to the quiz at the end. As you watch the videos make notes on what you think are the critical elements of game-based learning.

Video: Game-based learning brings history of civilization back to life (5:24)

Video: **Creative role-play encourages deeper science learning** (4:01)

Video: **Learning with Video Games** (8:06)

Video: **Gamification** (16:41)

Note: There are more resources about game-based learning in the **Resources** section (see the tab at the top of the page).

Read this before you proceed

You must participate in this quiz as a team effort, but each individual in the team must complete the quiz individually. The group score will be the average of the three individuals. Work out for yourselves how you can best achieve the perfect score as a team. There is a leader board at the end of the quiz. You only get one chance at the quiz.

5.7.2 Practise

Gamificologist Badge

Do you qualify? Nominate yourself for this badge if YOUR TEAM has achieved over 80% average for the Gamification Quiz at the end of the previous activity.

Nomination Form

User to nominate

aajamilu

Reason for nomination

Submit

New Challenge

Earn the Kahoot Badge by designing a multiple-choice quiz for a school subject you teach. Design with your team; implement in your class. The quiz must be designed using **Kahoot** and must include a leader board. Upload a 1-minute video of your class playing the game. You must submit the link to the video to your tutor by using this nomination form:

Create a New Submission

Attachment:

Submit

5.7.3 Design

Game Designer Badge

Working in your team, design a gamification idea for a topic in your curriculum. Select one topic and one idea as a team. You will not be required to produce all the artifacts, but you must be able to describe the game-based activity in detail. Consult this checklist as you design the activity. Note that you do not have to tick all the blocks in the checklist, but you have to tick as many as possible.

The game-based activity should include most of these features:	✔
The learners solve a problem or make a complex decision as a result of the game activities.	
The learners feel challenged and engaged by the challenge (not impossible to achieve).	
Learners network with each other during the game.	
The game is a novel learning experience.	
Learners are asked to produce an original and/or creative response. Knowledge building takes place rather than just memory use or hand-eye coordination.	
Learners engage in role play or imaginary role play.	
The whole activity is fun.	

Use this template to describe your game and submit it below to qualify for the Design Badge.

Create a New Submission

Attachment:

Submit

5.7.4 Reflect

Log in to your personal course blog and post a reflection about your experience of game-based learning prior to this course and what you have learned about it during this lesson. Use your past experience, and that gained as a result of this lesson, to respond to these questions:

1. In what ways do games address curriculum standards?
2. In what ways do they address **21st Century skills**?
3. Would you include games under the umbrella of knowledge-building activities?
4. Is it more important for learners to play games or create games?
5. How can digital games be incorporated into your subject/grade?

Prepare for final assignment

Use this opportunity to continue thinking about your final assignment, which you will present using the **ASSURE model**. Think about how you could introduce elements of gamification during this lesson.

5.8 Media Tools for Knowledge Sharing

"Sharing" has become synonymous with "publishing" or "final product" in learning activities in a digital classroom.

> *"Through creating electronic personal narratives students become active creators, instead of consumers, of multimedia."*

Jason Ohler, **The World of Digital Storytellng**

In this lesson we will explore ways in which digital media can be used to present the knowledge that engaged learners have built during innovative learning activities.

Learning objectives:

- Identify opportunities and challenges for using appropriate technologies to enhance innovation in learning activities.
- Design an innovative learning activity where the focus is on technology integration by learners.
- Design formative assessment strategies that can be used in innovative classrooms.

5.8.1 Prepare

Read Jason Ohler's **The World of Digital Storytellng**. While reading, note the essential components of a story. Consider the benefits of learners being creators of media and how this will help develop critical thinking, report writing and media literacy skills.

Watch this video, just for inspiration. What lesson can you take from it when thinking of learners as media creators?

Video: **When I become a teacher** (2:17)

Relax and watch this video and experience the power of digital storytelling. Our learners do not have to have sophisticated film equipment but can tell equally powerful stories to change society. How can their stories make the biggest impact?

Video: **Why Storytelling Can Change the World and Save the Ocean** (14:33)

5.8.2 Study

Podcasting

> *"Just as blogging has enabled almost anyone with a computer to become a bona fide reporter, podcasting allows virtually anyone with a computer to become a radio disc jockey, talk-show host or recording artist."*

How Podcasting Works

Video: **Podcasting in the Classroom** (9:48)

Video: **Integrating podcasting into your classroom** (4:30)

Find podcast resources online and share these with your group on the group discussion page.

Photo stories

> *"Educators at all levels can use Digital Storytelling in many ways, from introducing new material to helping students learn to conduct research, synthesize large amounts of content and gain expertise in the use of digital communication and authoring tools. It also can help students organize these ideas as they learn to create stories for an audience, and present their ideas and knowledge in an individual and meaningful way."*

Source: 21st Century Teaching: Ideas for Photo Story 3 Projects

The source of the above quote gives you many ideas for projects that can use digital (photo) storytelling. Click here to read more about **Ideas for Photostory 3 Projects**

Here are some examples of digital photo stories:

Video: **Grade 3 Photo Story** (3:49)

Video: **Civil War Project** (3:19)

Video: **Math project** (1:00)

Video: **Grade 7 Graveyard Book** (2:47)

Find story-telling resources online and share these with your group on the group discussion page.

5.8.3 Apply

Collaborate with your group by going to this Google Drive page and designing a rubric for assessing a) the process of building knowledge and b) the product of knowledge sharing.

Create a media product of your choice in which you describe how you set a story-telling task for your learners in which they must demonstrate their learning. Also describe how you will assess the process and product of this learning.

Submit the product, or the link to the product, using the submit form at the bottom of this page.

Assessment

0-1	2-4	5-7	8-10
You did not describe how you will set and assess a story-telling task	Your description of how you will set and assess a story-telling task had major omissions.	You told a good story of how you will set and assess a story-telling task, with minor omissions.	You told a very compelling story of **how you will set and assess a story- telling task.**
0-1	**2-4**	**5-7**	**8-10**
Your assessment criteria were not formative.	Your assessment criteria were either not formative or you omitted covering either product or process.	Your assessment criteria were mostly formative and covered both product and process.	Your **assessment criteria** were clearly formative and covered both product and the process.

5.8.4 Reflect

Log in to your blog and post your final reflection for this course in which you consider the knowledge you have gained during the course and how this will affect your approach to lesson planning and the integration of technology to enhance innovative approaches to learning.

5.9 Final Assignment

In this final assignment you will be required to submit a lesson designed to showcase the characteristics of innovative learning activity. Use this opportunity to implement all the ideas you have accumulated in the lessons leading up to this final assignment.

You can produce this lesson in any format of your choice but do include the basic components of the **revised ASSURE lesson plan template**.

Assessment

Print this page and use the checklist to ensure you have completed everything.

	Checklist item	✔
1	Your name is clearly indicated in your submission file name.	
2	You have used the revised ASSURE model and included all elements of the model.	
3	You have clearly indicated which media and technology resources you used.	
4	You have explained how you will use the selected media and technology resources to enhance innovative approaches to learning.	
5	You have included as many of the components of an innovative approach as possible, as defined by the lessons of this course.	
6	Your lesson and final assessment are aligned to your stated curriculum learning objectives.	
7	Your presentation has been contained in one file of under 8Mb.	
8	You have uploaded the file using the upload facility on this page.	

The assessment rubric for this assignment will be as follows:

	0-1	2-4	5-7	8-10
Analyse learners	Not completed	Few learner characteristics are included.	Most student characteristics are included, but some key information is missing.	Students are described including grade, demographics, learning styles, and background knowledge, etc.
Curriculum objectives	Not included	Learning objectives are included but rudimentary/not defined (too many).	Learning objectives are provided, but key information is missing.	Learning objectives include behaviour to be demonstrated; conditions under which behaviour will be observed; degree to which learned skills are to be mastered.

Select instructional methods, media and materials	Not evident	The instructional approaches include at least two of the following: knowledge building, collaboration, communication with social media (but not all).	The instructional approaches are sound and include all of the following: knowledge building, collaboration, communication with social media.	The instructional approaches are innovative and include all of the following: knowledge building, collaboration, communication with social media.
Utilise media and materials	Not evident	Media and materials are used to enhance at least two of the following: knowledge building, collaboration, communication with social media.	Media and materials are soundly used to enhance all of the following: knowledge building, collaboration, communication with social media.	Media and materials are innovatively used to enhance all of the following: knowledge building, collaboration, communication with social media.
Require learner participation	Not evident	You do not engage learners well, but there is some evidence of learner engagement.	You engage learners with real-world contexts and through the use of technology.	You engage learners with interesting and challenging real-world contexts and innovative use of technology in game-based approaches.
Evaluate and revise	Not completed	Criteria for evaluating the effectiveness of the lesson are poorly explained.	Criteria for evaluating the effectiveness of the lesson are partially explained.	Criteria for measuring the effectiveness of the lesson are clearly explained.
Assessment	Not completed	Criteria for success are barely described.	Criteria for success are at least partially described.	Criteria for success are clearly stated in the form of a rubric. Criteria include qualitative as well as quantitative descriptors. The evaluation instrument clearly measures what students must know and be able to do to accomplish the task.

Submit

1. You must submit a file which contains your lesson plan.
2. The file that you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_SVG_Final_Assignment

COMMONWEALTH of LEARNING
learning for development

SchoolNet South Africa

Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

6 PLANNING LEARNING THROUGH PROJECTS

6 Planning Learning Through Projects

Video: **An Introduction to Project-based learning** (3:34)

In earlier courses you learned about the key educational principles behind innovative approaches to learning and how digital literacy prepares students for a digital society. One way of bringing this approach to life in the classroom is through project-based approaches to learning. The purpose of this course is to provide participants with an understanding of the key components of a structured project and we will use the WebQuest as an example. The course is practical, exploring and analysing existing projects, and inviting participants to develop their own project using a 4-part structure. A planning template provides a "place" where the various ideas and aspects involved in a project design can be systematically collected. Where relevant, the concepts underlying the various aspects of a project are referenced and briefly explored.

Learning Objectives:

Once you successfully complete the course you will be able to:

1. Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
2. Plan a WebQuest or similarly structured project;
3. Plan a curriculum-aligned assessment strategy for a project;
4. Evaluate the effectiveness of a WebQuest or similarly structured project;
5. Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

Setting the Scene

You have been teaching for many years and some topics of study in your lessons have been taught the same way, year after year. Your learners love you but they may not think the same about all your lessons. Having studied some courses of the CCTI, especially courses such as *Designing Learning* and *Innovative Approaches to Learning with Technology*, you are now well-equipped to implement some project approaches to learning.

We challenge you to design a WebQuest project. Take a topic from your curriculum and design a classroom-based project approach to studying that topic using the WebQuest model, then watch learner engagement go through the roof as you implement the unit of study.

Assignment

Your final assignment will be the culmination of the lessons of this course during which you will systematically plan a WebQuest project. The final product will be the fully designed WebQuest including a teacher note, which is a part of the task you will add in the final assignment.

Click here to see a copy of the final **WebQuest assessment rubric**.

6.1 The Essence of Projects

During this lesson you will analyse examples of project-based learning and work collaboratively with a small group of participants to develop a graphic representation of the essence of projects.

This is a course on technology integration, so we should never lose sight of the potential to integrate technology in the curriculum

> *"Effective integration of technology is achieved when students are able to select technology tools to help them obtain information in a timely manner, analyse and synthesise the information, and present it professionally. The technology should become an integral part of how the classroom functions — as accessible as all other classroom tools."*
>
> *- NATIONAL EDUCATIONAL TECHNOLOGY STANDARDS FOR STUDENTS, INTERNATIONAL SOCIETY FOR TECHNOLOGY IN EDUCATION*

Source: Edutopia – **What is Successful Technology Integration?**

Learning Objective:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice.

6.10 Final Assignment

What to do

Your final assignment is to put the finishing touches to your WebQuest, either online on Zunal or in a PDF document if you have been using the document template. This means each of the following sections of the WebQuest must have been completed:

1. Introduction
2. Task
3. Process
4. Assessment

5. Resources (can be integrated with other sections)
6. Conclusion
7. Teacher Notes

Assessment rubric

You have been using the **WebQuest rubric** during this course. Finally apply the entire rubric to your finished project as a self-assessment.

Submit

1. You must submit a file which either contains your WebQuest or the link to your WebQuest.
2. If your assignment is posted at another location it MUST be shared and accessible to the tutor and assessor.
3. The file you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_SVG_Final_Assignment
4. Remember the 8Mb limitation on file size.

6.1.1 Prepare

Join the lesson group discussion called *Essence of Projects*. Start by sharing your experience of curriculum projects generally and project-approaches to learning that you may have implemented in the past.

In the meantime, your tutor will divide you into groups of four for this lesson. Ensure you have accepted your tutor's Friend request so that he/she can allocate you to a smaller group.

Observe the overview video below, then return to the groups of four to share your findings. As you watch the videos make a note of what you think are the key learning principles of projects. Focus on:

1. the design of the learning;
2. what engages learners;
3. the roles of the learners;
4. the role of technology;
5. the nature of collaboration and communication;
6. the role of information sources;
7. the kind of thinking taking place;
8. the products of learning.

Read: **What is Successful Technology Integration?** and use this as a guideline to assess the role of technology when you assess projects.

Video: **Project-based Learning – An Overview** (9:26)

Share your findings with your group of four in the discussion group area your tutor has set up for you. Make a note of what other groups' members have observed that you might have missed.

6.1.2 Study

Collaborate with your group of four by assigning each group member at least two of the following videos to watch. Make a note of the length of each video as you allocate tasks equally. Remember to focus on these seven items as well as any other item you may have discussed in your group:

1. the design of the learning;
2. what engages learners;
3. the roles of the learners;
4. the nature of collaboration and communication;
5. the role of information sources;
6. the kind of thinking taking place;
7. the products of learning.

A Video: **Success Start to Finish** (8:00)

B Video: **Project-Based Learning at Clear View Charter Elementary School** (21:45)

C Video: **Anatomy of a Project: "Soil Superheroes"** (6:33)

D Video: **Anatomy of a Project: Kinetic Conundrum** (6:52)

E Video: **Wetland Watchers: Kids Care for Their Environment** (8:08)

F Video: **Applying Math Skills to a Real-World Problem** (10:59)

G Video: **Anatomy of a Project: Give Me Shelter** (5:00)

H Video: **High School Students Learn Economics and Urban Planning Through Project-Based Learning** (8:57)

I Video: **Students Get Involved in Current Events through Project-Based Learning** (12:38)

Once you have completed your task of watching videos and making notes, move on to the next activity.

6.1.3 Apply

Your tutor will setup a blank mind map on Mindmeister for your group of four. Proceed with this activity only after you have watched all the videos allocated to you in the previous activity.

Go online to the blank mind map and create the most creative and accurate mind map which covers all the key elements of project-based learning. The resulting mind map must make it very clear to viewers what the key principles of project-based learning are.

Take a screen capture of the final product and share this with the whole group on the *Essence of a Project* group page, using the document upload facility on that page.

6.1.4 Reflect

Log in to your personal course blog and post a reflective comment on how your perception of projects may have changed during this activity. What do you think is the strongest argument for this approach to learning? What are the major challenges you face in order to implement this approach to learning?

6.2 Project Learning Goals

During this lesson you will explore the question: "How can I ensure my learners will achieve curriculum-related learning goals during the project?

You will identify a project idea which is aligned to curriculum objectives and formulate a project learning goal. This will be the beginning of a project idea that will grow into a full project by the end of this course.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a curriculum-aligned assessment strategy for a project.

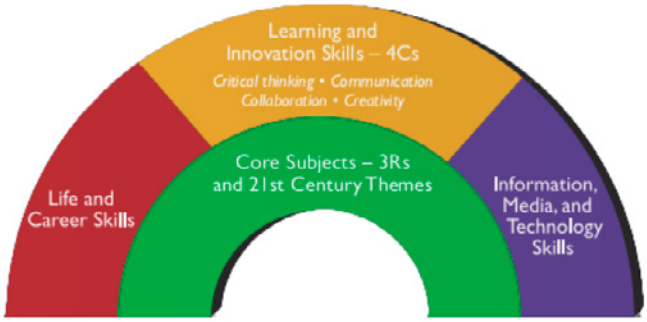
6.2.1 Prepare

In this lesson you will decide on a topic for your project. Once you've chosen the topic you can consider to which curriculum objectives you will align the project. In addition, you can optionally consider other skill sets such as the 21st Century learning skills.

As you formulate your project learning goals you will want to include reference to:

1. Selected curriculum objectives
2. The specific topic/content of the project
3. Some 21st Century learning skills
4. Higher-order thinking skills associated with knowledge building.

21st Century learning skills

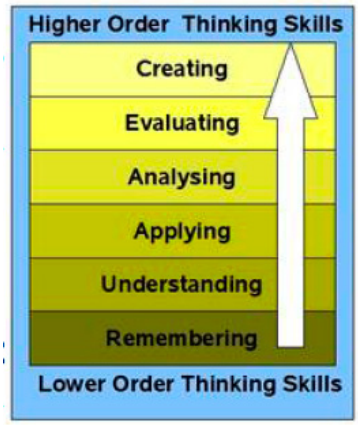


Source: www.p21.org

Click here to read a description of the 21st Century learning skills.

You may like to remind yourself of the content of the previous course on *Education in a Digital Society* in which we explored the various digital literacies.

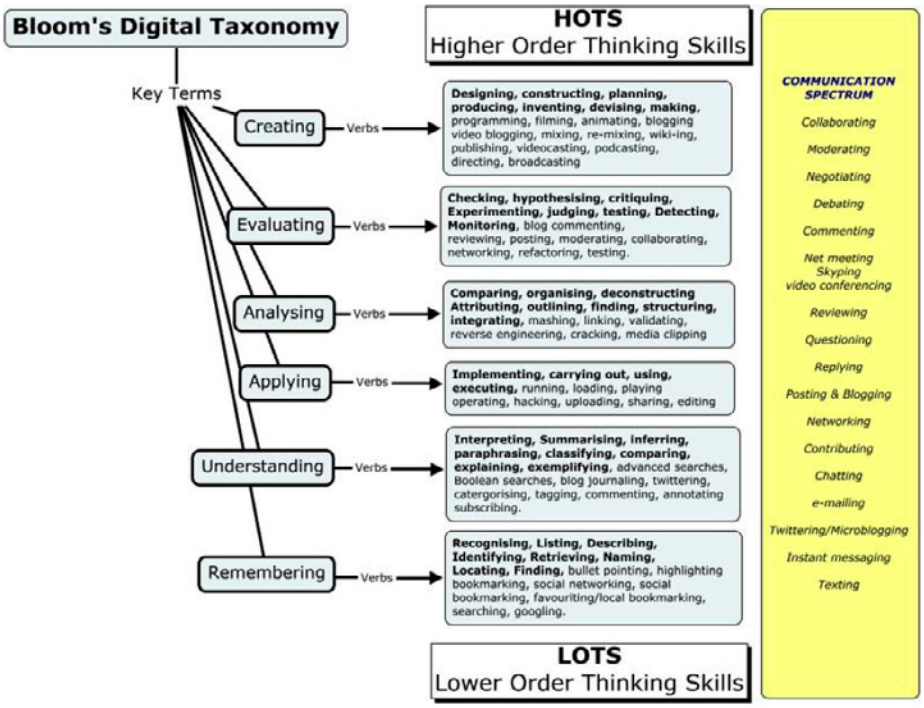
Bloom's Revised Taxonomy



Source: Education Origami

Bloom's Revised Taxonomy has bearing on the knowledge-building activities with which we strive to engage learners. Refer to the previous courses on *Designing Learning* and *Innovative Approaches to Learning with Technology* to remind yourself of these core principles of learning.

Bloom's Digital Taxonomy is a very useful extension of the basic taxonomy, which includes reference to specific skills and digital tools typically used when integrating technology with innovative approaches to learning. Examine this image and consider which thinking skills you would like to develop in your learners during this project.



Source: http://edorigami.wikispaces.com/Bloom%27s+Digital+Taxonomy

6.2.2 Study

Study this example of project learning goals and identify the four elements you should ideally include:

- Selected curriculum objectives
- The specific topic/content of the project
- Some 21st Century learning skills
- Higher-order thinking skills associated with knowledge building.

Learning goals:

- Use the scientific method to investigate heat transfer and solar energy
- Develop a compelling argument regarding the use of solar energy
- Explain how solar energy is a source of natural energy on earth
- Find and evaluate background information
- Evaluate models of solar power
- Design a solar-powered model
- Draw conclusions from experimental data

The colour coding shows how elements of the learning goal address the curriculum, 21st Century skills and higher-order thinking.

Analyse this project and list what you think are the possible learning goals of the project. Note how these learning goals are curriculum related and also clearly related to higher-order thinking and/or 21st century skills.

Here are **many more examples of projects** you can peruse at your convenience.

Watch this video and note the five keys to rigorous project-based learning. This will give you an idea of the important things to consider and to try to accommodate indirectly in your learning goals if possible (it is not always possible):

Video: **Five Keys to Rigorous Project-Based Learning** (6:30)

6.2.3 Apply

Write your learning goals

This is a process where you keep coming back to change plans you made earlier as the project becomes ever clearer in your mind, so do not become distressed trying to finalise learning goals at this stage.

1. Note the curriculum objectives to which you wish to align the project.
2. Note 21st Century skills you know you would like to incorporate.
3. Note ways in which you will engage learners in knowledge building – the higher-order thinking skill
4. Do not forget to specifically refer to the topic/content of the project

Now write about four learning goals that include the key ideas you noted above.

1. Submit your project idea by posting a reply in the Project ideas group discussion.
2. View the ideas of others in your group and give them feedback if you have additional ideas to contribute.

6.2.4 Reflect

Log in to your personal course blog and record your initial project idea. Separately state the curriculum objectives, specific 21st Century skills and higher-order skills. Note some initial ideas about how you will engage learners in this project and what the project is about.

6.3 Skeleton of a Project

Now you know the key principles of a project-based approach to learning, and you have a rough idea what your project topic will be, you will start structuring your project. We will introduce four phases which are common to most projects and complex thinking procedures, including problem solving and scientific investigations. The project structure you will apply in this course is the WebQuest, which will be introduced in this lesson.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Evaluate the effectiveness of a WebQuest or similarly structured project;
- Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

6.3.1 Prepare

In their simplest form, all projects have four phases. The first phase sets the scenario and poses the challenge. The second phase involves gathering data and information. The third phase involves processing the information and data, and using higher-order thinking skills such as analysis, evaluation, synthesis etc. The final phase involves reporting.

Phases	Scientific method (simplified)	Problem solving (one cycle)	Project process	WebQuests
1	Question – research - state hypothesis	Identify the problem	Problem / Question	Task (a real-world challenge)
2	Test with experiment	Develop alternatives	Gather data and/or information	Gathering resources (teacher preparation)
3	Analyse data and draw conclusions	Implement and evaluate	Process data and/or information	Processing information / deliberation
4	Communicate results	Draw conclusion	Present findings	Product and conclusion

Table 1: Comparison of project processes

Familiarise yourself with two of these projects.. As you do so, note the four phases of the project. At which stage does each phase start?

Select ONE project from this list of project-based learning projects. Read the project description

- **Teacher's Pet** (Gr 2-3)
- **Food for Thought** (Gr 6-8)
- **Composting** (Gr 8-10)
- **Pedal Power** (Gr 10-12)

Select ONE project from this list of WebQuests. Read the WebQuest instructions.

- **Are Professional Athletes Paid Too Much?** (Gr 6-8)
- **Tuskegee Tragedy** (Gr 9-12)
- **Slavery...Scars from the Past** (Gr 6-8)
- **How Will Our Garden Grow?** (Gr 3-5)

6.3.2 Study

Introduction to WebQuests

Watch this **interview with Dr Bernie Dodge**, who first developed WebQuests.

Video: **What is a WebQuest?** (7:51)

A WebQuest about WebQuests

Your tutor will divide you into groups of at least four. The objective of this activity is to work collaboratively to identify the best WebQuest from the list provided.

As a group, choose your level. Not all group members may teach that level; just reach consensus on which grade level to follow in Step 3.

Grade 3-4
Elementary phase
Senior phase and older

Allocate each team member one of the following roles. No specific expertise is required for any role. If there is an extra team member that person can select any one of the roles.

The Efficiency Expert
The Altitudinist:
The Affiliator:
The Technophile:

Participate in the WebQuest by following the instructions on the page and CONFINING yourself to the instructions in the block to which you were allocated in Step 2 above. Click on the link for the level on which your group decided in Step 1.

Grade 3-4
Elementary phase
Senior phase and older

After the WebQuest and after you have decided which is the best WebQuest according to your personal perspective (role), share your findings by discussing your choice with your group of four. Give at least one reason why you think the WebQuest you have chosen is the best. As a group you will have to reach consensus and decide on just ONE WebQuest being the best overall WebQuest.

6.3.3 Apply

Now that you have had some exposure to WebQuests we will use this activity to set up a basic template. We recommend you **register on Zunal** and use the free account to setup one free WebQuest.

Video: **How to make a WebQuest using Zunal** (9:39)

If you find using an online template too demanding on your Internet connectivity, you can create the WebQuest using this **Word document template**. You could even use it for drafting ideas then transfer them to Zunal at a later stage.

Note that we will not be assessing you using the Zunal rubric. Your final WebQuest will be assessed using the **assignment assessment rubric**. We will be adding more features into the WebQuest than the basic Zunal site recommends. Carefully follow each of the lessons in this course.

Introduction to the WebQuest

How do you get your learners interested in a project when you launch it? The secret of a good WebQuest is….

Capture the students' imagination with:

- ***a stimulating introduction*** *and*
- ***a challenging, real-world scenario.***

1. Look at these four examples of WebQuest introductions. Read the introductions. Do they inspire you?
   - **Westward Ho!** (Literacy/Soc. Sci. 3)
   - **The Ocean's in Trouble!** (Science 4-6)
   - **Comparative Democracy** (Lang. Arts/Hist. Soc. Sci. – 8)
   - **Rock the Vote** (Lang. Arts/Hist. Soc. Sci. – 8) NOTE: The ***stimulating introduction*** introduces the topic in an engaging way. The ***challenging, real-world scenario*** (next lesson) is where the challenge is set and the scenario is described. In most cases above the scenario has been described to some extent in the introduction. Keep your introduction short and inspiring and just introduce the topic so the learners know what the WebQuest will be about.
2. Join the *Introduction to WebQuest* group online and state which WebQuest you think has the most inspiring introduction and why you think so. What other techniques would be excellent for engaging the learners' attention when introducing a project?

3. Vote for the best WebQuest introduction using the poll below:
   Best WebQuest Introduction

Which WebQuest has the most inspiring and engaging introduction?

- Westward Ho!
- The Ocean's in Trouble!
- Comparative Democracy
- Rock the Vote

4. Vote View Results Total Answers 1 Total Votes 1

6.3.4 Reflect

This icon (left) indicates that you must edit your WebQuest template on Zunal or in the Word Template.

Think about what you have learned about WebQuest introductions in this lesson and compose a suitable introduction for your WebQuest. Remember: a visual aspect is recommended. Keep your introduction short and ***inspiring*** and just introduce the topic so the learners know what the WebQuest will be about and are stimulated by the thought of participating. Enter this in the **Introduction** section.

Enter the project learning goals in the **Teachers'** section.

Submit a copy of your WebQuest to the *Introduction to WebQuests* group using the document upload facility on that page. Give each other feedback on the WebQuest introductions of your peers using the **WebQuest rubric** as your guideline.

Log in to your personal course blog and post a reflection on your initial thoughts about WebQuests. Do you see elements of 21st Century learning and innovative approaches to learning in WebQuests?

6.4 The Challenge Phase

The challenge of the project is like a spring that winds up a child's toy; it winds up the project and sets it up for good learner engagement and a stimulating process. The aim is to have learners engaged in knowledge-building activities. In problem-solving projects the challenge phase is characterised by the posing of the problem and the challenge to find a solution. In other project- based approaches

the challenge phase is characterised by posing essential questions to which there are no obvious answers. This launches an investigation in order to develop informed responses. Whereas you do not want to plan a project just so that technology can be used (unless you are a computer/IT teacher), you definitely want to try to enhance the learning experience through the integration of technology. As you design a challenge for your learners you should always have an eye on the potential for technology use in the project.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Evaluate the effectiveness of a WebQuest or similarly structured project.

6.4.1 Prepare

The WebQuest Task

Here is an interesting version of a WebQuest task:

Video: **A WebQuest Task** (0:40)

In a WebQuest the challenge phase starts with the introduction, but peaks in the **Task**. A good WebQuest task includes:

- a **real-world connection** *(e.g. the ban on the ivory trade)*
- **real-world roles:** *(e.g. the team will play the roles of representatives from the ivory trade and nature conservation)*
- **a real-world kind of task**: *(e.g. the team will have to make recommendations to the SITES world summit about whether ivory should be sold on the world market again)*
- **real-world deliverables**, even if in a make-believe situation, but they know what they will have to deliver *(e.g. they will have to deliver a presentation and brief paper containing their recommendations)*

Here is an example of a WebQuest task:

> *It is 1985. You are part of a respected team of journalists creating a commemorative newspaper to spotlight the glory days of space exploration. Your team will look at contributions from 1950 until 1985. Your publisher would like you to focus on the ideas learned during this important time in world history. Your team will research the scientific and cultural contributions of the space programme and create a four-page newspaper complete with pictures, artwork, and graphs.*

Here is a second example:

> *Your School Governing Body is considering a ban on all wireless electronics in your school. Members have received complaints that wireless products like cell phones and laptop computers distract learners in class. If wireless devices are banned, learners and teachers could not use cell phones at school. Laptop computers and wireless internet access wouldn't be allowed even for educational purposes. The Governing Body wants to hear from the public about this issue. Then they will vote on whether or not to approve the ban. You must take a stand and prepare a presentation for the School Governing Body to tell them what you think about the proposal to ban wireless devices.*

Can you identify the 4 real-time elements in the examples? Can you see how this might engage learners?

1. Join the discussion group for this lesson called Challenge Phase.
2. Share your thoughts about these two examples. Could you improve on them? Do you have any other examples of great WebQuest tasks?

6.4.2 Study

This page presents you with a taxonomy of WebQuest tasks. Click on each image and explore the related resources. Make a note of good ideas and tips you encounter.

Think about your own project idea. Decide what category(ies) of task your project idea falls into. Specifically note the guidelines in that section of the taxonomy of tasks.

Adapted from Bernie Dodge's WebQuest Taskonomy: A Taxonomy of Tasks

6.4.3 Apply

1. Use the **template support document on designing a WebQuest task** to design your WebQuest task.
2. Open the **WebQuest rubric** and assess your WebQuest task according to the rubric criteria.

If you are stuck for ideas, explain your case to your group in the Challenge Phase group discussion and see if they have some ideas for you.

Share your task with your group on the discussion page and give feedback to others. Use the **WebQuest rubric** to assess their tasks before giving positive feedback. Remember technology integration should start to be evident at this stage

	0 points	3 points	6 points
Technology Integration	Technology use was either overpowering to the detriment of subject learning, or hardly evident at all.	Technology was well integrated in some of the project phases but some significant opportunities for technology to enhance the learning process were missed.	Technology does not overpower the project and its use by learners enhances the gathering, processing and reporting stages. The teacher used technology to provide an engaging introduction during the challenge phase.

Copy your final WebQuest scenario to your WebQuest template file or to your Webquest on Zunal.

6.4.4 Reflect

Log in to your personal course blog and post a reflection on how the Challenge phase of a project sets up the whole project. Are you satisfied with your draft introduction and task? How do you feel you have captured your learners' imagination so far?

6.5 Plan Learner Engagement

Building on the previous activity, you will design group roles which will provide a structure for the learners and determine the nature of their engagement with and accountability to each other during the project. Group roles will be introduced in the WebQuest immediately after the scenario has been described in the task. In most project-based approaches to learning the teacher designs some kind of collaboration between learners in and sometime beyond the class. Good WebQuests achieve this by allocating different group members real-world roles that offer different perspectives to the task. At times these are different skills sets, but in other WebQuests these roles may represent opposing viewpoints, which would mean members of the group will have to reach consensus before coming to a final conclusion. This kind of role setting contributes towards positive engagement in the project.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Evaluate the effectiveness of a WebQuest or similarly structured project.

6.5.1 Prepare

When learners work in groups on a project you should ensure all members of the group have an orchestrated and engaging role to play in the group. This does not refer to group note-taker, timekeeper and group chairperson, typical roles allocated in co-operative groups. In WebQuests, as you will have discovered, you are describing real-life scenarios. The group members will therefore be role playing real-life roles as the group acts out the scenario. This is what the activity is about – identifying these roles for the learners in the project groups.

We are not suggesting that only roles will engage learners in learning.

1. Read **Engaging Students with Project-Based Learning** and identify the factors that engage learners in this classroom.
2. Join the *Plan Learner Engagement* discussion group and share your conclusions with the group after reading the article. Share other factors that, in your experience, engage learners in the classroom.

Roles in WebQuests

The roles are allocated to group members in the *Process* section, but in some WebQuests you may see this in the *Task* section. Some proponents of WebQuests, including founder Bernie Dodge, do not believe allocating roles is an important part of the WebQuest, but co-founder Tom March does believe in its importance. Given what this series of courses will have taught you about learner engagement through authentic real-world learning activities (see the course *Innovative Approaches to Learning with Technology*), we take the view that group roles are critical to engaging WebQuests.

1. Consider the roles in the **Searching for China WebQuest** and think about their power to engage. Share your thoughts about these roles with the group on the discussion group.

6.5.2 Study

1. Join your collaborative group for this lesson called Plan Learner Engagement and discuss what evidence would indicate good learner engagement in a classroom project.

2. Draw up a 2-3 item rubric using the online collaborative document that your tutor has set up for you.
3. Now, working on your own, evaluate the group roles in each of these four basic, starter WebQuests. You will have to read the introduction and task to establish the context of each WebQuest.
   - **A Whale of a Problem**
   - **Local Leaders, Tomorrow's Heroes**
   - **Freedom of Expression**
   - **Know Your Target Market: Gender**

4. Record your choice by completing this poll:
   Best WebQuest Roles Which WebQuest makes use of the best role?
   - A Whale of a Problem
   - Know Your Target Market: Gender
   - Local Leaders, Tomorrow's Heroes
   - Freedom of Expression
   - Vote **View Results** Total Answers 0 Total Votes 0
5. Return to the group discussion and share your reasons for your choice. "Listen" to the arguments and, if necessary, reach consensus on which one the group, thinks is best.

6.5.3 Apply

Your tutor will divide you into groups of four and you will work in support of each other as you write group roles for your WebQuest.

1. Join the group of four, start a new reply and share your initial ideas on the roles for your WebQuests. Provide the link to your WebQuest or upload your template in the document area so your group can read your project's context.

2. Read the posts by your other group members and give them feedback. What do you like and what do you think can be improved? Give some suggestions.

3. Once you feel you have perfected your group roles, write these either at the end of the Task section or at the beginning of the Process section. Write a full brief to the role player giving him/her clear instructions on what contribution he/she must make to the group effort.

6.5.4 Reflect

Log in to your personal course blog and post a reflection on what you have learned about role playing as a form of learner engagement. How do you think you could incorporate this into your lessons, if you have not already done so? If you have experience of this, share it with your readers and add how you may have acquired new perspectives as a result of this lesson.

6.6 Gathering Phase

You will know from the course on *Education in a Digital Society* that digital literacy, which includes information literacy skills, is an important skill set for learners to develop. In most project-based approaches you would therefore expect the learners to decide on their information needs and to develop an information-gathering strategy. In WebQuests you will pre-research the basic websites, but this does not mean students cannot decide to gather further data or information in order to fully respond to the challenge.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

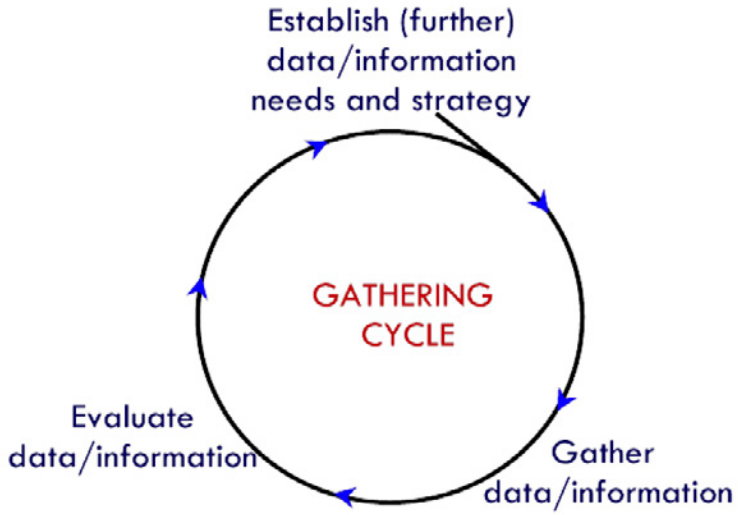
- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Evaluate the effectiveness of a WebQuest or similarly structured project;
- Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

6.6.1 Prepare

In project-based approaches, the Gathering phase starts once the learners have:

1. been introduced to the project and task/problem/question that poses the challenge;
2. been allocated their groups and group roles.

The new phase is characterised by the **learners** analysing the task and its information requirements. Good tasks will challenge the learners to engage in complex and higher-order thinking processes. Identifying what information and data will fuel that thinking is the first responsibility of the group. They then develop an information- and data-gathering plan and embark on what would quite likely be a number of gathering and evaluation cycles.



Analyse

1. Analyse this video on an Urban Planning project and try to establish what data- and information- gathering needs the learners would have had at the gathering stage.

   Video: **Urban Planning** (8:57)

2. Share your responses to this with your group on the Gathering Phase group discussion.

WebQuest Resources

In the original WebQuests the intention was for the teacher to pre-research for mostly Web resources. There are advantages to this in terms of making efficient use of time in the classroom, but we also know that digital literacies are part of the 21st Century learning skills set. Refer to the course on **Education in a Digital Society** for more about that. If you want to assess the learners' information literacy skills you may require them to be more active in developing an information-gathering plan. In this course we require you, the teacher, to pre-research the Web resources.

6.6.2 Study

When your design of a WebQuest project is assessed in the final assignment, you will be assessed as follows:

- There is a clear and meaningful connection between all the resources and the information needed for learners to accomplish the task. Every resource carries its weight. Resources are localised where possible. (4 points)
- Some resources carry information not ordinarily found in a classroom. Links make excellent use of the Web's timeliness and colourfulness. Varied resources provide enough meaningful information for learners to think deeply. (2 points)

1. Study these four WebQuests and assess the resources that have been provided in each case. Use the criteria from the WebQuest rubric as outlined above.
   - **Are Professional Athletes Paid Too Much?** (Gr 6-8)
   - **Tuskegee Tragedy** (Gr 9-12)
   - **Slavery...Scars from the Past** (Gr 6-8)
   - **How Will Our Garden Grow?** (Gr 3-5)
2. Record your choice by completing this poll:
3. Return to the *Gathering Phase* group discussion and share your reasons for your choice. "Listen" to the arguments and, if necessary, reach consensus on which one *the group thinks* is best.

6.6.3 Apply

As you will have realised by now, one of the keys to the success of the WebQuest is the provision of good resources to support the enquiry of the learners, either as a group or in their individual roles, during the process of the WebQuest.

Think about the following types of resources:

A. Websites

- Print publications
- Digital media
- Community surveys (or online surveys)

B. Collaboration resources

- Other classes
- Experts
- Field experiences
- Process tools such as wikis or online collaborative documents such as Google docs, which can be used to gather survey data and shared opinions

C. Digital content resources that might deepen understanding of an issue or subject content

You may have to rethink some parts of your project idea if it is not possible for your students to be supported by good information resources. Note that even though it is called a WebQuest, WebQuests do not have to rely on information from the Web.

As you conduct a search, you may like to use this **Template for planning a search strategy.**

1. Find suitable resources to support learners during the process of the WebQuest.
2. Go to your WebQuest site on Zunal or your document template and insert the resources at the most appropriate place. You may choose to have a separate resources page or you may choose to insert resources as you describe the group roles. If the resources are online, create active links to them.

3. Share your resources with your colleagues by posting a link to your WebQuest (or upload your template to the document area) on the discussion group. Your tutor will allocate you three peers to whom to you must give feedback about the quality of their resources. Use the **WebQuest assessment rubric** and refer to the two items on resources only.

4. Make changes to your resources as per feedback from your peers.

6.6.4 Reflect

Log in to your personal course blog and post a reflection on what you think are the pros and cons of pre-researching resources for your learners.

What advice would you give your learners when implementing a WebQuest if you require them to do additional research?

Have you discovered new ideas about using technology during the Gathering phase of a project?

6.7 Processing Phase

Much "project" work does not move beyond gathering information. In order to engage higher-order thinking skills and transformative thinking, it is important to set a challenge that clearly refers to tasks that will require processing the information gathered. For information to be transformed (as opposed to transferred by copying and pasting) the learners need to take data/information/ideas, process them and create their own ideas or come to their own conclusions. This is knowledge building.

By using a suitable tool, the processing of data and information will naturally emerge from the gathering activities, e.g. a mindmap becomes an outline, a survey becomes spreadsheet data which can be queried, represented graphically and analysed. There are many technology tools for processing information. It is important to assess the potential for technology to enhance the various activities of the processing phase.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Evaluate the effectiveness of a WebQuest or similarly structured project;
- Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

6.7.1 Prepare

When writing the Process stage of a WebQuest we must ensure *"Every step is clearly stated. Most learners would know exactly where they are at each step of the process and know what to do next. The process provides learners coming in at different entry levels with strategies and organizational tools to access and gain the knowledge needed to complete the task."* WebQuest rubric) Technology integration is assessed under the Resource section of the rubric.

Transformative Thinking

Think back to Lessons 3 and 4 when we emphasised that the Introduction and Task must prompt higher-order thinking. This is where that thinking happens. It is where data and information are transformed into the learners' own knowledge.You will have to carefully plan and lay out all the instructions for the phases the learners will go through to achieve this knowledge building.

The Process stage is also where you outline collaboration processes and different kinds of group work. For instance, if the role tasks will be challenging for the learners to master, have like roles work together (as in **jigsaw grouping**). If the learners are more advanced, keep the groups apart so each can develop his or her own interpretation.

The best way to make the transformative thinking happen when the students come back together after gathering data/information, is to describe a process where individual experts (roles) contribute to a discussion or planning that has a common goal, and where data and information are processed in order to support higher-order thinking such as analysis, synthesis, evaluation and problem solving. It is much more than just sharing what they have learned and if they are merely putting together parts to make a whole, with little discussion or thinking, then the transformative aspect is missing.

Learner Support

Learner support is important because learning support is the communication process where support by the teacher is provided for the learner and skills are gained on the part of the learner.

The teacher can give the learners just enough support so they can accomplish the task by themselves. The teacher gives learners this support in any number of ways, ranging from hints or feedback to demonstrating the task to the learners. This is a temporary framework that supports students as they develop new skills, just as buildings are supported when fresh concrete is poured to make the floors and walls. Consider how we have made use of template documents at various stages of these CCTI courses.

Learn more about student support by reading:

- More about scaffolding
- Types of scaffolding

6.7.2 Study

Study these four examples of WebQuests and focus on the **Process** section. As you do so, use this extract from the WebQuest rubric:

	0 points	**3 points**	**6 points**
Detail and support of Process	Process is not clearly stated. Learners would not know exactly what they were supposed to do just from reading this. The process lacks strategies and organisational tools needed for learners to gain the knowledge needed to complete the task.	Some directions are given, but there is missing information. Learners might be confused. Strategies and organisational tools embedded in the process are insufficient to ensure all learners will gain the knowledge needed to complete the task.	Every step is clearly stated. Most learners would know exactly where they are at each step of the process and know what to do next. The process provides learners coming in at different entry levels with strategies and organisational tools to access and gain the knowledge needed to complete the task.

Engagement Through Roles	**0 points** Few steps, no separate roles assigned.	**2 points** Some separate tasks or roles assigned to group members. These are co-operative but not collaborative. More complex activities required.	**4 points** Different roles are assigned to group members to help learners understand different perspectives and/or share responsibility in accomplishing the task.
Transformative Thinking	**0 points** No transformative thinking. (This is not a WebQuest, but may be a good Knowledge Hunt).	**2 points** Higher-level thinking is required, but the process for learners may not be clear. Some information is merely being repackaged.	**4 points** Higher-level thinking is required to work with information gathered and construct new meaning.

1. Searching for China
2. Tuskegee Tragedy
3. How Will Our Garden Grow?
4. Slavery...Scars from the Past

Use this poll to record your choice of the best example of a WebQuest process.

1. Connect with your group using the Process Phase group discussion.
2. Justify your choice of the best example. "Listen" to their reasons and, if necessary, reach a consensus as a group on which example of a WebQuest process is really the best.

6.7.3 Apply

1. Use this activity planner to plan a range of activities that make up the process. Remember that, although teacher input is critical at times, you want to make the project predominantly learner-centred.

2. Write the Process section of the WebQuest on the Process page of the Zunal site or in your document template.
3. Use the Process Checklist to ensure you are on the right track.
4. Self-assess your Process section by applying the Process section of the WebQuest rubric.

6.7.4 Reflect

Log in to your personal course blog and post a reflective post on how you might have gained insight into supporting the learning process, especially in the case of projects. If you have been doing this all along, write a testimony to the success of using learner-support strategies to develop skills in learners. Share your most successful ideas.

6.8 Assessment

In this lesson we explore the question:

How will I know my students have learned the skills and developed the understanding this project intended?

You have been in a position to design your assessment tools as soon as you wrote your project learning goals in Lesson 2. However, project design is cyclic in nature and you are always going back to earlier ideas and improving on them as the whole project becomes clearer in your mind. You will definitely want to assess the learners' grasp of the curriculum objectives associated with this project. If you have designed your project well you will be able to see evidence of that understanding from the products of their work.

You have just completed writing the Process section of your WebQuest and this means you now have a much clearer idea about what kind of skills the learners will be using and what new skills they will be developing. The new skills provide an opportunity to design formative assessment tools so the learners can have clear feedback on how their skills development is progressing.

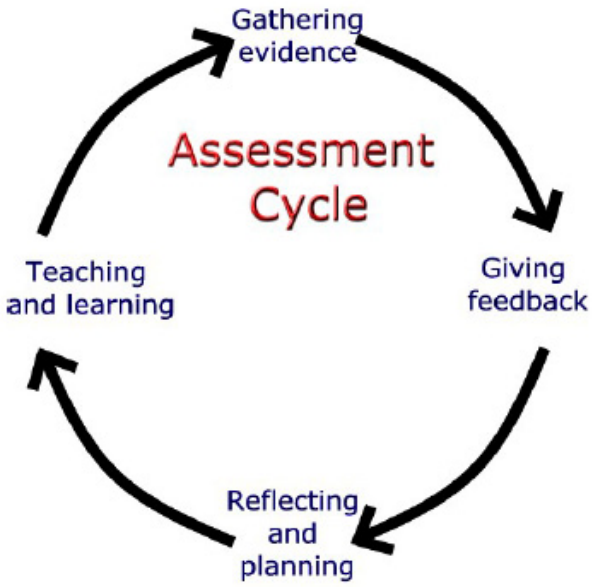
Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Plan a curriculum-aligned assessment strategy for a project;
- Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

6.8.1 Prepare

Each education system has a primary focus for assessment. We also have a responsibility to develop a cross-curricular approach to assessment, which includes numeracy and literacy, as well as a wide variety of life skills such as collaboration, information management, higher-order thinking, communication, digital literacy and self organisation, amongst others. Identifying the assessment standards on which to base teaching and learning is the first step of an assessment cycle that leads to the growth of learning and teaching through feedback and reflection.



In this lesson you will design the assessment tools (which help you give feedback on the evidence gathered) that will provide you and the learners with feedback about their mastery of the curriculum objectives and other skills and processes you would like them to develop.

Remember:

- Assessment is a formative and developmental process;
- We should focus our assessment on the specific learning goals of the project;
- We can assess both skills and understanding;
- We should try to assess learning development during the project process as well as the evidence shown in the final product.

1. Before you develop your assessment tool, have a look at these three examples and note to what extent each is formative and makes the expectations of the learner clear.

- **Art-i-facts project**
- **King Tut project**
- **Deserts project**

2. Share your conclusions with your group using the Assessment discussion group.
3. Also discuss what you think makes an assessment authentic.

6.8.2 Study

Assessing both the product and process

We can assess learners while they are (to name a few):

acting answering assessing calculating collecting composing computingco- ordinating copying designing discussing	drafting drawing evaluating experimenting illustrating interviewing investigating listening making mapping map reading	measuring modelling observing performing planning pretending problem-solving questioning reading recalling researching	reviewing role-playing selecting surveying singing talking translating watching writing

We do not only assess what learners write or remember. We can assess the following kinds of output (once again, to name just a few):

Written	Spoken/Heard	Visual
story letter report diary reflective journal logbook essay questionnaire newspaper notes website lyrics programme	oral drama role-play conversation interview discussion debate radio programme music	picture poster painting collage chart graph decoration photograph video model sculpture

What we assess is closely linked with how we assess. Continuous assessment and integrated assessment all serve to make us much more aware that assessment is not something tagged onto the end of a unit of study. We should be aware of the many processes and products of learning, as well as the need to include varied assessments that accommodate the different intelligences we typically find in our learners. This all affects the methods of assessment we could use.

In this activity we will be focusing on what we assess.

It is important that learning experiences in the classroom be assessed in an authentic manner. The traditional grading of papers still has a legitimate place …but should not be the sole means of assessing. Rather, continuous assessment should mirror instruction and be interwoven with it. Evaluation is vital for a clear, reliable picture of how students are progressing and how well the methods of instruction address students' needs.

Saskatchewan Education. (1997).
English Language Arts 10: A Curriculum Guide for the Secondary Level.

The following extract from the Saskatchewan Curriculum Guide uses the example of writing and illustrates how dialogue and reflection help learners and teachers to continuously assess the **process** of writing, before the final written product is produced. In the following extract, notice the role that reflection takes in the process assessment.

Click here to read the extract on process assessment for writing.

Although this example refers to language and writing, remember that writing is a cross-curricular skill. However, it should be possible for you to understand there are many aspects of a process in any learning area that can be treated in a similar way. As opposed to process, one can also identify aspects of assessment of a product. Let us follow the writing example through by looking at another extract from the same curriculum guide. In the following extract, notice how formative a product assessment can be and also how the use of clearly-expressed criteria can assist with good feedback even when scoring is used.

Click here to read the extract on product assessment of writing.

There are many instances of assessment throughout the learning process. Group work, for instance, involves many processes while the group is working towards developing a product. This provides opportunities for the group to assess itself (peer- and self-assessment) while the teacher can help the members of the group develop their group and social skills through constant monitoring and feedback.

Tools such as project narratives can be used for the learners to capture evidence of the **process** of their thinking and discussion as a group or as individuals.

Click here to see an example of a project narrative template (Word document).

6.8.3 Apply

In this activity you will design the assessment tools required for your WebQuest. You may like to first consult these quite basic **Guidelines on writing rubrics.**

Go to your WebQuest on Zunal or in your document template and insert the rubrics that align to your project goals.

Note: you may like to create and populate the rubric in a word processor table before copying and pasting it into the template on Zunal.

1. Use the assessment section of the WebQuest rubric to self-assess your rubrics.
2. Then make a copy of the rubric(s) and paste it/them in a Google Drive document.
3. Share the Google Drive document with your tutor and anyone else from whom you would like feedback. Your tutor and peers will provide feedback by commenting in the Google Drive document.

6.8.4 Reflect

Write reflective comments in your personal course blog. Consider what you may have l earned or what you strongly belive in regarding assessment of the processes and products of project-based learning.

Do you believe you can gather sufficient evidence of the learners' learning through your assessment strategy for the WebQuest? Do you feel a summative assessment (such as a class test) is still necessary once the project is complete?

6.9 Presenting Phase

The final stage of the project requires learners to create something, and share it with an audience, preferably real. In doing this, they will engage their creativity, and use various creativity tools to take the knowledge they have developed in the previous stage, and contribute it to the world, giving them a sense of having accomplished something meaningful.

In the case of the WebQuest, you may have already determined the nature of the project product e.g. a newspaper from the past, a presentation to a planning committee, a persuasive video etc. As the project planner you decide on the product of the project when you design the Introduction and Task.

In this lesson we will briefly investigate various options for different kinds of project products.

Learning Objectives:

Once you successfully complete the lesson you will be able to:

- Analyse existing projects and recognise examples of sound principles, best practice and practical ideas for your own practice;
- Plan a WebQuest or similarly structured project;
- Select appropriate digital resources which are useful for teachers preparing and learners working on projects.

6.9.1 Prepare

Watch these four videos and identify the project products that were produced by the learners. Then join the online collaborative document and brainstorm the alternative products that could have been produced by the same learners in the same project.

A Video: Anatomy of a Project: **"Soil Superheroes"** (6:33)

B Video: Anatomy of a Project: **Kinetic Conundrum** (6:52)

C Video: **Wetland Watchers: Kids Care for Their Environment**(8:08)

D Video: **Anatomy of a Project: Give Me Shelter** (5:00)

1. Go to the online collaborative document your tutor will have set up for you in Google Drive.

	Brainstorm the possible project presentation phase products that can be produced by learners.		
Your name	Name of project	Products produced	Alternative product ideas for the same project
Example	Soil Superheroes		
Example	Kinetic Conundrum		
Example	Wetland Watchers		
Example	Give Me Shelter		

2. Complete the empty cells for the first four example projects. If others have already inserted text, edit it and add anything you feel is missing. The right-hand column in particular is where you can think creatively and suggest how the learners in each project could have presented their knowledge differently.

6.9.2 Study

1. Explore as many WebQuests as you can in **Zunal** and **QuestGarden**.
2. Repeat the process you went through in the previous activity by going to the Google Drive document in which your group is recording and brainstorming project presentation ideas.

	Brainstorm the possible project presentation phase products that can be produced by learners.		
Your name	Name of project	Products produced	Alternative product ideas for the same project
Example	Soil Superheroes		
Example	Kinetic Conundrum		
Example	Wetland Watchers		
Example	Give Me Shelter		

3. Add your name, the WebQuest you have investigated, the project product(s) and possible alternative ways in which the same project's results could have been presented by the learners.

6.9.3 Apply

1. Choose ONE project presentation method from those listed on the brainstorm page.
2. In the most creative and imaginative way possible, use this method to present the accumulated ideas about how learners can present their findings at the Presentation phase of a project.

3. Share your product with the group using the document upload facility in the *Presenting Phase* discussion group. If it is a video on YouTube, share the link.

6.9.4 Reflect

Log in to your personal course blog for the last time and post your reflections about this course and what you have learned. How might this course influence what you do in the classroom? What plans do you have for implementing a project-based approach for a section of work in your curriculum

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7 MANAGING TECHNOLOGY-RICH LEARNING SPACES

7 Managing Technology-Rich Learning Spaces

Video: **Re-Imagining Learning in the 21st Century** (3:59)

The purpose of this course is to allow participants to take a deeper look at the wide variety of technology options available to today's learners, and then to explore how to use these to create and manage innovative learning spaces. Participants will look at both traditional and new configurations and consider how they can use and manage these different technology options. Each raises unique issues to the teacher managing the class. These issues are related both to managing the class, and to designing the learning and the learning environment, no matter what options are available. In this module we will attempt to raise and discuss these issues so we can draw our own personal conclusions and be more effective designers of learning experiences.

Learning Objectives

Participants who successfully complete the course will be able to:

1. Evaluate the potential value to learning and teaching offered by different technology configurations;
2. Describe learning experiences that exploit a specific technology's advantages;
3. Propose solutions to the management challenges of integrating technology in learning spaces;
4. Review the opportunities and constraints of physical learning spaces;
5. Articulate a vision for technology-rich learning spaces in the future.

Setting the Scene

Here's your challenge

Your principal has just been to a principals' conference overseas and one of the sessions was addressed by the Minister of Education. Watch this excerpt of the press conference after the Minister's address:

Video: **Breaking Down the Classroom Walls** (0:47)

This really excited the imagination of your principal and he's returned home with a wild idea in his head. He wants to explore how technology can be adopted in your school to break down the walls of classrooms. He is even willing to find the capital to build an innovative new learning centre in the

school which challenges the old paradigms of classrooms being the empire of the teacher. He has adopted this theme song to launch the *Break Down the Walls* project:

Video: **Ross Lynch – Break Down The Walls – with lyrics** (2:43)

Is this a hare-brained idea? Break down the walls!! Fortunately, you have been selected to participate on a special committee to study the implications of managing learning with technology with a view to proposing a new concept for a learning environment at your school.

The culmination of this challenge will be your final assignment. **Click here to read the final assignment.**

When you are ready to attend your first meeting, click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.1 Cases for Spaces

In this committee workshop you will be discussing how technology and classroom configurations influence the kind of teaching and learning that takes place in that learning environment. Your principal has sent along some photos as suggestions. (He really has not seen much technology in a school before – shame.)

Learning Objectives

Once you complete this lesson you will be able to:

- Evaluate the potential value to learning and teaching offered by different technology configurations;
- Review the opportunities and constraints of physical learning spaces.

7.1.1 Prepare

During this course you will be placed in smaller groups that will collaboratively come up with recommendations for the *Break Down the Walls Project*. As you gain knowledge through your research and discussions you will record this in a wiki. Your tutor will place you in groups and you will receive a notification to join a design group.

1. Connect to the Internet and **go to wikispaces**.
2. Sign up for **wikispaces**, using the same email address you are using as a participant in this course.

   Note: you will **not** be required to create your own wiki in this module.
3. Do this only **after** you have signed up:
   - Look out for the email invitation to the wiki.
   - Check your "junk mail/spam" folder as well.
   - f you have not received it, notify your tutor and supply an alternative email address.
4. Sign in to the wiki using the email address and password you used when signing up to wikispaces.

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1. Look carefully at each of the Photos A to F below and make notes on what each photo tells you about:
   - the type of learning you would expect to take place in that room;
   - the role of the teacher;
   - the role of the student;
   - the role of the technology.
2. Do you think technology and its configuration play a non-negotiable role in determining the kind of learning taking place in that room?
3. What other factors should one consider when assuming the kind of learning taking place in the room?

Photo A (above)

Photo B (above)

Photo C (above)

Photo D (above)

Photo E (above)

Photo F (above)

Make a PDF or print this page so you can refer to the photos during the next activity.

Once you have completed your observation and note-taking you can click on **Mark Complete** (first time) or **Next Topic** on future visits to this page

7.1.2 Study

1. Join the group discussion for this lesson called *"Learning Spaces"*.
2. Consult the images in the PDF file you created from the last activity. Discuss what each of the Photos A to F below tells you about:
    - the type of learning you would expect to take place in that room;
    - the role of the teacher
    - the role of the student
    - the role of the technology.

3. Do you think technology and its configuration play a non-negotiable role in determining the kind of learning taking place in that room?
4. What other factors should one consider when assuming the kind of learning that takes place in the room?

Once you have completed your discussion click on Mark Complete (first time) and Next Topic on future visits to this page.

7.1.3 Apply

Your principal has been very creative, if perhaps a little uninformed, about his Break Down the Walls Project.

You are going to match his creativity and create either a powerful **one-minute video** message or a **poster** for the principal called: "Don't let technology rule your space".

1. Upload your video to YouTube.
2. Once your poster is complete, upload it to your tutor using the upload area at the bottom of this page. Remember to name your document starting with you own name.
3. If you are creating a video, type the URL in a document and upload that to your tutor.

You may like to use part of an existing video and annotate it on YouTube. Here is some support if you want to go that route:

Video: **How To Create YouTube Video Annotations** (4:47)

Assessment

0-1	2-4	5-7	8-10
The message of the video/ poster is too complex weak and unclear.	The message is either too complex or unclear.	The message of your video/ poster is simple, effective and clear without being really powerful.	The **message** of the video/ poster is simple, yet very **powerful** and very **clear.**
0-1	**2-4**	**5-7**	**8-10**
There is little or no evidence of creative effort.	There is some evidence of creativity.	The creativity of our video/ poster is original and fairly unique without being exceptional.	The **creativity** of your video/ poster is exceptional, very **original** and very **unique.**

7.1.4 Reflect

Use this opportunity to reflect in your blog/wiki on how your perception of the design of learning spaces has been influenced during this activity. What questions still remain in your mind about the concept of learning space or learning environment?

Once you have completed your reflection, click on **Mark Complete**. Return to the main lesson page and mark that complete as well before proceeding to the next lesson.

7.2 Managing the Warmware

During the previous workshop meeting of your Break Down The Walls Project committee, comments were made about the students' role in technology- enriched learning spaces. Some more conservative elements of the committee raised concerns about technology's disruptive influence on student behaviour and the possibility it would also divert student attention and lead them into situations which may not be appropriate. It was like opening a can of worms, so you decided to have a break-out discussion about discipline and how to manage classes and individual incidents, with reference to technology.

Lesson Objective

Once you complete this lesson you will be able to:

- Propose solutions to the management challenges of integrating technology in learning spaces.

7.2.1 Prepare

As you prepare for the break-out meeting on the issue of student behaviour in technology-rich learning environments, reflect on your own experience in the classroom. You search around in your files and you find this Edutopia handout called **Ten Tips for Classroom Management**. What are the main points relating to the management of learning with technology you can take with you to the meeting?

You visit a neighbouring school which uses iPods and a classroom management tool called ExitTicket in the classroom. This is what they say:

Video: **Technology in the classroom – Management and Procedures** (5:17)

To attend the break-out meeting and add to the discussion, click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.2.2 Study

The meeting on "discipline" starts and some of the group members immediately have contributions to make. One says:

> *"Managing classrooms is a very broad topic of study and is often not adequately taught at teacher training institutions. In many cases it is taken to be only about the discipline and control of students. Student behaviour is a factor to contend with, but student management does not necessarily have to directly involve disciplining the individual students."*

Another committee member adds:

> *"This project is not about classroom behaviour, but teachers may find this issue an obstacle to successful teaching and learning. If behavioural issues are restricting our success as teachers we should brush up on* ***The Basics of Good Classroom Management – Part 1 – Prevention.****"*

You add:

> *"Effective teaching is not about effective discipline, but about managing the classroom effectively. This is the assertion made by Harry and Rosemary Wong in their article in the The Gazette, a teachers.net publication. It is worthwhile reading* ***why they consider procedures to be so important****, especially how they distinguish between discipline and classroom management. It's a lot about managing the warmware and less about the hardware."*

1. Join the group discussion for your design group called *"Group <number> Classroom Management"*.
2. During this discussion draw on your experience with technology integration and the most relevant points of the suggested reading.
3. Collaboratively try to decide on a small list of the most important principles of good classroom management (try to identify no more than six principles). You may like to open an online collaborative document for this purpose.

Once you have completed your discussion, adjourn the meeting and click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

7.2.3 Apply

In this activity you will start to build a series of wiki pages on managing technology-enriched learning spaces.

1. Go to the **wiki** which you joined in Lesson 1.
2. View and edit the page in the wiki that is titled *Classroom Management with ICT Integration*.
    - Collaboratively apply the principles of best practice in classroom management (from lesson activity 7.2.2) to classrooms in which ICT is integrated as a learning resource (in the hands of students).
    - Elaborate on the principles and focus on how ICT influences the principles in practice.
    - Suggest practical measures for effectively managing classrooms in which ICT is integrated.
    - Edit the page until the wording is clear and concise.
    - Allocate yourself no more than 30 minutes for this task.
3. Save the pages you edited.

Once you have completed this task click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.2.4 Reflect

Use this opportunity to reflect in your personal blog/wiki about the process of writing collaboratively in a wiki. How could you improve the process with your design group?

Reflect on the most important learning you gained from this lesson and managing the warmware. Are there aspects of your own classroom practice you plan to change as a result?

Once you have completed your reflection, click on **Mark Complete**. Return to the main lesson page and mark that as complete as well so you can proceed to the next lesson.

7.3 Old Days - New Ways

As teachers ease (Ease? What planet are you on?) their way into technology they typically go through these stages:

- Dabbling
- Doing old things in old ways

- Doing old things in new ways
- Doing new things in new ways

You may remember the **SAMR model** from the course 3 *Technology-Enriched Teaching*, which is structured along the same lines.

Your school Break Down the Walls Project team has recognised this and has decided to explore some old and some new ways of doing things with technology along the following lines:

- old things and old ways – dedicated technology venues
- old things and new ways – one technology device in the classroom
- new things and old ways – will old tactics work with mobile technologies?
- new things and new ways – what do emerging trends show us about how we may have to adapt our teaching?

Learning Objectives

Once you complete this lesson you will be able to:

- Evaluate the potential value to learning and teaching offered by different technology configurations;
- Describe learning experiences that exploit a specific technology's advantages;
- Propose solutions to the management challenges of integrating technology in learning spaces.

7.3.1 Prepare

In this workshop session your committee will explore some old ways and some new trends to get an overview of how things stand in technology for learning globally. The four areas your group must investigate are:

1. old things and old ways – dedicated technology venues
2. old things and new ways – one technology device in the classroom
3. new things and old ways – will old tactics work with mobile technologies?
4. new things and new ways – what do emerging trends show us about how we may have to adapt our teaching?

You will operate in jigsaw groups. In case you do not know what this refers to here is a summary of **how a jigsaw group works**.

(Source: CSIR-SchoolNet SA, ICT4RED, Module 1 Booklet)

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1. Decide which members of your group will address which one of the four options listed above.

Your group should cover all four areas.

2. Go to the groups' menu and look for the group which is numbered according to your allocated number.

3. Request to join that group.

Once you have joined the group click **Mark Complete** (first time) or **Next Topic** on future visits to this site.

7.3.2 Study

You will now form different, "expert" groups with all the members for other groups who are studying the same area you have been allocated by your design group (your "home" group to whom you will return with your new-found knowledge). You should have joined your expert group by now.

1. Join the discussion in your expert group and decide how you will approach the research. What key questions do you want to ask before you approach the reading and research?

2. Agree on a date by which time you should report back to each other.

3. Conduct your individual research as assigned by your expert group.

4. Return to your expert group and share your findings. Find responses to your key questions that you can take back to your home group, the design group.

Here are your allocated expert group tasks for research and discussion:

Old things and old ways – dedicated technology venues

Many schools still have dedicated venues for technology, some high density (often referred to as computer labs) and others low density (sometimes referred to as learning labs, collaboration rooms or media labs). The two options have very different implications for learning as we discovered in Lesson 1 of this course.

Use this supporting document on low-density labs and discuss what additional questions you need to ask. Focus, too, on the learning opportunities and class management issues that may arise in such a technology-enriched learning space.

	**Old things and new ways – one technology device in the classroom** This group is also looking at devices within the walls of a physical learning space. One of the oldest concepts of technology in the classroom was the "one-computer classroom". Today, this has taken on a new form with the appearance of interactive whiteboards (read chapter 4 and 8 of The Interactive Whiteboard Revolution: Teaching with IWBs) in many classrooms that have no other technology present and teachers with portable devices (such as tablets or laptops), where this device is the only device in the classroom. Read about what you can do with one iPad in the classroom for instance. Focus on the learning opportunities and class management issues that may arise in one-device learning spaces.

	**New things and old ways – will old tactics work with mobile technologies?** What happens when the old meets the new – which one has to give and adapt? One of the emerging trends which fast became a reality is mobile devices. Mobile phones are controversial but tablets are all the rage. Why do we discriminate? Read Amidst a Mobile Revolution in Schools, Will Old Teaching Tactics Work? During your research, identify the potentials for learning and how to overcome classroom management issues
	**New things and new ways – what do emerging trends show us?** You are the futuristic group, but future trends quickly become current technology and approaches. The 2012 Horizon Report is a few years old but already some of the trends are reality in many classrooms. Focus on the Two to Three Years and Four to Five Years trends. What implications do they have for the classroom of the future? Will they break down the walls?

Source: Interactive whiteboards: http://moodle2.msad52.org/pluginfile.php/5937/mod_resource/content/1/The+Interactive+Whiteboard+Revolution.pdf

One computer classroom issues: http://eduscapes.com/tap/occ2.pdf

Once you have completed your research in your expert group, click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.3.3 Apply

It is time for you to return to your home group and to share with them what your key questions were and what your basic conclusions are about your area of expert group study.

1. Join your design group and report back to them. Participate in the discussion that may ensue.

In this activity you will continue to build a series of wiki pages on managing technology-enriched learning spaces.

1. Go to the **wiki** which you joined in Lesson 1 and used in Lesson 2.
2. View and edit the page in the wiki that is titled according to your expert group topic. This will be either "Low-density labs", "One-device classrooms", "Mobile Revolution" or "Emerging Trends".
    - Report on your key questions and findings. Be sure to include reference to how the technology requires specific classroom management measures and, in the case of more emerging trends, how the concept of learning space could be challenged.
    - Edit the page until the wording is clear and concise.
    - Allocate yourself no more than 30 minutes for this task.
3. Save the pages that you edited.

Once you have completed your wiki entries, click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.3.4 Reflect

As you reflect on the past lesson, post an entry to your blog/wiki in which you assess your position between the old ways and the new things with technology. Is technology changing the way in which you view learning spaces and the personal learning environments of your students? How are you adapting the way in which you manage the classroom?

Once you have completed your reflection, click on **Mark Complete**. Return to the lesson main page and mark that complete so that you can proceed to the next lesson.

7.4 Space Innovation

As your committee has been developing the knowledge base on the wiki, your principal has been kept updated through your collaborative efforts. He is full of praise for your work, but he is anxious to know what kind of new spaces he must build with the funds he intends raising. He is now requesting your committee to focus its attention on innovative learning spaces. Of course, your discussions and findings may be leading you to the conclusion that new spaces are not really

necessary. Perhaps you are concluding that how we adapt what we do in existing spaces is more important and that the concept of "learning space" is more virtual at times. You may be drawing completely different conclusions, but this is your opportunity to look at innovative learning spaces and to assess whether their design really is the catalyst to change.

Learning Objectives

Once you complete this lesson you will be able to:

- Propose solutions to the management challenges of integrating technology in learning spaces;
- Review the opportunities and constraints of physical learning spaces;
- Articulate a vision for technology-rich learning spaces in the future.

7.4.1 Prepare

This video has been set up for your committee to watch at the very beginning of the workshop session on innovative learning spaces:

Movie: **Learning to Change-Changing to Learn** (5:37)

This lesson will simulate a great division of opinion between your committee members. The two points of view are:

1. **Technology group**: Classroom walls do not need to be physically broken down. Technology and innovative learning design can break down classroom walls in a virtual sense and that is sufficient for social learning styles of the future.
2. **Construction group**: Classrooms impose restricted parameters on student thinking and you have to design new educational spaces in order to release new ways of thinking about learning.

Your tutor will set up two discussion groups representing the two points of view. Join the the group which best represents your own opinion by clicking on the **Join** button on the Groups page.

Once you have joined your discussion group, click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

7.4.2 Study

Connect with your group in the discussion area. Your group may decide to use other collaboration spaces as well. This is your group's decision.

As you research your point of view, you must collaboratively build an argument with your group by posting your findings to the discussion, supporting views that have already been expressed and posting a new comment if your findings represent a fresh idea. Share with your group the best resources you find. Follow up on some of the resources they share with you.

Both groups may find some value in the JISC publication: **Designing Spaces for Effective Learning**.

Technologists, your view is supported by this TED talk by Raj Dhingra.

Video: **Can Technology Change Education? Yes!** (16:43)

7.4.3 Apply

Reaching consensus

In the first part of this activity you will engage in a whole group discussion with a view to reaching consensus about the role of technology in defining new "learning spaces" and the need for new physical learning spaces.

1. Join the group discussion for this lesson called *Learning Spaces: Reaching Consensus.*
2. Present your concluding arguments to the group and "listen" to the views of the opposing group. Can you find common ground and come up with a strong proposal for your principal?

It will be important to develop your own clear view on this. If the principal calls you in to report on the committee's work, how will you respond? You have to provide an accurate report of the committee's conclusions.

Assignment

Your principal DID call you in to report on the committee's findings about innovative learning spaces. In this assignment you will prepare **supporting material for your discussion** with the principal and a **podcast** which will represent your practice speech to the principal during your forthcoming meeting. You may put these together into a photo story or leave them separate, but ZIP them when you submit them. Your final product(s) should not be more than 8Mb in size.

Assessment rubric:

0-3	4-8	9-13	14-18
The content of the podcast is poorly presented, not supported by good argument and misrepresents the consensus opinion.	The content of the podcast is presented with some flaws, not well backed up with argument and represents only small amounts of the consensus opinion.	The content of the podcast is well-presented, backed up with sound argument and represents most of the consensus opinion.	The content of the podcast is creatively presented, backed up with good argument and thoroughly represents the consensus opinion.

0-2	3-4	5-6	7-8
The supporting material is plain, not always accurate and does not support the podcast.	The supporting material is clear, has at least one significant inaccuracy and supports the podcast in places.	The supporting material is well presented, accurate and clearly supports the podcast.	The supporting material is creative, accurate and enhances this podcast well.
1	**2**	**3**	**4**
The podcast is technically of very poor quality.	The podcast is audible but has some noticeable disturbances.	The podcast is of a good listening quality, with minor disturbances.	The podcast is technically of a very high quality.

What to submit:

1. You must submit a ZIP file which contains both the podcast and supporting materials .
2. The file you upload here must have the file name <your name><country>_Assignment1 e.g. JoeBlogg_SVG_Assignment1

7.4.4 Reflect

Use this opportunity to reflect on the process of seeking consensus in an online learning environment. Also reflect on the question: "How can I 'break down the walls of my classroom' without actually having to incur great expenses or construction costs?"

Once you have completed your reflection, click on **Mark Complete**. Return to the main lesson page and mark that as complete as well before proceeding to the next lesson.

7.5 BYOD Space Odyssey

The last lesson could be regarded as an aside, but it was an important aside nevertheless. It would hopefully have taught you that when we talk about managing learning spaces we are not only talking about physical spaces. The technologists' arguments would also have resonated well with the CCTI course you may have previously done on Innovative Classrooms.

As a result of the insights from the recent investigation into learning spaces, your committee has identified a new perspective to explore. They want to explore the WHERE factor more deeply. Clearly the classroom is still a viable learning space, so how do we manage situations where students bring their own devices to the class? This is popularly known as Bring Your Own Device (BYOD).

Learning objectives

Once you have completed this lesson you will be able to:

- Evaluate the potential value to learning and teaching offered by different technology configurations;
- Propose solutions to the management challenges of integrating technology in learning spaces.

7.5.1 Prepare

To prepare yourself for the debate about BYOD you attend an online conference session led by well-known teacher, professional development specialist, Naomi Harm.

> *"Bring Your Own Device (BYOD) is more about instructional design and delivery, rather than tools, devices, or applications. Teachers who implement BYOD effectively also facilitate and nurture learning communities in their classrooms while recognizing the immediate needs of today's digital age learners to collaborate, communicate, create, and think critically. This online webinar will model effective mobile teaching and learning scenarios to implement a BYOD program in your K-12 schools and classrooms. The session is designed to increase your understanding of BYOD in order to lead to greater student engagement in learning and to empower teachers to design and create new compelling and motivating lessons and assignments."*

Source: http://k12onlineconference.org/?p=1647

Video: **Any Device Will D**o (25:43)

BYOD can mean different things to different people. For some it might mean crossing that barrier about brining cellphones into the classroom; for other it may mean dictating which devices should be brought, which is what one would refer to as a one-to-one (1:1) approach; to others it may mean what Naomi was referring to, bringing any device. Each model has its own unique implications.

Join this Google Drive page and join one group to form groups that specialise in one of the above models.

Once you have joined your group on Google Drive, your tutor will create a discussion group for each group on the Groups page. Join that group.

Once you have joined your group, click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

7.5.2 Study

You will research the benefits and classroom management issues of your chosen topic so you can contribute to a group discussion and then collaborate in creating wiki content in the next activity. First, look at one of these resources (aligned to your chosen topic) and follow the guidelines on the resource page to which you are linked.

Go to the resource page for:

1. **Cellphones in the classroom**
2. **One-to-One Learning**
3. **BYOD: Any Device Will Do**

Once you have gone through these resources and made notes about the benefits and classroom management issues, compare notes with your small group.

1. Join your specific topic group discussion which your tutor has created for you.
2. Discuss your preliminary findings with your group.
3. Identify additional questions you need to ask before you can write with some authority about this topic.
4. Assign each group member a research task.
5. Agree on a report-back date.
6. On the given report-back date, share your findings.
7. Once you have concluded your discussion, decide on how you will assign the task of sharing your knowledge on the wiki.

Once you have completed this activity click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

7.5.3 Apply

In this activity you will continue to build a series of wiki pages on managing technology-rich learning spaces.

1. Go to the **wiki** which you have been working on during this course.
2. View and edit the page in the wiki titled according to your group topic. This will be either “Cellphones in the Classroom”, “One-to-One Learning” or “BYOD: Any Device Will Do”.
    - Report on your key questions and findings. Be sure to include reference to the benefits of the model and how to address specific classroom management issues that may occur.
    - Edit the page until the wording is clear and concise.
    - Allocate yourself no more than 30 minutes for this task.

3. Save the pages you edited.

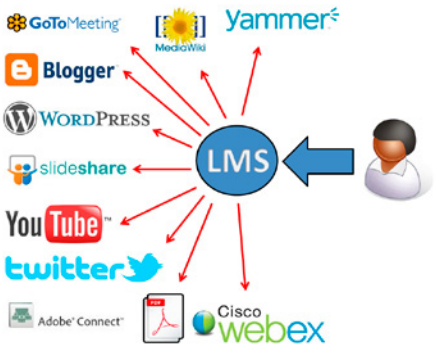
Once you have completed your wiki entries, click on **Mark Complete** (first time) and **Next Topic** on future visits to this page.

7.5.4 Reflect

Use this opportunity to post a reflection in your personal blog/wiki in which you comment on the various models of BYOD. What would you need to do to prepare your class for such an eventuality? Perhaps you already use one of these models. What is your experience and what have you learned in this lesson that can make you implement the model even more successfully?

Once you have completed your reflection, click on Mark **Complete**. Return to the main lesson page and mark that complete as well before proceeding to the next lesson.

7.6 Learning Management Systems



While viewing and reading some of the resources of the previous workshop, some of you will have encountered reference to a learning management system (LMS). There was even a suggestion that BYOD is not possible unless you have a good LMS – it sounds like a real space odyssey!

In its final act before concluding its report to the school principal, your committee has decided to explore the affordances of different LMS platforms and how they can impact on the management of teaching and learning.

Learning objectives

Once you complete this lesson you will be able to:

- Describe learning experiences that exploit a specific technology's advantages;
- Propose solutions to the management challenges of integrating technology in learning spaces.

7.6.1 Prepare

What is a learning management system (LMS)? Well, you have been participating in one throughout this course. Using an LMS is currently more prevalent in higher education institutions than in schools but the trend is changing. However, schools do not generally operate on the same principles as higher education institutions, so schools may have different requirements and use different products. *Moodle* is popular in higher education institutions with large enrollments. *Edmodo* is more popular in schools.

Within LMS sites, teachers may elect to use any of the following tools:

- Announcements: Non-threaded, asynchronous messages for all site participants to read. Email notifications may be sent as well.
- Assignments: Allows students to upload and submit assignments and projects and instructors to grade and comment on students' submissions.
- Chat: Synchronous conversation tool. All messages are automatically saved and are viewable for all site participants.
- Content Sharing: File storage space. Any file type may be stored; URLs to other websites may be created, and shared citation lists may be created. Email notifications of new content may be sent as well.
- Discussion: Threaded, asynchronous messages for all site participants to read.
- Drop Box: Private file storage space for sharing between individual students and the instructor.
- Email Archive: All email sent via a site-specific email address is delivered to all participants and also saved online for archival and searching.
- Forums: A threaded, asynchronous messaging tool, similar to the Discussion tool but with more finely-grained options and permission settings.
- Gradebook: An online grading tool that allows the instructor to grade any assignment or exam and share that information with students, who view only their own scores.
- Messages: A non-threaded, asynchronous messaging tool that can either send messages to groups of students or individuals.
- News: Allows site participants to view RSS feeds from external sources.
- Schedule: A shared calendar used to post deadlines, due dates, etc.
- Syllabus: Instructors may use this tool to post their syllabus as HTML or an attachment.
- Web Content: Allows site participants to view external websites.
- Wiki: A collaborative document-writing tool. Any site participant may add or modify additional pages and a history of changes is automatically recorded.

Source: https://ctools.umich.edu/access/content/group/research/papers/Survey_FinalPaper_AERA09.pdf

Watch these introductions to a few free LMSs which are used in schools:

Video: **Get to Know Canvas K12** (1:42)

Video: **Edmodo at a Glance** (1:29)

Video: **Schoology** (watch the first 1:30)

Video: **Previewing new Classroom by Google** (1:43)

Consider these questions and make some preliminary notes about them:

1. How would you describe a LMS in your own words?
2. What have been the aspects of this LMS that you have liked and what have you not liked?
3. Would you value a system such as this to manage the learning process in your classroom?
4. Is an LMS really an important feature of classroom learning? Would it help you to manage technology-rich learning spaces?

Once you have thought about these questions, click on **Mark Complete** (first time) or **Next Topic** on future visits to this page.

7.6.2 Study

In this video, Dr. Mark Bullen questions the value of the LMS and argues there are alternatives that not only have the potential to save money but also to provide a more appropriate learning environment.

Video: **Reconsidering the Learning Management System** (9:05)

In this activity you will do some critical thinking about the use of LMSs in the classroom. If you want to understand more deeply what LMSs offer, spend some time exploring one of the LMSs that were introduced in the previous activity. You will need to allocate quite a bit of time to this if you want to explore an LMS from scratch. It may be better to try and experience demos of an LMS or connect with teachers who use them. Then you can ask what they actually do with an LMS and whether you can gain access to experience it.

1. Join the discussion group for this module called *"Learning Management Systems"*.
2. The question you should debate is:
   "Do learning management systems add value to our understanding of innovative learning in technology-rich learning spaces?"
3. First, decide what other key questions you, as a group, want to ask to frame this discussion.
4. Conduct research as needed to fuel your input into the discussion, which should focus around the questions on which you are focusing.
5. Participate in the discussion. Try to provide both your own input and responses to the input of others.
6. As the discussion proceeds, formulate your own opinion on the value of the LMS for the school learning environment.

Once you have completed your discussion, click on Mark **Complete** (first time) and Next **Topic** on future visits to this page.

7.6.3 Apply

In this activity you will contribute to the last of the wiki pages on managing technology-rich learning spaces.

1. Go to the **wiki** you have been working on during this course.
2. View and edit the page in the wiki that is titled *"Learning Management Systems"*.
   - Collaboratively set up headings and provide a synopsis of your discussion in the previous activity. What questions did you identify and what key points arose? What are the pros and cons of a learning management system and highlight your focus question, **Do learning management systems add value to our understanding of innovative learning in technology-rich learning spaces?**
   - Edit the page until the layout and wording is clear and concise.
   - Allocate yourself no more than 30 minutes for your contribution to this task. Let's see the power of collaboration as you build a really useful and insightful page of content one last time.
3. Save the pages you edited.

Once you have completed your contributions, return to the wiki page a few times to see how the content has developed. When you are ready to proceed to the last reflective activity, click on **Mark Complete** (first time) or **Next Topic** on future visits to the page.

7.6.4 Reflect

Make use of this opportunity to reflect in your blog on what you personally think about the potential of using learning management systems in your classrooms. If you intend doing so, what value do your think it offers teaching and learning in your classroom? If you do not intend using them, what are your reasons?

Once you have completed your reflection, click on **Mark Complete**. Return to the main lesson page and mark that complete as well before moving on to the final assignment.

7.7 Final Assignment

Final Assignment

This is the grand finale. After participating in your committee and collaborating with different groups while researching the pros and cons of managing different

technology- rich learning spaces, you are now in a position to synthesise the information at your disposal and to craft it into a concise, yet informative and stimulating, presentation to your principal. This is going to be a bit like playing "The Apprentice". This is your big chance to shine, although I am sure your principal will not think of saying "You're Fired!".

Your presentation should be multimedia and must include either a clear audio track or a clear script along with supporting visual material. You could use a photo story, a presentation, or a video, or any other multimedia format. There is only one condition. Your uploaded file must be no larger than 8Mb. This does not mean to say you cannot place *publicly accessible* files in the cloud.

Your presentation could have a title like: "Technology-Rich Learning Spaces of the Future – How Will We Manage?". You may choose any title as long as it includes reference to technology, learning spaces and managing these spaces.

In your presentation include the following:

1. What you consider to be the most important key features of student learning that should be accounted for when considering new technology-rich learning spaces;
2. How both technology configuration and learning spaces influence teaching and learning;
3. How special classroom management considerations are necessary in technology-rich environments;
4. A vision of how you see technology-rich learning spaces in the future.

Assessment

This rubric is adapted from "**Evaluating Multimedia Presentations**". For more detail follow the link.

0-1	2	3-4	5
It is not clear what the focus is meant to be.	The focus was often not clear and clarification would be required.	The focus was clear most of the time.	The presentation had a clear and consistent **focus**
0-2	**3-5**	**6-8**	**9-10**
I was lost during most of the presentation. Few if any of the slides seemed logical when presented.	Most of the slides were unclear or confusing, and there were several places where I wasn't sure where the presenter was headed.	I generally knew where the presenter was and where he/she was headed, but there were a couple of places where I was a little confused.	At every point in the **well-organised** presentation, I knew exactly where the presenter was and where we had been, and I had a sense of where we were going.

0-2	3-5	6-8	9-10
The presenter relied too heavily on short bullet points in the multimedia presentation and didn't provide sufficient oral elaboration. The images were purely decorative and added nothing to my understanding of the issue.	The supporting information was too sparse. The presenter did not sufficiently elaborate on many of the bullet points, and the images added little to my understanding of the issue.	The presenter provided enough support for his/her argument, but some images seemed extraneous or purely decorative, and a couple of bullet points needed further clarification.	There was a lot of **supporting information, evidence, images**, etc. with clear explanation to make the presenter's point. I am thoroughly convinced!
0-2	**3-5**	**6-8**	**9-10**
Colors, fonts, and layout seemed almost random. The design was confusing and made it difficult to understand (or even find) the content of the presentation.	The layout and color choices distracted somewhat from the content of the presentation, and some of the images were purely decorative and seemed out of place.	The text and visual design were clear and interesting but somewhat inconsistent in style. Although the design may not have distracted from the content, it also did not enhance my ability to process the visual content of the presentation.	The **text and the visual design** were clear, interesting, and appropriate to the purpose and audience of the presentation. Fonts, colors, etc. seemed well chosen to reflect the presenter's purpose and aided in my ability to process the visual content of the presentation.
0-5	**6-10**	**11-15**	**16-20**
You have understanding in none or only 1 of the areas of this assignment and it is clear from this evidence you have not achieved most of the learning objectives of this course.	You have shown understanding in only 2 areas of this assignment and it is clear from this that you have not achieved all the learning objectives of this course.	You have shown clear understanding in 3 areas of the assignment and it is clear from this evidence that you have achieved the basic learning objectives of this course.	You have shown excellent i**nsight in all 4 areas of this assignment** and it is clear from this evidence that you have mastered the learning objectives of this course.

What to submit

1. You must submit a file which either contains your assignment or the details of where your assignment can be found. If there is more than one file they must be zipped into ONE file. The file size of the Zip file should not be more than 8Mb.
2. If your assignment is posted at another location it MUST be shared and PUBLICLY accessible.
3. The file you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_Uganda_Final_Assignment

COMMONWEALTH of LEARNING
learning for development

SchoolNet South Africa

Commonwealth Certificate for Teacher ICT Integration

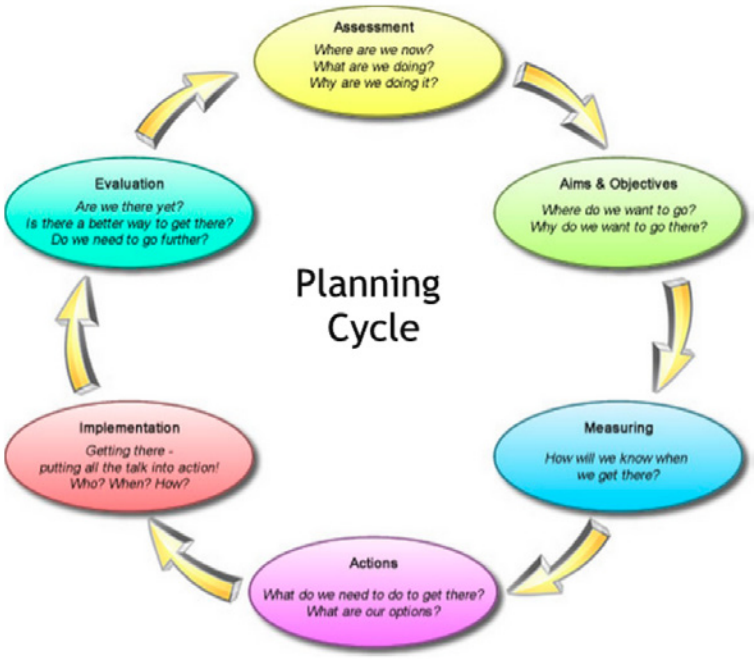
Preparing Teachers for ICT Integration into Teaching and Learning

8 PLANNING FOR TECHNOLOGY INTEGRATION

8 Planning for Technology Integration

This course simulates a process (stretching over two courses) which school leaders could follow while planning/reviewing and preparing for technology-enhanced learning in their schools. Previous courses in this CCTI programme have shown us how technology-based resources result in an ever-changing landscape which requires stakeholders to develop a clear vision and for leaders to facilitate the capacity-building of these stakeholders to respond collectively to that vision.

Planning is a cyclic process, as shown in the image below. We will follow one cycle during the process of the two courses in this series. We will follow a cycle similar to that shown in the image.



Source: Warren McCoullough, Innovative Schools, http://wazmac.com/ischools/planning/school-ict-planning/planning-cycle

This course, *8 Planning for Technology Integration,* will follow the process starting with Assessment and going as far as Implementation in the Planning Cycle image. Course 9 Technology Leadership in Schools will cover the change leadership aspects of Implementation and culminate in the Evaluation stage.

Learning Objectives

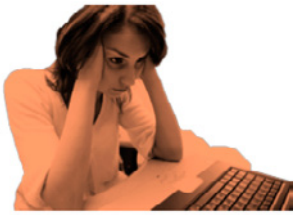
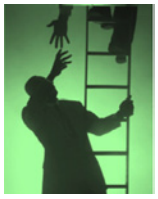
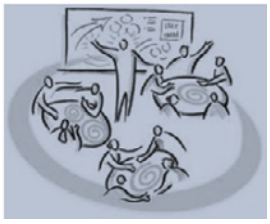
Participants who successfully complete the course will be able to:

1. Identify the constraints and advantages of their school's context and the resulting potential to harness technology for learning;
2. Analyse stakeholders and interact with each individual/group in a way that fosters ownership of the vision;

3. Conduct planning for e-learning;
4. Conduct technology planning;
5. Write a professional learning strategy.

Setting the Scene

Imagine that you could be any one of these characters:

	The **school technology guru**. You know a lot about technology and you are a very useful asset to your school, but you know very little about sound pedagogical practices. To be honest, this is sometimes annoying to some teachers. You would like to broaden your understanding and bring technology and the curriculum together. You are ready to play your role in this process.
	The **frustrated teacher**. You know enough about technology to realise that, with sound pedagogical practices, and a good technology vision and plan, you and your colleagues could orchestrate the most engaging learning experiences. Sadly, no one at your school thinks this same way. You want to drive a technology planning process and need to know how to do this.
	The **inspired leader**. You like to lead from the front and help others up the ladder of progress in your school. You are aware of the possible positive impact of technology on learning and you would like to bring together a group of stakeholders to develop a comprehensive plan for technology in your school. You are not sure where to start.
	The **wondrous facilitator**. Your classes run like clockwork and you use sound pedagogical practices as you facilitate learning. You are a great teacher but you don't feel great about it. You suspect there is something that technology can offer your learners in your classes. You know you can make a contribution to a school e- learning plan and you hope your school will be able to put together a good technology plan to support your growth in this regard.

Perhaps your context is slightly different and you can write your own character description, but clearly there are a number of different stakeholders in school who desire a situation where the school pulls together to develop a great, co-ordinated e-learning plan that actually results in enhanced learning experiences. It's not really about technology of course, it's about learning.

When we refer to e-learning we refer to learning that is enriched by the support of electronic devices and digital resources, in and beyond the classroom.

Assignment

In the last lesson of this course you will be required to submit a complete school technology plan which includes reference to:

1. The educational policy context of the school, including the focus areas of learning in the school
2. Clearly identified overarching pedagogical principles
3. Vision for e-learning
4. Curriculum technology integration (e-learning) plan
5. Technology and infrastructure plan
6. Teacher professional learning
7. Implementation
8. Evaluation
9. Acknowledgement of stakeholders

During this course you will address all of these issues so the last assignment will simply constitute a final presentation of the evidence of your learning.

Use or adapt these templates for your assignment.

School Technology Plan Template (Microsoft Word version)

School Technology Plan Template (PDF version)

Assessment rubric

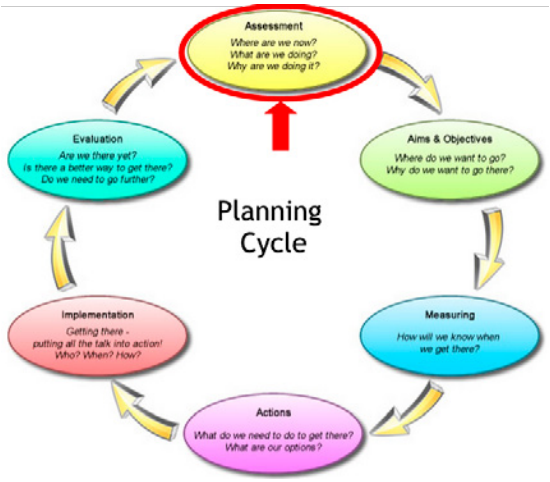
Level 1	Level 2	Level 3	Level 4
Fewer than six of the required components of the final school plan are referenced.	At least six of the required components of the final school plan are referred to.	At least eight of the required components of the final school plan are referred to.	All nine **required components** of the final school plan are referred to.
The educational background is missing more than one of these: school's context, clear educational focus areas, targeting sound pedagogical principles, and lacks detail.	The educational background is missing one of these: school's context, clear educational focus areas, targeting sound pedagogical principles, and/or lacks detail.	The plan is introduced with an educational background including the school's context, clear educational focus areas, targeting sound pedagogical principles, but lacks detail and/or accuracy in places.	The plan is introduced with a detailed **educational background** including the school's context, clear educational focus areas, targeting sound pedagogical principles.

The e-learning vision is not concise nor inspiring and it makes no reference to learning with technology.	The e-learning vision is either not concise nor inspiring or it makes vague reference to learning with technology.	The e-learning vision is concise but either not inspiring or it does not make clear reference to learning with technology.	The **e-learning vision** is concise and inspiring and makes clear reference to learning with technology.
The e-learning plan lacks detail and has major omissions of important detail.	The e-learning plan outlines goals for the development of e- learning but it lacks detail or has more than one omission of an important detail.	The e-learning plan outlines clear goals for the development of e- learning in accordance with the vision and the school's educational focus. However, it lacks detail or has at least one omission of an important detail.	The **e-learning plan** is comprehensive and outlines clear goals for the development of e- learning in accordance with the vision and the school's educational focus.

The infrastructure and technology plan is in most cases not aligned to the e-learning planning and lacks detail.	The infrastructure and technology plan and/or the budget and/or task allocation of technology planning has some major omissions.	The infrastructure and technology plan is mostly aligned to the needs of the e-learning planning, with minor diversions or omissions in the budget and task allocation of technology planning.	The **infrastructure and technology plan** is fully aligned to the needs of the e-learning planning and the budget and task allocation of technology planning is outlined in detail.
The teacher professional learning strategy does not outline structures and conditions to support learning in way that integrates technology and pedagogy .	The teacher professional learning strategy outlines structures and conditions to support learning in a way that integrates technology and pedagogy but has some serious omissions.	The teacher professional learning strategy clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy with few serious omissions.	The **teacher professional learning strategy** is based on performance data and clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy.
The plan for implementation does not successfully identify tasks, persons responsible, priorities and timeframes. It is not aligned to the planning.	There is a plan for implementation, which identifies tasks, persons responsible, priorities and timeframes, but is poorly aligned to the planning, with many serious omissions.	There is a plan for implementation, which identifies tasks, persons responsible, priorities and timeframes, but is not fully aligned to the planning.	There is a clearly outlined **plan for implementation,** which identifies tasks, persons responsible, priorities and timeframes in full alignment with the planning.
Indicators for evaluation are very poorly described, not clear nor fully aligned to planning. measurable.	Indicators for evaluation are either not clear or fully aligned to planning	Clear indicators for evaluation have been identified for each item in the e-learning planning, but some are either missing or not clearly measurable.	Clear and measurable indicators for **evaluation** have been identified for each item in the e- learning planning.

8.1 Where Are We Now?

In this lesson you will ask yourself these questions relating to teaching and learning with technology in your institution:



- Where are we now?
- What are we doing?
- Why are we doing it?
- Who feels part of the process?

This is essentially a self-assessment of your current practice with regard to some essential conditions that should be in place when developing a school/college technology plan.

Learning Objectives

Participants who successfully complete the course will be able to:

- Identify the constraints and advantages of their school's context and the resulting potential to harness technology for learning;
- Evaluate the achievements and benefits of e-learning in the school.

8.1.1 Prepare

Your e-Potential

As we embark on this journey of developing a technology plan, take a moment to reflect on where you are now in terms of your basic potential to harness the full advantages of technology for teaching and learning.

Use this e-Potential Continuum Self-Assessment tool to mark your current status and keep a copy of this for your own reference in a year's time:

Microsoft Word document version (save it and complete this digital copy)

PDF document version (print it and complete the hard copy)

For more resources based on the e-Potential Continuum refer to the **Resources** section.

1. Join the group discussion for this lesson called *Where are we now*?
2. Share with them what you overall impression is of your and your school's e-potential. What do you think you need to do urgently in order to make a positive contribution to your school's School Technology Plan?

National Curriculum and Policy

Most schools and educational institutions are subject to national or regional policy guidelines. What we do in schools is supposed to articulate that policy. At times, policy is less flexible or inspirational than practitioners on the ground who are more exposed to new ideas and can try them out in the classroom. However, policy guidelines still provide basic parameters for practice. In some countries there is strong district support and guidelines come in a more practical and supportive way from district personnel.

In this course, when you see the PLAN icon it means you have a task to complete related to your School Technology Plan, which is your final assignment.

Gather the major policy and curriculum guideline documents that affect your and your school's curriculum implementation. Write a summary of one or two paragraphs summing up the major guidelines relating to technology integration in schools. Insert this in your final assignment, but also bear it in mind in every activity that you do in this course.

School Technology Plan Template (Microsoft Word version)

School Technology Plan Template (PDF version)

8.1.2 Study

Study these two outlines of a technology planning process before joining a group discussion about them. As you study them, make notes of the process and the strengths and weaknesses of that process:

Plan A

Plan B

1. Return to the lesson's group discussion that you joined in the previous activity.
2. Comment on the two plans and state, giving reasons, which process you prefer.
3. Itemise what you think are the most important priorities when developing a School Technology Plan.

In this course we will develop a **School Technology Plan** (note the Title Case of the name in order to avoid future confusion with technology planning). This will consist of two components:

1. e-Learning planning
    - This is a consideration of the range of pedagogical approaches and technology resources that can support them with a view to enhancing the quality of teaching and learning experiences through the integration of technology.
2. Technology planning
    - This is a consideration of the infrastructure and technology resources that will be required to help make the e-learning goals achievable. Of course, it will take more than just technology to make these e-learning goals achievable.

Open this **image which shows how this course is structured** in relation to the more preferable planning process of the two options which you recently discussed.

In order to establish **what you have**, you should conduct assessments of your e-learning and technology capabilities at your school. You have already briefly considered your e-potential.

Use the Victoria Department of Education and Early Childhood Development's **e- learning planning template** as a starter document for assessing your e-learning status, but feel free to edit it and design your own assessment and planning tools in order to take stock of your school's e-learning situation.

Microsoft Word document A4 format

PDF document format

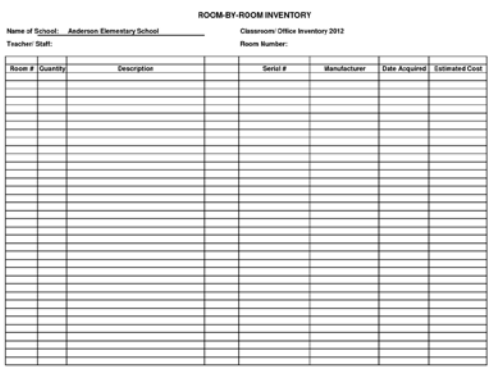
Microsoft Word document A3 format

If you are using one of the above documents, you would at this stage complete the **Current Status** column.

Similarly, you will find that consulting or creating your **inventory of technology** in the school will be a useful exercise at this time. Create your own document which should include basic information in tabular form, such as:

- technology description
- number available?
- where available?
- who accesses it?
- status – age and functionality, condition
- a brief overall summary of what is possible with current resources

Here are two image examples (click on an image for a larger version):


ROOM-BY-ROOM INVENTORY

Name of School: Anderson Elementary School
Classroom/ Office Inventory 2012
Teacher/ Staff:
Room Number:

Room #	Quantity	Description		Serial #	Manufacturer	Date Acquired	Estimated Cost


COMPUTER EQUIPMENT INVENTORY

Device Description	Location	Serial Number	Model Number	Specifics	Maintenance Vendor Number

Submit your current e-learning assessment and ICT inventory to your tutor for possible feedback.

8.1.3 Apply

Essential Conditions

ISTE identifies **14 essential conditions** for harnessing the potential of technology for learning. **(PDF version)**

1. Return to your group discussion for this lesson.
2. Discuss whether you think some conditions are more necessary to prioritise than others. Can you identify any additional essential conditions which may be more relevant to your own context? Share these with your group.

1. Open this **school assessment document** and assess your school's situation with regard to these essential conditions. If you would like to add elements to the document, first stop the write protection (Review Tab, no password required).
2. As you reflect on your school, make notes which you will use in your final reflection of this lesson (next activity). Focus on what the strengths and weaknesses are of your school's context. What kinds of actions are necessary to meet the more important conditions?

8.1.4 Reflect

Log in to your personal course blog and write a reflective post on your and your school's current context of readiness for technology integration.

Focus on what the strengths and weaknesses are of your school's context. What kinds of action are necessary to meet the more important conditions, which would allow your school to effectively harness the potential of technology for learning?

8.2 Leading with Pedagogy

In this lesson, we will identify a set of pedagogical principles, which will form the educational grounding to a School Technology Plan and all the decisions about technology acquisition and integration that derive from that.

Learning Objectives

Participants who successfully complete the lesson will be able to:

1. Identify the constraints and advantages of their school's context and the resulting potential to harness technology for learning;
2. Conduct planning for e-learning.

8.2.1 Prepare

1. You will prepare to collaborate in groups of three and divide the task of desktop research amongst yourselves. Your tutor will divide you into groups of three by creating smaller discussion groups and asking you to join these smaller discussion groups.
2. Your task is to identify a set of the most important educational principles that should provide the grounding for e-learning planning. Allocate the research of the resources below to each group member. Also discuss what further research you can do and allocate research tasks to each group member.
3. Agree on a date for feedback and discussion of your findings.

Resources

1. **Pedagogies of the 21st Century** – a paper presented by Gregory Whitby to the ACEL Conference in Sydney, Australia.(10 pages)
2. Read **Revisiting the Ten Conditions for Learning** which is written by Beate Planche for the Department of Education, Ontario, Canada. It reminds us of the considerations we need to take into account about how people learn.
3. Open the **script of the video** or watch the video of a New Zealand school principal talking about **Leading Pedagogical Change** and note the priority given to pedagogy when leading change in a school.
4. Open the **script of the video** or download the video case study of Balwyn High School, Victoria, Australia, on **Key Principles of Education** (106 Mb). Note the principles that are mentioned.
5. Case study overviews of school e-learning plans. As you do, so note the educational principles which each school regards as important.

- **Essendon Primary School**
- **Ringwood Secondary College**
- **Anderson Creek Primary School College**
- **Synopses of 12 Victorian government school case studies**

8.2.2 Study

Join the whole group discussion called *Leading with Pedagogy*.

1. Identify a collaboration space and set this up in your smaller group. Give your tutor access to this space as well.
2. Gather the most important pedagogical principles that each of you have derived from your desktop research.
3. Now discuss your pooled list of pedagogical principles and identify a list of no more than **six** of the most important principles on which to base technology integration decisions. Draw on your knowledge from experience and previous CCTI courses as well.
4. Post your group's list to the whole group online collaborative document that your tutor will have set up.

5. Discuss the accumulated principles in the online collaborative document.
    - Find common principles or strands of thought in your lists.
    - Has anything been missed?
    - Are these context sensitive principles?
    - How would you adapt them for your needs?

8.2.3 Apply

Open your School Technology Plan and write an outline of the key pedagogical principles your school admires, which will form your e-learning and technology planning.

Submit your draft to your tutor for feedback.

8.2.4 Reflect

At this stage you have established the educational context for your School Technology Plan.

Post a reflective comment in your blog in which you express your understanding and degree of satisfaction with the foundation work to your plan.

Have you been exposed to new ideas and, if so, how are they going to influence your planning and your practice?

8.3 Sharing a Vision

What you have done so far in this course has prepared you for drafting an e-learning vision from a fairly informed position. There are several things you should bear in mind about a vision:

1. Developing one is a process and not an event.
2. A vision is a process and not a product.
3. A vision which is not developed as a shared process with meaningful stakeholder input is not worth much.
4. Developing a vision is therefore an ongoing shared process.

The second in this two-part series of courses, Technology Leadership in Schools, will go into more depth about commitment to and ownership of a vision and its implementation. In this course, you will be advised to work, or at least consult, with a group of stakeholders in your school from this point onwards. The processes of e-learning/technology planning and implementing change leadership are interrelated. It might be best to implement an integrated process after you have completed these courses, rather than trying to juggle course requirements with an actual process in your school. The process is critical to progress in your school and if you cannot give it full attention you may jeopardise it to some extent.

Learning Objective

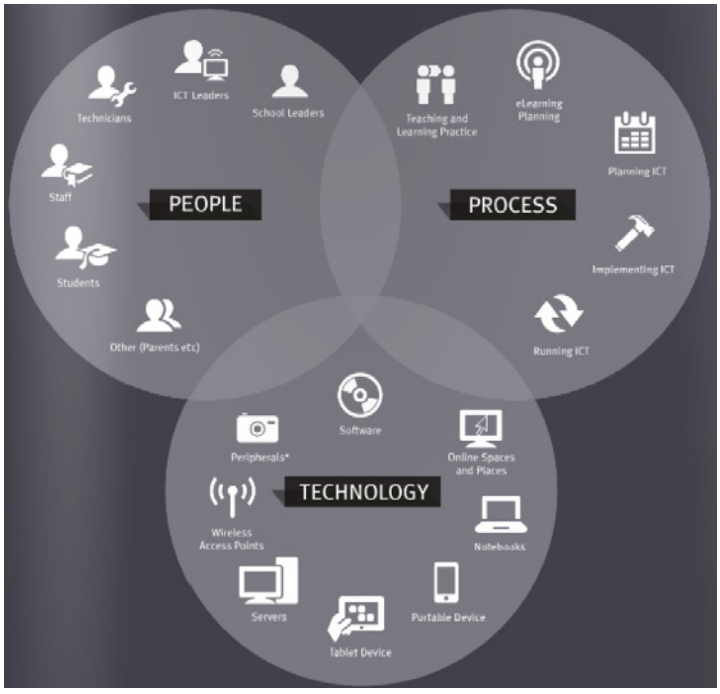
Participants who successfully complete the lesson will be able to:

- Analyse stakeholders and interact with each individual/group in a way that fosters ownership of an e-learning vision.

8.3.1 Prepare

Stakeholders

There are three important elements in effective technology integration. Thus far we have given attention to the process. In a later lesson we will address *technology* issues. If we are to address the vision in a meaningful way, we will have to identify the people who we would like to include, the stakeholders.



Source :Source: EdustarSchoolCTPlanning, http://issuu.com/deecd_vic/docs/edustar_school_ict_planning

It is optional whether you are going to address this in a real-world scenario or first participate within this course before applying your knowledge and skills to the real-world implementation of this process. Whichever option you select, use this opportunity to open your School Technology Plan and record the various stakeholders who will play an important role in taking ownership of the school's Technology Plan.

Shared Vision

A vision is not something you have to fully develop at this stage. A vision is something you will collectively develop with your staff and other stakeholders as you move together on the journey with technology. It is something you and your stakeholders will keep communicating about. As you work together you will grow the capacity to see a clearer and ever-expanding vision.

Look at some examples of school e-learning visions:

- **Cheltenham Secondary College**
- **Bendigo Secondary College**
- **Middle Park Primary School**
- **Malvern Central School**
- **Sandringham East Primary School**

8.3.2 Study

Before you formulate your vision, here are some questions to consider:

- How will learning and teaching change, and how will technology support this change?
- What type of learning environments will you see?
- How will learning take place?
- What will your learners' expectations of learning be?
- What will your learners know, value and be able to do when they leave your school?
- Does your e-learning vision stem from a School Strategic Plan, and does it create a picture of what technology can enable in your school?
- Is the e-learning vision a strong and succinct statement, which is easily understood by all members of the school community?
- How will your e-learning vision support a whole-school approach to the use of ICT?

Source: (Suggestions from Archdiocese of Canberra and Goulburn Education Office, http://www.ceocg.catholic.edu.au/Pages/Welcome.aspx accessed July 2014)

Every journey starts somewhere and so does every vision. Your school's collective vision will start here with you and with time it will become clearer and more all-inclusive.

Use the checklist to assess your vision statement:

Criteria	√
Speaks about the future of my school.	
Is concise, yet memorable (a short sentence that is easy to remember)	
Uses simple language my stakeholders will understand	
Paints a compelling picture of my school and community in the future	
Alludes to how technology may contribute to enabling improvement	

Developing a Vision Microsoft Word version)

Developing a Vision (PDF version)

Shared Vision group discussion and share your vision with the group.

8.3.3 Apply

Open your School Technology Plan and insert the final draft of your vision, bearing in mind you may have to work with your stakeholders in developing ownership of such a vision, if you have not already done so.

8.3.4 Reflect

Log in to your personal course blog and post reflective comments about the process of being visionary, which you experienced in this lesson.

Paint more detail of the picture which your concise vision statement represents. Include your vision statement in the post.

8.4 e-Learning Planning

The first step of e-learning planning is to identify where you are in relation to elements of e-learning practice. In this lesson you will be introduced to the e-learning matrix, which will help you to recognise your current strengths and areas for improvement in areas such as:

- e-learning leadership;
- teaching, learning and assessment;
- professional learning;
- learning spaces and communities.

Lesson objectives

Once you have completed this lesson you will be able to:

- Identify the constraints and advantages of your school's context and the resulting potential to harness technology for learning;
- Analyse stakeholders and interact with each individual/group in a way that fosters ownership of the vision;
- Conduct planning for e-learning.

8.4.1 Prepare

In this lesson we will delve more deeply into e-learning planning.

Watch this **video of staff at Lilydale Heights College** talking about e-learning planning. What are important contributing factors to e-learning planning?

Review these e-learning planning summaries, which you accessed during Lesson 2. Extract the key ideas you think will be most applicable or adaptable to your school's context. If we can assume these are schools that have successfully implemented an e-learning plan, what are the key elements of their success?

- **Essendon Primary School**
- **Ringwood Secondary College**
- **Anderson Creek Primary School College**
- **Synopses of 12 Victorian government school case studies**

1. Join the *e-Learning Planning* discussion group.
2. Share your views on what the key elements of e-learning success are. Base this on your reading and your personal experience.
3. What advice might you give the principal of Ashhurst School after hearing what he has to say in this video?

   Video: **e-Learning Leadership at Ashhurst School** (1:43)
4. Share what you feel might be the priority areas of e-learning planning in your school.

8.4.2 Study

You will not know where to go on a journey if you do not know where you are at the moment.

You have already done quite a bit of reflecting on your current status. You remember briefly recording your current status in **Lesson 1** when you first opened and saved the e-learning planning template. In this activity you will use a planning matrix developed by the Victoria Department of Education and Early Childhood Learning, Australia, to reflect deeply on your school's e-learning activity and to assess what your strengths are and what areas need prioritisation and development.

The matrix is broadly constructed with five main elements, each sub-divided into smaller parts, Read the one- page **Overview of the e-learning planning matrix**.

Each of these elements is described in detail in the matrix, with four developmental levels, ranging from Foundation to Transformative.

1. Take some time to read each element's description and mark the cell that best describes the status of that element at your school.
   - **eLearning_Planning_Matrix_A4_version** (Microsoft Word version)
   - **eLearning_Planning_Matrix_A3_version** (Microsoft Word version)
   - **eLearning_Planning_Matrix** (PDF version)

Source: **ICT School Planning**

If you mark a cell in one of the right-hand columns this suggests your school has made good progress in that area. However, if you mark a cell in the Foundation column it would suggest your school needs to develop in that area and you may want to prioritise that element for development in your e-learning plan. Read the cells to the right, in the same row, to get an idea of how development of that element might take place over time.

Return to the **e-learning planning template** you opened in Lesson 1. Update the Current Status column, if necessary. Base this on the deeper analysis you have just done.

Optional reading: **The complete e-Learning Planning Guide**.

8.4.3 Apply

Now that you have thoroughly assessed your current status, you are in a position to identify areas of your school's e-learning plan that require prioritisation. If you need guiding questions to assist your thinking, consult pp17-27 of the **e-Learning Planning Guide**.

Review these examples of completed e-learning planning templates:

- **Cheltenham Secondary College**
- **Bendigo Secondary College**
- **Middle Park Primary School**
- **Malvern Central School**
- **Sandringham East Primary School**

1. Open the **e-learning planning template** you have been working on so far and complete the remaining columns. NOTE: You may edit this template, add items or remove items according to your own context and needs.
2. Include a detailed outline of your e-learning planning in your **School Technology Plan.** Reference to technology resources can be placed in draft form under the Infrastructure and Technology section of the School Technology Plan. Reference to Success Measure (last column) can be placed under the Evaluation section of the School Technology Plan.
3. Send the School Technology Plan to your tutor for feedback. Be sure to save the file with a file name that starts with your own name. e.g. John_Umaga_elearning_ planning

Rubric for feedback

0-2	3-4	5-6	7-8
The e-learning vision is not inspiring and it makes no reference to learning with technology.	The e-learning vision is either concise or not concise or inspiring or it makes vague reference to learning with technology.	The e-learning vision is concise but either not inspiring or it does not make clear reference to learning with technology.	The **e-learning vision** is concise and inspiring and makes clear reference to learning with technology.

0-4	5-8	9-12	13-16
The e-learning plan lacks detail and has major omissions of important detail.	The e-learning plan outlines goals for the development of e- learning but it lacks detail or has more than one omission of an important detail.	The e-learning plan outlines clear goals for the development of e- learning in accordance with the vision and the school's educational focus. However, it lacks detail or has at least one omission of an important detail.	The **e-learning plan** is comprehensive and outlines clear goals for the development of e-learning in accordance with the vision and the school's educational focus.

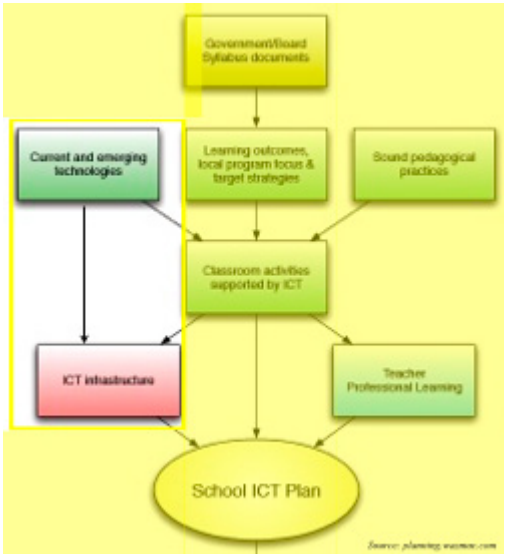
8.4.4 Reflect

Log in to your personal course blog and post a reflective comment about your e- learning planning.

Do you feel you have a clearer idea of what is required for your school to move along the road towards achieving your vision?

What is your personal role in the journey going to be along this pathway?

8.5 Technology Planning



The infrastructure and technology needs of your school are determined by the e-learning plan and its associated resource requirements. In this way you ensure you know the exact purpose of the expensive infrastructure and technology acquisitions and you can justify the expense to your stakeholders.

In this lesson we extract the infrastructure and technology resource requirements from the e- learning planning document and use a task tracking document to identify the tasks and responsibilities for the implementation of both the e-learning and technology planning.

Learning objective

Once you have successfully completed the lesson you will be able to:

- Conduct technology planning.

8.5.1 Prepare

Learning, Teaching Assessment and Reporting	**Learning & Teaching** Achieve equity of access for all teachers and students to eLearning tools	eLearning is mainly used to support existing teaching and learning activities	ICT embedded across the curriculum to enhance learning and teaching	Provide appropriate AV tools (ie Data Projectors, Smartboards) which allow for the interaction with content	Cameras for each class Video cameras easily accessible across each year level Increase the number of Smartboards across the school	eLearning Team / Specialist Technician (TS)	2009 and ongoing	Each class to have high level of access to eLearning tools and resources, network and online services All staff and students have access appropriate AV tools and resources when required Teachers and students are able to showcase student work
	Assessment & Reporting	eLearning is used for assessment in some levels	eLearning is routinely used to enhance assessment and reporting	Ensure access to the network, online services (Ultranet) and the Internet for all staff.	Budget to be allocated	Specialist Technician (TS)	2010 -2011	Range of assessment and reporting strategies online (eg rubric)

Your infrastructure and technology needs will have been determined by the e-learning planning. If you review the case study e-learning plans you will notice some items in the Resources columns refer to infrastructure and/or technology resource requirements. For example, see the columns highlighted below in the Middle Park High School e-learning plan.

Review

Review the case studies of school e-learning plans and identify the infrastructure and technology needs.

- Cheltenham Secondary College
- Bendigo Secondary College
- Middle Park Primary School
- Malvern Central School
- Sandringham East Primary School

1. Join the lesson discussion group called *Technology planning*.
2. Share your views on the way in which infrastructure and technology planning is determined in these example case studies. Do you think each is an efficient way of planning? Can you identify pitfalls in each approach?

8.5.2 Study

Based on your audit in Lesson 1, you already know where you are in terms of technology resources.

1. Return to your e-learning planning template and study each entry you made. Ensure you have correctly identified the infrastructure and resource needs in your planning. If necessary, update your plan.
2. Research the costs of acquiring the infrastructure and technology you have identified.
3. Design a spreadsheet in which you plan a budget for infrastructure and technology acquisitions and maintenance for a period of the next three years.
   Here is a **Technology Budget** you may like to adapt for your use.

4. Insert a detailed outline of the infrastructure and technology planning, including the budget, in your **School Technology Plan**.
5. Share your budget with your colleagues by uploading it to to the document area of the *Technology Planning* group discussion.

8.5.3 Apply

Use this opportunity to think about implementation of both the e-learning and infrastructure planning. Use this task-tracker spreadsheet to identify the tasks, responsible people and priority levels.

- **Task Tracker spreadsheet** (XLSX format)
- **Task Tracker Example**
- **Task Tracker Guide**

Source: **www.wazmac.com**

1. Insert an outline of these tracked tasks in your School Technology Plan under the Implementation section.
2. Share your School Technology Plan with your peers by uploading it to the document folder of the *Technology Planning* discussion group.

3. Your tutor will assign you to groups of three. Use the small group areas to give feedback to your two group peers using the rubrics as your guideline. You may comment on both the e-learning and technology planning.

Assessment of Technology Planning

0-1	2-4	5-7	8-10
The infrastructure and technology plan is, in most cases, not aligned to the e-learning planning and lacks detail.	The infrastructure and technology plan and/or the budget and/or task allocation of technology planning has some major omissions.	The infrastructure and technology plan is mostly aligned to the needs of the e-learning planning, with minor diversions or omissions in the budget and task allocation of technology planning.	The **infrastructure and technology plan** is fully aligned to the needs of the e-learning planning and the budget and task allocation of technology planning is outlined in detail.

8.5.4 Reflect

Log in to your personal course blog and post a comment reflecting on technology planning and its place in the general planning cycle.

Do you think it is right that decisions about technology and infrastructure are driven by e-leaning needs?

Do you have an alternative view of the place of technology in school technology plan processes?

8.6 Teacher Professional Learning

The fact that teacher professional learning comes so late in the process does not in any way imply it is less important than the other steps of the planning process. It is critical and its position in the process can be ascribed to the fact that decisions about professional learning are subject to decisions about e-learning and technology planning, which in turn reveal specific professional learning needs.

Learning Objective

By the end of this lesson you will be able to:

- Identify the constraints and advantages of your school's context and the resulting potential to harness technology for learning;
- Analyse stakeholders and interact with each individual/group in a way that fosters ownership of the vision;
- Write a professional learning strategy.

8.6.1 Prepare

> *"Professional learning is not just about finding out about the ICT tools and developing competencies in using them. It focuses on being able to transfer new skills to changed pedagogical practice and improvements in the classroom."*

(Peter Cole, Professional Development: a Great Way to Avoid Change, IARTV Seminar Series, December 2004, No. 140, p. 4)

1. Join the discussion group for this lesson called *Teacher Professional Learning.*
2. Share the steps your school currently takes to provide teacher professional learning for technology integration.
3. Comment on the strategies shared by your peers. How much attention is given to pedagogical approaches and the evaluation of the impact of professional learning in the classroom?
4. What are the current constraints of teacher professional learning for technology integration?
5. Suggest ways in which current teacher professional learning can be improved.

In your e-learning and technology planning and during this course you will have identified several possible areas which will require staff support and a professional learning strategy.

1. List the identified needs for teacher professional learning that have emerged from your planning so far.
2. Record these learning needs in draft form in your School Technology Plan. You will return to these in the Apply part of the lesson.

8.6.2 Study

Teacher professional learning may seem to refer only to staff capacity to implement technology integration, but a more holistic view will include knowledge of how schools plan, implement and evaluate effective technology professional learning, especially with regard to how it enhances the quality of teaching and learning in the school. This will include:

- developing structures and conditions to support teachers to improve their technology capabilities;
- supporting teachers to effectively integrate technology into learning and teaching;
- supporting teachers through the process of change;
- developing collaborative, reflective, inquiry-based technology professional learning models and cultures aligned to the school's vision and goals;
- planning and implementing effective professional learning focused on, and embedded in, teachers' technology practice;
- using whole school performance data, especially the ePotential Teacher ICT Capabilities Survey (which we used in Lesson 1), which helps identify the ICT professional learning needs.

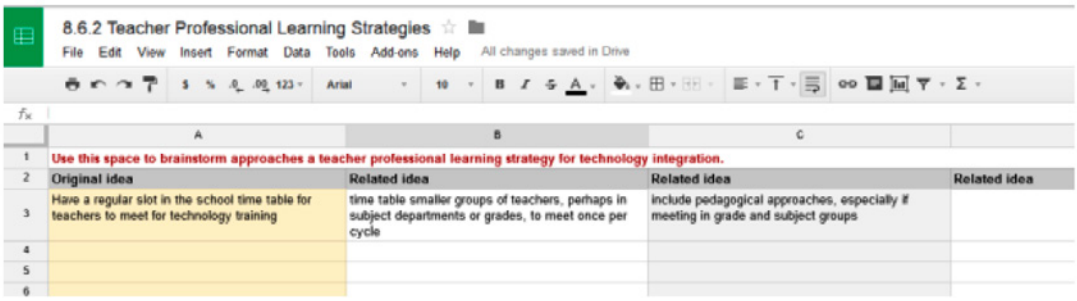
Source: e-Learning Planning Guide, **http://epotential.education.vic.gov.au/**

These points listed above are six considerations you will need to refer to in your School Technology Plan.

1. Refer to Page 21 of the Victoria DEECD **e-Learning Planning Guide** for further assistance with key questions you could ask.
2. Read the **Essendon Case Study** to see how they included the professional learning considerations into their e- learning plan.
3. Read the summary of advice (given in the paragraph on **ICT Professional Learning**) from Victoria DEECD e- leaning plans.
4. Go to the online collaborative document your tutor has created for you and brainstorm possible strategies for teacher professional learning in technology learning.

   - Use ideas of your peers as a springboard for further ideas.
   - Record main ideas in the first column and record related ideas in the next three columns.
   - Try to take into account all six considerations mentioned above.

The online collaborative document will look something like this:



8.6.3 Apply

Return to your draft **School Technology Plan** and complete the section of Teacher Professional Learning, bearing in mind the six considerations and other key questions and ideas you have been exposed to during this lesson.

1. Use this last opportunity to receive feedback from your peers. Join the same group of three you used previously in the course to give peer feedback.
2. Post your updated School Technology Plan, clearly indicating in the filename that this is the updated version.
3. Use the assessment rubric to inform your feedback.

0-1	2-4	5-7	8-10
The teacher professional learning strategy does not outline structures and conditions to support learning in a way that integrates technology and pedagogy .	The teacher professional learning strategy outlines structures and conditions to support learning in a way that integrates technology and pedagogy but with some serious omissions.	The teacher professional learning strategy clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy with few serious omissions.	The **teacher professional learning strategy** is based on performance data and clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy.

8.6.4 Reflect

This is your final opportunity to reflect on this course as a whole. Log in to your personal course blog and post a reflective, yet critical, comment on what you have learned about planning for technology integration in the school.

If you have followed this process with stakeholders in your school, share your experience of the real- world process.

If you plan to implement this process in your school, how will you go about it? What will you do differently in your own school's context?

8.7 Final Assignment

What to do

Submit a complete **school technology plan** which includes reference to:

1. The educational policy context of the school, including the focus areas of learning in the school
2. Clearly identified overarching pedagogical principles
3. Vision for e-learning

4. Curriculum technology integration (e-learning) plan
5. Technology and infrastructure plan
6. Teacher professional learning
7. Implementation
8. Evaluation
9. Acknowledgement of stakeholders

You are invited to use or adapt these templates for your assignment.

School Technology Plan Template (Microsoft Word version)

School Technology Plan Template (PDF version)

You may at this stage decide to use a freshly designed template. This is acceptable as long as you include all the required components.

Assessment rubric

Level 1	Level 2	Level 3	Level 4
Fewer than six of the required components of the final school plan are referenced.	At least six of the required components of the final school plan are referred to.	At least eight of the required components of the final school plan are referred to.	All nine **required components** of the final school plan are referred to.
The educational background is missing more than one of these: school's context, clear educational focus areas, targeting sound pedagogical principles, and lacks detail.	The educational background is missing one of these: school's context, clear educational focus areas, targeting sound pedagogical principles, and/or lacks detail.	The plan is introduced with an educational background including the school's context, clear educational focus areas, targeting sound pedagogical principles, but lacks detail and/or accuracy in places.	The plan is introduced with a detailed **educational background** including the school's context, clear educational focus areas, targeting sound pedagogical principles.
The e-learning vision is not concise nor inspiring and it makes no reference to learning with technology.	The e-learning vision is either not concise nor inspiring or it makes vague reference to learning with technology.	The e-learning vision is concise but either not inspiring or it does not make clear reference to learning with technology.	The **e-learning vision** is concise and inspiring and makes clear reference to learning with technology.

The e-learning plan lacks detail and has major omissions of important details.	The e-learning plan outlines goals for the development of e- learning but it lacks detail or has more than one omission of an important detail.	The e-learning plan outlines clear goals for the development of e- learning in accordance with the vision and the school's educational focus. However, it lacks detail or has at least one omission of an important detail.	The **e-learning plan** is comprehensive and outlines clear goals for the development of e- learning in accordance with the vision and the school's educational focus.
The infrastructure and technology plan is in most cases not aligned to the e-learning planning and lacks detail.	The infrastructure and technology plan and/or the budget and/or task allocation of technology planning has some major omissions.	The infrastructure and technology plan is mostly aligned to the needs of the e-learning planning, with minor diversions or omissions in the budget and task allocation of technology planning.	The **infrastructure and technology plan** is fully aligned to the needs of the e-learning planning and the budget and task allocation of technology planning is outlined in detail.
The teacher professional learning strategy does not outline structures and conditions to support learning in a way that integrates technology and pedagogy .	The teacher professional learning strategy outlines structures and conditions to support learning in a way that integrates technology and pedagogy but has some serious omissions.	The teacher professional learning strategy clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy with few serious omissions.	The **teacher professional learning strategy** is based on performance data and clearly outlines structures and conditions to support learning in a way that integrates technology and pedagogy.
The plan for implementation does not successfully identify tasks, persons responsible, priorities and timeframes. It is not aligned to the planning.	There is a plan for implementation, which identifies tasks, persons responsible, priorities and timeframes, but is poorly aligned to the planning, with many serious omissions.	There is a plan for implementation, which identifies tasks, persons responsible, priorities and timeframes, but is not fully aligned to the planning.	There is a clearly outlined **plan for implementation**, which identifies tasks, persons responsible, priorities and timeframes in full alignment with the planning.
Indicators for evaluation are very poorly described, not clear nor fully aligned to planning. measurable.	Indicators for evaluation are either not clear or fully aligned to planning	Clear indicators for evaluation have been identified for each item in the e-learning planning, but some are either missing or not clearly measurable.	Clear and measurable indicators for **evaluation** have been identified for each item in the e- learning planning.

What to Submit

1. Submit one file which contains your complete School Technology Plan.
2. The file you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_SVG_Final_Assignment
3. Use the submission facility at the bottom of this page to submit your assignment. Your tutor will mark the activity complete once the assignment has been received and downloaded.

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SchoolNet South Africa

Commonwealth Certificate for Teacher ICT Integration

Preparing Teachers for ICT Integration into Teaching and Learning

9 CHANGE LEADERSHIP FOR TECHNOLOGY INTEGRATION

9 Change Leadership for Technology Integration

This course proceeds or should be done concurrently with the "*Planning for Technology Integration*" course during which the initial planning for e-learning and technology in the school is completed. During this course we strategise around several key elements of change leadership, such as capacity building and the cultures of learning and evaluation, which will help to sustain the change and continue growing a sense of ownership of the e-learning vision. The course also addresses ongoing implementation issues regarding support and maintenance and facing challenges adaptively..

Why Change Leadership?

When new and innovative approaches are adopted in a school e-learning plan, new technologies may be identified as resources. Both represent change/transformation in the school. Implementing a School Technology Plan requires management of processes as well as people and technology. If process and technology are changing in a school, stakeholders (the people concerned) need to feel ownership of the direction of change if educational transformation is to succeed. Therefore, being a technology leader in the school requires an understanding of the process of change leadership, because ultimately it's all about the people, especially the teachers and learners.

Learning Objectives

Participants who successfully complete the course will be able to:

1. Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
2. Drive the process of building a shared vision in the school;
3. Describe the focus areas of the change process;
4. Plan and implement a capacity building process;
5. Develop a communication strategy to build a sense of ownership of the vision for e-learning in the school;
6. Describe how to develop and exploit a culture of learning in the school;
7. Describe a strategy for facing implementation challenges;
8. Develop a culture of evaluation in the school;
9. Evaluate the achievements and benefits of e-learning in the school.

Setting the Scene

Imagine

You are a young principal, newly appointed to a school, and e-learning runs in your veins, but the staff know nothing about that. Perhaps you are a well-established principal and you have the opportunity to establish a new e-learning policy through a departmental or private funding initiative. You could even be a member of the school management team who has started to explore ideas about e-learning as a way to enhance teaching and learning at the school.

Your challenge is to start a change process that will never end, to establish processes so you and your colleagues will be able to keep learning from events that unfold and make your school a growing and dynamic e-learning organisation.

Watch this video overview of transformational leadership. Many ideas in this video will emerge in the lessons that follow. In an opening entry in your personal course blog, note the key ideas the video is putting forward and comment on whether you agree with them or not and why.

Video: **School Leadership – Vision and Values** (4:36)

Strategise

When you see this icon you will be required to update your Technology Leadership Action Plan or Report. This is explained in the next section on the Assignment.

Assignment

By the end of this course you will be required to submit a complete **Technology Leadership Action Plan** (if you plan to implement your learning after the course). This should report fully on the process of change leadership strategising as you implemented your school's technology plan before and/or during this course.

Alternatively, you are required to submit a **Technology Leadership Report** (if you implement your learning during this course). This should represent in detail how you intend to lead the process of implementing the School Technology Plan (Course 8: Planning for Technology Integration) after the course.

This template can form the basis of your assignment submission, but you may add elements to it or present it in another format as long as you include the minimum requirements of the assignment.

Assessment Rubric

Level 1	Level 2	Level 3	Level 4
Your vision statement is not concise or inspiring and does not refer to a future with e-learning.	Your vision statement is not concise, but positive and paints only a partial picture of a future with e-learning.	Your vision statement is fairly concise, positive and paints a picture of a future with e-learning.	Your **vision statement** is concise, inspiring and paints a picture of a future with e-learning.
Your plan for building ownership of the vision and commitment to the implementation of e- learning is unclear and incomplete.	Your plan for building ownership of the vision and commitment to the implementation of e- learning at the school has one or two significant omissions.	You have a complete but predictable plan for building ownership of the vision and commitment to the implementation of e- learning at the school.	You have a detailed and innovative plan for building **ownership** of the vision and **commitment** to the implementation of e-learning at the school.
You have little or no understanding of leadership in your school.	Your understanding of leadership is not entirely clear but you have a few ideas on how to distribute leadership in the school.	Your understanding of distributed leadership has one or two inaccuracies but you have an idea how you grow this leadership in your school.	Your **understanding of leadership** is that it is distributed and you indicate clearly how you can achieve this approach in your school.
The plans for or report on capacity building describe a process that is poorly conceived and not sustainable.	The plans for or report on capacity building describe a process that is impractical, not collective or not ongoing.	The plans for or report on capacity building describe a process that is practical, collective and ongoing, but with the omission of at least one important detail.	The **plans for or report on capacity building** describe in detail a practical process that is collective and ongoing.
Your plan for developing a culture of learning in the school is confusing and incomplete. It does not take any contributing factors into account.	Your plan for developing a culture of learning in the school is incomplete. It takes some contributing factors into account.	Your plan for developing a culture of learning in the school is clear and complete. It takes all contributing factors into account.	Your plan for developing a **culture of learning** in the school is detailed and innovative. It takes all contributing factors into account.
Your plans for analysing and addressing adaptive challenges are unclear and incomplete and evaluation measures are either missing or very unclear.	Your plans for analysing and addressing adaptive challenges are incomplete and /or evaluation measures are incomplete.	You have recorded plans for analysing and addressing adaptive challenges, including how to embrace resistance. You have made reference to how you will evaluate your progress.	You have recorded detailed plans for **analysing and addressing adaptive challenges,** including how to embrace resistance. You have clearly described how you will make these plans part of a cyclic process of strategising.

Your communication plan does not take the needs of your community into account. It has many significant omissions. It provides no opportunity for dialogue between stakeholders.	Your communication plan is generic. It includes basic information but has more than one significant omission. It provides little opportunity for dialogue between all stakeholders in conventional ways.	Your communication plan is tailored to the needs of your community of stakeholders. It is comprehensive in its information and coverage, with at least one significant omission. It provides for opportunity for dialogue between all stakeholders in conventional ways.	Your **communication plan** is clearly tailored to the needs of your community of stakeholders. It is innovative and it is comprehensive in its information and coverage. It provides for effective and easy dialogue between all stakeholders in a creative way.
Your plan to develop a culture of evaluation in the school is confusing and incomplete. Your plan for evaluating your technology leadership and school technology plans is also unclear and incomplete.	Your plan to develop a culture of evaluation in the school is incomplete. Your plan for evaluating your technology leadership and school technology plans have many significant omissions.	Your plan to develop a culture of evaluation in the school is complete. Your plan for evaluating your technology leadership and school technology plans, has a few significant omissions.	Your plan to develop a **culture of evaluation** in the school is detailed and innovative. You have also outlined detailed and complete plans for evaluating your technology leadership and school technology plans.
Collectively you have made little or no clear reference to how the various factors influencing change leadership for technology integration are interrelated.	Collectively you have made only one or two reference to how the various factors influencing change leadership for technology integration are interrelated.	Collectively you have made many references to how the various factors influencing change leadership for technology integration are interrelated.	Collectively you have consistently and clearly shown how the various factors influencing change leadership for technology integration are **interrelated.**

9.1 Visionary Leadership

Think of the situation you find in your school now, or may soon experience with the implementation of an e-learning strategy. Ask yourself the question: "Why is this the right thing to do?". The answer to this question is very important because it is likely things may change in your school and its learning environments. Change threatens some people, maybe even you at times. In answering this question you will have the **moral purpose** for your involvement in this project. You will understand what it is you are trying to improve in your school and its community and you can communicate this with stakeholders.

Are you the kind of visionary leader who drives an e-learning strategy in your school? What kind of leader do you have to be? Is all the responsibility weighing heavily on your shoulders? In this lesson you will be exposed to some important views of leadership that may help you to better understand your role.

Learning Objectives

When you successfully complete the lesson you will be able to:

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
- Drive the process of building a shared vision in the school;
- Evaluate the achievements and benefits of e-learning in the school.

9.1.1 Prepare

Read **Key Leadership Qualities** and watch the short video on that page as well. Make a note of the qualities mentioned in the article. Why do you think they are key? Save your thoughts for a discussion later in this lesson activity.

Moral Purpose – Knowing Why to Commit to Change

Much of the learning in this course is influenced by the research and presentation of Michael Fullan's change leadership workshops which are hosted online by the **Microsoft Innovative Schools Toolkit.**

1. Download and watch the 3-minute video on Moral Imperative. As you watch, reflect on why you think it is important to have a moral purpose associated with a change process. **http://www.is-toolkit.com/workshop/fullanworkshops/CH11.wmv** (74Mb)
2. NOTE: As with all activities in this course, you may like to discuss them with stakeholders in your school before participating in your course group interactions.

3. Discuss these three questions with your group:
   - What would you like to see improve at your school? Be specific.
   - What can you do (or make happen) to conquer challenges relating to the academic performance, life-long learning skills and career prospects of students in your school?
   - If teachers and other stakeholders ask you **why** they are being asked to commit to the effort associated with the e-learning strategy, how could you respond to them? Is it an inspirational response?

9.1.2 Study

Read **7 Habits of Highly Effective Tech-leading Principals**. Consider, if you were to adopt these, how each habit can contribute to a school and community-wide sustainable process of transformation with e-learning in your school.

Post a critical response to this article in your personal course blog. Does it apply to your context? Do you think these are vital habits? Are there further habits you feel should be included?

Distributed leadership

The notion of "technology champions" or "leading lights" in technology integration is widely published and has led many school to appoint technology co-ordinators or assign all the "technology- related" issues to a technology teacher at the school. The trouble is people move on, and when these supporting pillars of the process are the removed, the process grinds to a halt. Much the same can be said for the leadership capabilities of a school's principal and management team. The idea of a "visionary leader" does not suggest that one or two leaders must have all the vision and drive, because when they leave, their energy goes with them and "the lights go out".

A sustainable leadership is one that can be sustained and has a very wide-spread base.

Watch this video on Distributed Leadership. Develop an understanding of what it involved by noting the key elements of leadership mentioned. What is the nature of the environment in which this kind of leadership is practised? What are the benefits of this approach?

Video: **Distributed Leadership in Education** (4:39)

Watch the next video OR read this overview of the Pennsylvania School District **Distributed Leadership** project (Source: **Penn Center for Educational Leadership**). Does it define distributed leadership differently from your current understanding? What new perspective does it offer you?

Video: **Leadership is … distributed** (10:15)

9.1.3 Apply

Your tutor will set up a blank mind map page for you and send you a message with the link to that web page. Collaborate to construct a mind map that outlines all the elements and related concepts for visionary (and distributed) leadership.

Shared vision

During the *Planning for Technology Integration* course you addressed the topic of a shared vision for e-learning so you could proceed with the process of developing a School Technology Plan. At that stage you were alerted to the fact that a vision is a shared process rather than a product. If you are doing the two courses simultaneously, these two activities will overlap at this stage. If you are doing them consecutively you will already have a draft, but you may now wish to start the participatory process with stakeholders at your school. This is the opportunity to do so.

Watch the video on how to write an inspirational vision statement and then review your vision statement.

Video: **How to write a vision statement that inspires** (4:36)

When you see this icon it will mean you have a task related to updating your Technology Leadership Action Plan or Report.

1. Work with your stakeholders and develop a vision statement everyone can understand and potentially commit to. Everyone must feel they have played a significant part in its formulation.
2. Identify at least two clearly measurable performance indicators that, when observed, will be an indication the vision is in place and being implemented.

   You may like to watch the video **How to develop key performance indicators** (4:03)

9.1.4 Reflect

Log in to your personal course blog and post a reflection on your understanding of the value of distributed leadership and what action would be necessary to make this possible in your school.

Then, write a paragraph or two expanding on your school vision, painting a fuller picture of what you and the stakeholders of your school envisage.

9.2 Understanding the Change Process

In this lesson you will deepen your understanding of the change process and leadership in a changing school environment. You will be introduced to Michael Fullan's eight change forces, many of which we will address in more detail in later lessons.

Change is like an engine that requires fuel. A car will splutter to a dead stop if it has no fuel. Similarly, change will not successfully take place if it does not have that fuel. The fuel of sustainable change is **commitment** and **ownership** by all the stakeholders in the system (the school, community, district and nation).

Learning Objective

Participants who successfully complete the course will be able to:

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape.

9.2.1 Prepare

> *"**Change Knowledge:** Understanding and insight about the process of change and the key drivers that make for successful change in practice."*
>
> Source: Fullan, M, Learning to Lead Change, Core Concepts

Read Fullan's **Core Concepts** and/or download and watch the two videos below in which Michael Fullan explains the eight change knowledge drivers. Many of the related concepts will be covered in the course. Note any new ideas or concepts that emerge from this reading/viewing. Take special note of the concept of "understanding the dynamics of change". How do these concepts translate into practices you can implement in your context?

- Video: **Foundation Drivers** (31 Mb)
- Video: **Enabling drivers** (51Mb)

1. Join the discussion group for this lesson called *Understanding the Change Process*.
2. Share with your group your interpretation of change knowledge drivers generally. What does it mean to your practice?
3. Make special reference to how your understanding of the change process has been deepened.

Complete the quiz at the bottom of the page before continuing to the next topic.

9.2.2 Study

> *"**Sustainability** is the capacity of the system to engage in the complexities of continuous consistent improvement with values of deep human purpose."*
>
> Fullan, Leadership and Sustainability: System Thinkers in Action,2005

One of the most important ways of sustaining effort is to build **commitment** and **ownership.** They feed off each other; either one can strengthen because the other has developed.

Scenario

School X is experiencing a problem because the technology is not being integrated. The principal is very nervous that parents will complain that expensive resources are not being used. At the technology committee meeting the general consensus is that many teachers at the school are not committed and are negative about technology for teaching and learning. You are part of a team of 4 change leadership consultants and your team concludes that the school has made inadequate provision for building commitment and developing a sense of ownership of its vision. You will prepare a 4 slide presentation with recommendations based on the four questions below. Observe the rule of having no more than 6 point per slide and no more than 6 word per point. Avoid "Death by PowerPoint" – be creative.

1. When is a good opportunity to build commitment?
2. How do we build and sustain commitment?
3. How do we create a sense of ownership?
4. How do we develop a shared vision?

Resources:

- PDF: **Building and sustaining commitment**
- Video: **Creating the shared vision** – Swinton Primary

Your tutor will allocate one peer to give you feedback on this work based on the rubric below. Submit your presentation to your tutor, who will re-direct it. Ensure that your presentation file is saved with a file name that starts with your own full name.

Assessment

Level 1	Level 2	Level 3	Level 4
The recommendations are confusing and inaccurate.	The recommendations are not accurate nor complete. It will not be possible for the school to successfully use these as a set of guidelines.	The recommendations are accurate but either not concise or complete. It will be possible for the school to use these as a set of guidelines.	The **recommendations** are concise, accurate and complete. It will be possible for the school to successfully use these as a set of guidelines.
The presentation is uninspiring and has many technical errors.	The presentation is not creative, tends to overuse bullet points and makes use of text media only.	The presentation is creative, avoids uninspiring bullet points and makes use of one type of media.	The presentation is **creative,** avoids uninspiring bullet points and makes use of several types of media.

Complete the quiz at the bottom of the page before continuing to the next topic.

9.2.3 Apply

1. Use this **self-assessment checklist** to assess the situation regarding distributed leadership at your school.
2. Go online to the collaborative document to which your tutor has invited you.
3. Identify at least three other good habits that are not on the checklist. Edit the entries of your peers if necessary.
4. Use the new items to conduct a further self-assessment of the distributed leadership habits at your school.

5. Open your Technology Leadership Action Plan/Report and write a set of principles as resolutions that will drive the process of your school adopting a distributed leadership approach.

6. Each sentence should start with "Leadership will…" and should either confirm good practice that already exists in your school or suggest a way of doing things that will, through discussion and with time, become common practice at your school. e.g. Leadership will resolve to identify all stakeholders of the e-learning plan and include appropriate stakeholders in a meaningful way in implementation discussions.

9.2.4 Reflect

Log in to your personal course blog and post a reflection on how your understanding of leadership, change leadership and distributed leadership has changed. How are these three terms for leadership related?

What are some of the immediate and longer term actions you intend to take in order to adapt the style of leadership in your school.

9.3 Capacity Building

Capacity building is not something that happens only through a series of training courses, which is a view we often take of staff learning needs. Capacity building is an ongoing process that you, as a change leader, have to actively manage with the support of other stakeholders. It is about delegating responsibility and building leadership and management skills across a distributed range of stakeholders in your school. In this lesson we will seek to answer three questions to help us understand and better manage capacity building. These questions are:

1. How do we make capacity building a collective process?
2. How do we make capacity building evident in practice?
3. How do we ensure capacity building is ongoing?

Learning Objectives

When you successfully complete the lesson you will be able to:

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
- Plan and implement a capacity-building process;
- Evaluate the achievements and benefits of e-learning in the school.

9.3.1 Prepare

The simple start to capacity building

Capacity building can be considered as having two aspects. First, there are stakeholders who need to be "capacitated" – they have the need to develop the ability to make a contribution to the e-learning implementation. It may be a simple technical skill or it may be the responsibility to manage a complex task. Secondly, there are people who have to strategise about an organisation's and individual's capacity to function successfully. These people, usually the school management team, will want to grow capacity in others. A good place to start is to identify the kind of capacity that needs to exist or be built in order to successfully implement your school's technology plan.

The staff of one school were asked what their learning needs were and they listed the items in this table of **staff learning needs**.

1. Consult your School Technology Plan and identify the learning needs that emerged from that planning process. Update the table to reflect the capacity building needs in your own context. Consider these questions:
   - In your School Technology Plan you also wrote more detailed plans on how you would build support for staff learning needs. Do you have the capacity to implement that? What capacity- building needs emerge from that?
   - Thus far in your School Change Leadership Strategy you have identified processes that have to be put in place. Who are the stakeholders who will be responsible for this? Do they have the capacity to take on the responsibility?

Jim Collins identifies a Hierarchy of Leadership:

Level 5 — Great Leader (personal humility, professional will, true greatness)

Level 4 — Effective Leader (galvanizes people to commit to vision)

Level 3 — Competent Manager (organizes people toward goals)

Level 2 — Contributing Team Member (effective contribution to group goals)

Level 1 — Highly Capable Individual (makes productive contributions)

Source: Leadership at Work, Jim Collins and Level 5 Leadership

You may like to download and watch the **video in which Michael Fullan discusses this hierarchy of leadership**.(41Mb)

1. Join the discussion group for this lesson called *Capacity Building*.
2. Discuss how you would categorise these levels of leadership in terms of a stakeholder's ability to a) make strategic decisions about capacity building, b) delegate responsibility, c) monitor the capacity-building process d) build capacity in others. In your experience, can anyone do these things or do you have to possess a certain level of leadership quality?
3. Open the summary of staff learning needs and add two columns **as shown in this example**.
4. Identify the stakeholders responsible and those in support of the various capacity-building tasks you identified in the previous activity.

9.3.2 Study

Delegation

When **Alfred P Sloan** of the Ford Motor Company said "The most important thing I ever learned about management is that the work must be done by other men", he did not mean managers or leaders would just sit and watch from the sidelines (or that they should all be men). He was really saying that delegation is an essential and powerful tool for leaders in ensuring capacity is built to run something as complicated as a motor company. Change leadership of a school evolving with technology is no less complicated a task.

Once you have defined clear roles and responsibilities for each stakeholder in your school community you are able to define what measurable minimum achievement you hold them accountable for. As a leader you have to delegate the responsibility to the relevant stakeholders and support them in that role until you feel they have grown their management and leadership skills to such an extent they can operate independently. It is a supported learning process of growing leaders and building capacity.

The process of strategising to build capacity in your school and achieve success in your school as a change leader therefore depend, to a large extent, on your ability to properly delegate responsibility.

1. Your tutor will assign you a partner with whom you will conduct a mock delegation meeting.
2. Decide on a way in which you will conduct this meeting in real time. You could use the telephone, instant messaging, video conferencing or any other means upon which you agree.
3. Open the **Delegation Meeting Template** to plan the meeting. Note the key elements of the meeting:
    - Clear description of responsibility
    - The authority level being assigned
    - A discussion on the measures for success
    - Clarity about supporting resources
    - A statement of commitment
    - Concrete steps to be taken
    - Discussion of timelines for periodic reporting

Assessment

Use this checklist to assess your and your partner's performance during the delegation interview.

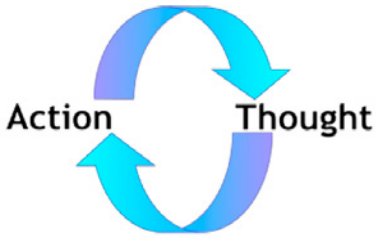
	The delegation meeting	√
1	The "principal" made clear the responsibility and minimum requirements.	
2	You were both able to maintain a positive and communicative meeting.	

3	The “stakeholder” was able to explain how he/she would commit to the responsibility.	
4	You were convincing in your different roles (you took the role play seriously)	

9.3.3 Apply

Strategising

Strategising is an on-going process that cycles between **action** (putting plans into practice, acting out responsibilities) and **thought** (such as planning, ideas, reflection, evaluation, including delegation meetings)



At this stage you will need to strategise more formally about capacity building. During this lesson you have given it a lot of thought.

1. Open your Technology Leadership Report/Action Plan
2. Identify the ACTION:
   - the capacity that needs to be built
   - the stakeholders involved
   - the plans to build the capacity
3. Record the THOUGHT:
   - Reflect on the delegation meetings and include the completed interview templates for all interviews that were held (as an Appendix).
4. Identify and include at least two performance indicators that will describe the evidence that, when observed, will indicate to you that the capacity-building process is a success.
5. Submit the draft to your tutor for feedback

Assessment

Level 1	Level 2	Level 3	Level 4
The plans for or report of capacity building describe a process that is poorly conceived and not sustainable.	The plans for or report of capacity building describe a process that is either impractical, not collective or not ongoing.	The plans for or report of capacity building describe a process that is practical, collective and ongoing, but with the omission of at least one important detail.	The **plans for or report of capacity building** describe in detail a practical process that is collective and ongoing.
The report and reflection the delegation meetings show poor understanding of the process and the meeting is not likely to have been successful.	The report and reflection the delegation meetings show an incomplete process with major omissions of detail. The communication and mutual understanding of the responsibility being delegated is in doubt.	The report and reflection the delegation meetings show a correct process with minor omissions of detail. The communication and mutual understanding of the responsibility being delegated is adequate.	The **report and reflection the delegation meetings** show a thorough and carefully considered process. The meeting was characterised by good communication and mutual understanding of the responsibility being delegated.

9.3.4 Reflect

Log in to your personal course blog and post a reflection on capacity building and how you can play a role in the building of capacity in your school. Also, comment on whether you are experiencing the value of the cycle of strategising. Does this influence your understanding of the process of change leadership?

9.4 Culture of Workplace Learning

One of the biggest challenges of teacher professional learning is to get teachers to make that "leap" from the training room (workshop) into the classroom. Teachers often do receive training in new approaches to teaching and learning when attending courses, but many of them cannot replicate it in the classroom. Fewer teachers have the independence, confidence and/or understanding to use technology in the classroom in the same way they witnessed in the training room. What do they lack?

Learning Objectives

When you successfully complete the lesson you will be able to

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
- Plan and implement a capacity building process;
- Describe how to develop and exploit a culture of learning in the school;
- Evaluate the achievements and benefits of e-learning in the school.

9.4.1 Prepare

The teachers often lack confidence and they lack support. Their peers, all of whom would have attended the same training, can be a major source of support. If you can encourage and develop a culture of learning in the workplace you will go a long way towards achieving the stakeholder ownership of your vision. Once the teachers experience the satisfaction of teaching with technology they will understand what the school's technology vision is about.

There are three main tiers of collaborative learning support:

1. The workplace, the school and its community
2. Learning from other schools
3. Learning from district support staff and other external providers

If a school has a well-established culture of professional learning in the workplace it may mean the staff have a high degree of ownership of the school's vision and objectives. On the other hand, if there is a poor culture of workplace professional learning it may mean more work needs to be done on communicating the vision and objectives.

Consider how this may help your capacity-building strategy.

Learning Communities at local level

Download and watch this video of Michael Fullan talking about **Learning Communities at the local level**. What has research shown us about learning communities at the school level? How does one establish a learning community in the school?

Peer Coaching

Read the one-page flyer about **Peer Coaching,** which is a Microsoft Partners in Learning course offered in many countries throughout the world.

To read more about this programme see the **Peer Coach information** on the Microsoft Innovative Schools website.

In a nutshell, peer coaching is:

- collaborative
- peer-to-peer
- supportive
- explorative
- workplace-based

What are the other advantages of such an approach? Is the approach compatible with the concept of professional learning communities?

1. Join the group discussion for this lesson called Culture of Learning.
2. Share your experience of learning in the workplace. Does it resemble either the professional learning community or peer coaching?
3. What benefits and challenges have you experienced or could you envisage?

9.4.2 Study

Use this time to learn about how to build a culture in a school.

Building a Culture

Watch the video and identify the key elements of building a culture. How can you translate this to building a learning culture in the school?

Video: **Building and sustaining a school culture** (5:07)

Professional learning is effective when peers collaborate with each other in the workplace. Peer-to-peer support is characterised by:

- Sharing of ideas on equal terms in pairs or small groups
- Conversations, often informal, about how to use technology in teaching and learning
- Collaborative exploration of new ideas and skills in the classroom – no appraisal
- Informal self-assessment and self-regulation

How do we develop this culture of collaborative learning in the workplace?

1. Join the lesson's group discussion again.
2. Share your thoughts on what you extracted from the video regarding establishing a culture of learning in the school.
3. If you have experience of this in your own school, share your experience with the group.
4. In a separate thread of discussion, discuss the question: "How can we strengthen our collaboration and communication ties between schools in our region?"

9.4.3 Apply

1. Open your Technology Leadership Action Plan/Report and update the section on Culture of Learning.
2. Align these actions with your plans for capacity building, showing the relationship between the two in your plans and comments.
3. Show how this strategising inter-relates with the principles of change leadership you have adopted so far. Explain how a culture of learning will contribute to more sustainable capacity building and a greater coherence generally in the implementation of the School Technology Plan.
4. Upload your plan to the group discussion document area so you are able to share this with your peers.
5. Identify and include at least two performance indicators that will describe the evidence that, when observed, will indicate to you that the culture of learning in the workplace is being successfully established.
6. Your tutor will place you in groups of three so you are able to give feedback to at least two peers.
7. Use the rubric to assist you with your feedback.

Assessment

Level 1	Level 2	Level 3	Level 4
Your plans for building a culture of learning in the school are unstructured and impractical with no acknowledgement of the inter-relating factors.	Your plans for building a culture of learning in the school are structured but not entirely practical with insufficient acknowledgement of the inter-relating factors.	Your plans for building a culture of learning in the school are clear, practically achievable and show evidence of some thought about how the various influencing factors should be considered.	Your plans for building a culture of learning in the school are meticulous, practically achievable and show evidence of deep thought about how the various influencing factors should be considered.
Your plans for building a culture of learning include no considerations of the contributions from beyond the school.	Your plans for building a culture of learning include few considerations of the contributions from beyond the school.	Your plans for building a culture of learning include some considerations of the contributions from beyond the school.	Your plans for building a culture of learning include considerations of the contributions from the community and the value of establishing a strong learning community between schools and with the district/region.

9.4.4 Reflect

Log in to your personal course blog and post a reflection on building a culture of learning in the school. What is your experience of this and what new ideas are you planning to put into action?

9.5 Facing Challenges Adaptively

In this lesson you will explore how to overcome challenges. Some challenges may be technical and within your current capacity at the school to solve. At the other end of the spectrum, large infrastructural problems such as the lack of electricity or Internet connectivity may seem completely beyond your ability to address and would require support from the system, nationally or provincially. However, you have to face the challenge. These challenges, including the challenge of change leadership itself, can be addressed with a collective response from within your school community. In other words, you go beyond what you know and have to persevere in finding the solution, drawing in other stakeholders if and when you need to do so. One of the simpler adaptive challenges is resistance to change, but it requires a sensitive response from you. There is no one solution to resistance; it depends on the people involved – you have to be adaptive.

Learning Objectives

When you successfully complete the lesson you will be able to:

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
- Describe a strategy for facing implementation challenges.

9.5.1 Prepare

In this lesson you will examine challenges encountered in e-learning implementation processes. Sometimes you do not apply your current knowledge and you may experience an "implementation dip" when you let these challenges make you feel despondent and unmotivated. It is important to know what your current capacity is to solve these problems and who to turn to for assistance. One can distinguish between two broad types of challenge:

1. Technical problems
2. Adaptive challenges

Technical problems are often, but not always, technology-related. They are problems in which current knowledge is sufficient to find the solutions. Technical problems can be solved by having a guideline, personal support, routine or process in place.

e.g. There is no booking system for a computer lab. It is hard to plan and gain access for lessons. This can be overcome by instituting a booking process.

Adaptive challenges have a complex set of underlying factors contributing to them and each challenge requires an adaptive response. It is often not the reserve of one person to meet such a challenge. In a school with established distributed leadership the challenge will be addressed by a group of people. Although they are sometimes tough to overcome, schools usually have the capacity to collectively address and overcome an adaptive challenge.

e.g. Teachers are not showing interest in integrating technology in the school. This is an issue of ownership and commitment to the vision and therefore requires some new thought and different action i.e. strategising

Some of the biggest failures of leadership occur:

a) when leaders treat adaptive challenges like technical problems, thinking that a decree of a process can solve the problem, and

b) when leaders, through their lack of capacity, treat simple technical problems as insurmountable adaptive challenges.

9.5.2 Study

Adaptive Challenges

Adaptive challenges are complex and unique, not routine. They may require difficult learning processes, but it is possible to solve them. They may generate tension or seem like a good idea to avoid. They usually require a bit longer to solve, but effective leaders lead through the uncertain and complex situations that require experimentation and adaption.

Scenario

School X is experiencing a problem because the bank of tablets supplied by the district office is not being used. The principal is very nervous that the district technology co-ordinator will remove the tablets and give them to another school. At the e-Learning Committee meeting the general consensus was that many teachers at the school were not committed and were negative about the project.

Typically the change leaders work through a process shown in the template below, even if they do not do it all that formally. Read the suggested responses related to the above scenario.

A: Identify the adaptive challenge – the staff is divided about teaching with technology and many have not bought into the vision and therefore show no commitment to use technology.

B: Define the challenge:

Current reality	Describe the current situation.	Divided staff, some teach with technology, some do not and make negative remarks about the use of technology, especially the time required to learn new skills.
	What needs to change?	Staff commitment, need the negative staff members to see the value of technology.
	What needs to be retained?	The positive staff who teach with technology, technology needs to be used
	What are the best features of the reality that could help you build towards a solution?	The fact that some staff do have skills and are setting a good example by teaching with technology.
Desired outcome	Describe what success might look like to you.	The staff who use technology pair up with non-users and support them to learn at their own pace in peer-to-peer collaboration. All staff are committed to the e- learning vision.
	Is success dependent on others? To what extent?	It will depend on embracing the resistance of the non- users and leading them to a change of mindset – this is critical
The Problem	Review what you have written above and write a first draft of the problem statement.	The problem is there is no collaboration between confident users and non-users. There is not sufficient ownership of the vision by either group.

Context	What are the features of the wider environment that shape this issue?	Change leadership has not succeeded in engaging staff in the vision building. Teachers do not have much time to learn new things. There may not be sufficient recognition for those who achieve learning with technology.
	Who knows about this problem? Who is committed to a solution and how do key stakeholders see this?	The SMT recognises this problem. Neither group of teachers consider this to be a problem, but the complaining group are emotional and therefore must be frustrated. Change leadership is committed to communicating and getting input about the vision. Resisting stakeholders will be engaged by the principal to understand their position. At this stage they are indifferent.

C: Focus on the most critical elements

Technical components	What are technical components that can be solved with technical solutions?	Can find technology support resources, and identify experts within the school to support others.
People	Who are the people and how must people change for this problem to be solved?	Expert teachers – must become more collaborative and supportive, must take ownership of the vision Complaining teachers (non-users) – must negotiate and commit to an achievable goal to start on the path with technology, must understand the moral purpose, later understand and support the vision
	If there is conflict, where does it emerge?	Teachers who do not want to commit resist, but no real conflict.
Conflict	Do all agree with the vision?	No
	Do all agree with the goals of the plan?	This will require one-on-one interviews to manage resistance.
	Do all agree with the implementation of the plan?	Stakeholders will re-negotiate the details of implementation.

D: Action learning

In this stage you do the following:

a. Develop an action plan to test new ideas.
b. Talk these plans through with colleagues – new solutions may emerge.
c. Carry through the new action plan.
d. Reflect on and modify the actions.
e. Report back to colleagues and explore which new ideas and possibilities have emerged.

1. Your tutor will divide you into groups of three and create a discussion group for you to join.
2. Each of you describes a real-life adaptive challenge you have experienced in your schools.
3. Decide on one. Create an online collaborative document and copy the **adaptive plan analysis template** into the collaborative document.
4. Work through the analysis process and develop an action plan for the challenge.

5. Once you have completed this, share the link of your analysis and plan with the rest of the group by posting a message to them.

9.5.3 Apply

Embracing Resistance

As a change leader you will be more successful if you embrace resistance rather than avoid it or react to it with rules. Resistance is not a technical problem. It is an adaptive challenge. It requires you to exercise emotional intelligence. Emotional intelligence includes these three skills:

1. Your awareness of your own emotions
2. Empathy – identifying with what others feel
3. Ability to build relationships

When embracing resistance you need a strong working relationship with the people involved. If this does not exist it will hamper your attempts, so you must build a strong working relationship. You could use this process to achieve a strong working relationship. Typically, you would do the following:

- Respect those who resist.
- Understand the reason for the resistance.
- Link with their position – find common elements in your respective positions.
- Establish to what extent the person has bought into the vision, objectives and implementation procedures at your school.
- Discuss the question "What is in it for us?"
- Develop a plan of action.

1. Your tutor will assign you a partner with whom you will conduct a mock resistance interview.
2. Identify a typical issue that causes resistance.
3. Decide on a way in which you will conduct this meeting in real time. You could use the telephone, instant messaging, video conferencing or any other means upon which you agree.
4. Open the **Resistance Interview Template** to record the meeting. One of you should act the role of the principal and the other act the role of the resisting stakeholder.
5. Use the checklist to assess your performance.

6. Send a copy of the interview record to your tutor for feedback.

	Resistance role-play assessment	√
1	You were able to show respect for one another.	
2	The "principal" was able to establish the reason for resistance.	
3	The "principal" showed empathy.	
4	The discussion about "what is in it for us?" reached a satisfactory conclusion.	
5	You agreed to a plan of action that was acceptable to both of you.	

9.5.4 Reflect

Log in to your personal course blog and post a reflection on what you feel it takes to meet the challenges of e-learning implementation. Describe some challenges that have cropped up in your school in the past and describe how they were tackled. How would you do it differently now?

9.6 Communicating for a Change

Communication is not just about sending out notices and giving presentations. In a situation requiring change leadership, you will rely on a carefully planned communications strategy to positively influence the changing environment, motivate stakeholders and manage resistance. There are five key components to building a communications strategy:

1. Identify the communicators and audience;
2. Determine the message content;
3. Identify the most effective communications methods;
4. Ensure feedback and dialogue;
5. Evaluate the outcome.

In this lesson you will develop a draft communications strategy which you will finalise with your key communications stakeholders in your school.

Learning Objectives

When you successfully complete the lesson you will be able to:

- Describe how the traits of a visionary technology leader foster sustainable change in the school technology landscape;
- Develop a communication strategy to build a sense of ownership of the vision for e-learning in the school;
- Evaluate the achievements and benefits of e-learning in the school.

9.6.1 Prepare

Watch the video in which John Kotter gives some hints about successfully communicating a vision. What are the important lessons to learn? How do you propose applying these lessons in communicating your school's vision?

Video: **Communicating a Vision for Change** (4:16)

Read **Four Qualities of a Successful Change Communication Strategy** and write a list of practical guidelines you extract from the article.

1. Join the discussion group for this lesson called Communicating for a Change.
2. Share your experience of communication in the schools at which you have worked. What worked well?
3. What are the lessons you have extracted from the viewing and reading in this activity?

9.6.2 Study

In this activity you will conduct a learning-groups process and report back your small-group learning to the whole group on a collaborative wiki page.

1. Your tutor will divide you into four groups, A to D.
2. Each group will address the set of questions with the same letter as their group. See below.
3. Assume you are developing a strategy for communicating the vision for e-learning at the school. Actually consult with colleagues at your school where appropriate.
4. Share your findings and ideas in your small-group discussion.

Here are the four sets of questions which may help you develop a communication strategy:

A. Identify the communicators and audience

1. Who are the stakeholders affected by the change?
2. Who would the stakeholders find trustworthy to communicate to them?

Stakeholders are more likely to take ownership of the vision if they feel they have a voice and are well-informed.

1. How will you give the stakeholders the opportunity to respond to your communications, give a comment or ask a question?

B. Identify the most effective communications methods

Stakeholders will expect communication to be timely and honest.

1. Do you want to send mass communications, personal messages, or communicate at meetings?
2. What methods of communication do your stakeholders use most often and prefer?

C. Determine the message content

1. What does your audience need to know about:
   - the vision?
   - how change fits into the school's objectives and values?
   - personal implications of change?
2. What is the purpose of the messages?
3. What kind of message content would you send – what should it ask for or say?

D. Evaluate the outcome

1. How will you know your communications strategy has been successful?
2. What evidence will you look for to confirm that the method and content of the messages were appropriate and the best option?

After the small-group discussion:

Join the wiki page your tutor has set up for you, called *Guidelines for a communication strategy*. As a collaborative group, write a full response to the questions as part of an example strategy for communication.

9.6.3 Apply

1. Open your Technology Leadership Action Plan and update the Communication section.
2. Apply your own unique context to the strategy rather than just repeating the one you have just entered in the wiki.
3. Identify and include at least two performance indicators that will describe the evidence that, when observed, will indicate to you the communication plan is successfully being put into action.
4. Use the rubric below to self-assess your work.

Assessment

Level 1	Level 2	Level 3	Level 4
Your communication plan does not take the needs of your community into account. It has many significant omissions.	Your communication plan is generic. It includes basic information but has more than one significant omission.	Your communication plan is tailored to the needs of your community of stakeholders. It is comprehensive in its information and coverage, with at least one significant omission.	Your communication plan is clearly tailored to the needs of your community of stakeholders. It is innovative and comprehensive in its information and coverage.
Your communication plan provides no opportunity for dialogue between stakeholders.	Your communication plan provides little opportunity for dialogue between all stakeholders in conventional ways.	Your communication plan provides opportunity for dialogue between all stakeholders in conventional ways.	Your communication plan provides for effective and easy dialogue between all stakeholders in a creative way.
Your communication plan has no meaningful measurable performance indicators.	Your communication plan has few meaningful measurable performance indicators for evaluating its success.	Your communication plan has some measurable performance indicators for evaluating its success. One indicator is either unclear or not measurable.	Your communication plan has clear, measurable performance indicators for evaluating its success.

9.6.4 Reflect

Log in to your personal course blog and post a reflection on what you have learned about communication and how this will affect your practice as an educator. Can you take some ideas from this lesson and apply them to other aspects of your work as a teacher?

9.7 Culture of Evaluation

In this lesson you will explore how to develop a culture of evaluation in the school and how this will contribute to the action learning process and sustain a dynamic change process. As with so many other components of change leadership for technology integration, a culture of evaluation is a collective process, which takes place most successfully when people work together in pursuit of a shared vision.

Learning Objectives

When you successfully complete the lesson you will be able to:

- Develop a culture of evaluation in the school;
- Evaluate the achievements and benefits of e-learning in the school.

9.7.1 Prepare

View the infographic **Building a Culture of Evaluation: 30 Ideas to Apply to Your Organization.**

For the purposes of this course regard **evaluation** as the *judgement of a process* and **assessment** as the *judgement of individual performances*.

Both assessment and evaluation should be regarded as positive processes designed to establish how successful we have been and what we need to do in order to improve. We need to both evaluate and assess aspects of technology use in the school in order to:

- Recognise all achievements
- Develop capacity for self- and peer-assessment
- Plan effectively
- Focus on how you learn
- Focus on how learners learn
- Focus on classroom practice
- Provide sensitive and constructive feedback
- Foster motivation
- Promote understanding of vision and objectives
- Help you know how to improve

This is called **Assessment (evaluation) for learning**. You will probably have deduced by now that a culture of evaluation goes hand-in-hand with a culture of learning in the workplace (see Lesson 9.4). It is also a collective process.

9.7.2 Study

School-based evaluation is not about doing things for rewards and it is not about performance appraisal in the usual sense of the term; it is about you and the teachers learning from what you do in order to improve what you do. It is a process conducted by you and the teachers and you have the freedom to involve peers of your choice, should you so wish. As a result of this process you and the teachers will be able to identify and communicate gaps in your learning and seek assistance.

The process is school-based in that the change leaders will, through negotiation, include a culture of evaluation into the School Technology Plan and will have to effectively communicate the purpose of this activity to the stakeholders. If you and the teachers have the capacity to appraise yourselves or the openness to discuss a self-appraisal with peers, you become independent learners and show mature leadership skills. You will have committed to the vision, committed to the culture of learning and committed to the culture of evaluation. Most importantly, this means you are willing to be held accountable for the investment that has been made in you and the students by the government Ministries and/or funders sponsoring technology integration (as is often the case).

Why is self-evaluation necessary?

It will be your responsibility as a change leader to answer this question and communicate the answer to the stakeholders.

1. Complete the school-based evaluation planning template: **Microsoft Word version** | **PDF version**
   Note: District support staff or funders may at times provide you with specific evaluation requirements. You may be able to integrate their needs with your needs, but realise that their needs are for accountability to their funders and the evaluation of their efforts. Your needs are to promote improvement in a culture of school-based learning and evaluation.
2. Share your planning template with your peers by posting it to the document section of the *Culture of Evaluation* discussion group.

9.7.3 Apply

Performance indicators define what you will observe as evidence when you gather data for your self-evaluation, as well as evaluating the progress of your e-learning implementation and vision. They are statements reflecting specific goals that can be used to gauge progress. A performance indicator helps you measure a performance outcome and each is typically focused on only one aspect at a time. They can also give you an indication of short-term wins, which you can celebrate.

Good performance indicators:

- *Include measures* – they should be able to measure something (frequency, amount, extent, proportion, quantity and, more difficult, quality).
- *Are few* – you do not need many.
- *Are actionable* – they describe an action.
- *Are timely* – they should remain useful for a long time.
- *Are reliable* – indicators can easily be measured by a variety of people.
- *Are comparable* – measures developed for current evaluation should be able to be compared with measures from past evaluations.

Here are some examples:

- Curriculum integration
  - Teachers will integrate technology with learning in all subject areas more frequently.
  - Teachers will integrate technology with learning at least twice per week.
  - An increasing percentage of teacher lessons will incorporate technology.
- Technology literacy
  - Both teachers and learners will acknowledge sources of information in every classroom product.

1. Open the Performance Indicators template and accumulate the performance indicators you have written in this course and in the Planning Technology Integration course.
2. Apply the checklist to assess the quality of each performance indicator.
3. Consult with your tutor and peers in the Culture of Evaluation discussion group if you are in doubt.
4. Finally, update your Technology Leadership Plan/Report by including details on how you will develop a culture of evaluation in the school. Insert the summary of performance indicators and provide a timeline to indicate when these will be evaluated and who will conduct the evaluation. Provide an outline of the planned evaluation process.

	Assess your performance indicator	√
1	It is describing one specific activity	
2	It is measurable	
3	It is timely	
4	It is easily understood by different people	
5	It can be compared with similar indicators from year to year	

9.7.4 Reflect

This is your final opportunity to make a reflective comment in your personal course blog in the context of this course. Post comments about your views on a school culture of evaluation.

Finally, post a reflection on the course as a whole. How has it influenced your thinking about technology leadership and change management? How do you plan to put your learning into action?

9.8 Final Assignment

What to do

You are required to submit a complete **Technology Leadership Action Plan** (if you plan to implement your learning after the course). This should report fully on the process of change leadership strategising as you implemented your school's technology plan before and/or during this course.

Alternatively you are required to submit a **Technology Leadership Report** (if you implement your learning during this course). This should represent in detail how you intend to lead the process of implementing the School Technology Plan (Course 8: Planning for Technology Integration) after the course.

This template can form the basis of your assignment submission, but you may add elements to it or present it in another format as long as you include the minimum requirements of the assignment.

Assessment Rubric

Level 1	Level 2	Level 3	Level 4
Your vision statement is not concise or inspiring and does not refer to a future with e-learning.	Your vision statement is not concise, but is positive and paints only a partial picture of a future with e- learning.	Your vision statement is fairly concise, positive and paints a picture of a future with e-learning.	Your **vision statement** is concise, inspiring and paints a picture of a future with e-learning.
Your plan for building ownership of the vision and commitment to the implementation of e- learning is unclear and incomplete.	Your plan for building ownership of the vision and commitment to the implementation of e- learning at the school has one or two significant omissions.	You have a complete but predictable plan for building ownership of the vision and commitment to the implementation of e- learning at the school.	You have a detailed and innovative plan for building **ownership** of the vision and **commitment** to the implementation of e-learning at the school.
You have little or no understanding of leadership in your school.	Your understanding of leadership is not entirely clear but you have a few ideas on how to distribute leadership in the school.	Your understanding of distributed leadership has one or two inaccuracies but you have an idea on how to grow this leadership in your school.	Your **understanding of leadership** is that it is distributed and you indicate clearly how you can achieve this approach in your school.
The plans for or report of capacity building describe a poorly-conceived, unsustainable process.	The plans for or report of capacity building describe a process that is impractical or not collective or not ongoing.	The plans for or report of capacity building describe a process that is practical, collective and ongoing, but with the omission of at least one important detail.	The **plans for or report of capacity building** describe in detail a practical process that is collective and ongoing.

Your plan for developing a culture of learning in the school is confusing and incomplete. It does not take any contributing factors into account.	Your plan for developing a culture of learning in the school is incomplete. It takes some but not all contributing factors into account.	Your plan for developing a culture of learning in the school is clear and complete. It takes all contributing factors into account.	Your plan for developing a **culture of learning** in the school is detailed and innovative. It takes all contributing factors into account.

Your plans for analysing and addressing adaptive challenges are very unclear and incomplete and evaluation measures are either missing or very unclear.	Your plans for analysing and addressing adaptive challenges are incomplete and /or evaluation measures are incomplete.	You have recorded plans for analysing and addressing adaptive challenges, including how to embrace resistance. You have made made reference to how you will evaluate your progress.	You have recorded detailed plans for analysing and **addressing adaptive challenges**, including how to embrace resistance. You have clearly described how you will make these plans part of a cyclic process of strategising.
Your communication plan does not take the needs of your community into account. It has many significant omissions. It provides no opportunity for dialogue between stakeholders.	Your communication plan is generic. It includes basic information but has more than one significant omission. It provides little opportunity for dialogue between all stakeholders in conventional ways.	Your communication plan is tailored to the needs of your community of stakeholders. It is comprehensive in its information and coverage, with at least one significant omission. It provides for opportunity for dialogue between all stakeholders in conventional ways.	Your **communication plan** is clearly tailored to the needs of your community of stakeholders. It is innovative and comprehensive in its information and coverage. It provides for effective and easy dialogue between all stakeholders in a creative way.
Your plan to develop a culture of evaluation in the school is confusing and incomplete. Your plan for evaluating your technology leadership and school technology plans is also very unclear and incomplete.	Your plan to develop a culture of evaluation in the school is incomplete. Your plan for evaluating your technology leadership and school technology plans have many significant omissions.	Your plan to develop a culture of evaluation in the school is complete. Your plan for evaluating your technology leadership and school technology plans, has a few significant omissions.	Your plan to develop a **culture of evaluation** in the school is detailed and innovative. You have also outlined detailed and complete plan for evaluating your technology leadership and school technology plans.
Collectively, you have made little or no clear reference to how the various factors influencing change leadership for technology integration are inter- related.	Collectively, you have made only one or two reference to how the various factors influencing change leadership for technology integration are inter- related.	Collectively, you have made many references to how the various factors influencing change leadership for technology integration are inter-related.	Collectively, you have consistently and clearly shown how the various factors influencing change leadership for technology integration are **inter-related.**

Submit

1. You must submit a file which contains your Technology Leadership Plan in one document.
2. The file you upload here must have the file name <your name><country>_Final_Assignment e.g. JoeBlogg_SVG_Final_Assignment