**ITELab Modules:
Handbook for
Module Framework B**

Designing for Learning

Conor GALVIN,
UCD ITELAB Project Team

ITELab

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WELCOME TO THE ITELab MODULE FRAMEWORK ON DESIGNING FOR LEARNING

Welcome to the final run of this **ITELab** Module Framework **Designing for Learning.** The framework is designed for generalist use, not just for IT / ICT specialist student teachers – it is assembled to be relevant to all beginning teachers / teachers in formation.

We suggest that the materials and activities referenced below can provide all or some of the basis for a 6-week block of work with student teachers; ideally having some placement access during that block.

ITELab Handbooks act as reference points for suggested activities and build on the collective experience of the ITELab partnership project. They are not a prescription but instead act as a reference point and guide for local activity.

This short handbook on the **ITELab** Module Framework **Designing for Learning** is designed to help anyone using the framework – or some aspects of it – to integrate ITELab resources into their courses. It provides an overview of the underpinning ITELab philosophy and an outline of the framework structures, activities, and possible assessment arrangements. The handbook has now been revised for a final time in light of three pilot / beta test runs.

We hope this handbook in its now final form offers a good start-point for work on developing better, pedagogically-infused technology usage among teacher educators and student teachers, and that users enjoy working with the framework materials provided.

Conor Galvin (PhD)
UCD ITELab Team Leader,
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Designing for Learning.

Content & Activity Summary

UNIT /WEEK	TOPIC
Wk 1	**What is Learning Design and why does it concern us?** • An exploration of the nature and value of learning design
Wk 2	**c21 Learning: capability, innovative teaching & learning:** • What is "innovative teaching practice"? • What are the characteristics of a "21st century educator" and a "21st century learner"? • How might capabilities help us understand this conceptualisation of (new) learning? • What school and system factors better support innovative teaching practices?
Wk 3	**Deeper Learning; the use of technology to enhance learning;** • 'Reverse engineer' one of the examples provided of a highly rated lesson-plan. • Test your findings against an authoritative model of technology usage such as TPACK. • Focus especially on issues of when, how and how much?
Wk 4	**Building Better; using newly-acquired design knowledge.** • Design and develop a lesson drawing on relevant materials from a selected EUN eTwinning Kit. • Test the product through a critical peer review process – such as reflective practice
Wk 5	**Problem Based Learning; getting a technical edge.** • Exploring PBL & essential elements to develop learning experiences • Working on the five PBL design principles in your planning • The characteristics of authentic assessment & authentic learning
Wk 6	**Collaborative On-line Projects; issues and practices.** • Identify the key pedagogical approaches/teaching and learning styles that have been used in this project. • What issues of cultural awareness and ethics does this project raise? • Identify the elements that have come together to make this project successful.

Designing for Learning; Assessment

Assessment Type	Assessment Description	% of final grade	Timing
Lesson Scenario Development. [Locally assigned & Graded]	The design, production, resourcing, and quality-testing of a set of Learning Scenarios suitable for use with a designated learner group and in a specified setting. [SUGGESTED]	100%	End of Module

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MODULE B: Designing for Learning

[3ECTS Level 3; configuration of hours of direct input & hours of related project work/ self-directed learning to be decided locally]

Focus	Concept	Competence Areas	Assessment
Learning Design for Beginning Teachers	Designed to: develop understanding, confidence, and good practice among beginning teachers relating to designing and teaching digitally-enhanced classes.	• Develop practical capability relating to principled learning design • Explore the value of learning scenarios to the beginning teacher / teachers in programmes of formation • Professional engagement; communication, collaboration, and co-development.	The design, production, resourcing, and quality-testing of a set of Learning Scenarios suitable to a designated learner group and setting
Objectives / Intended Learning Outcomes	At the conclusion of this module participants will be able to: • meet the challenges of sourcing, (re)purposing, and developing a range of rich-digital instructional / learning materials for use in teaching contexts; • plan, teach and evaluate digitally enhanced lessons based on learning scenarios that demonstrate strong levels of understanding and competence in relation learning design principles & practices • identify opportunities and plan effectively for classroom and other learning activities that demonstrate innovative ICT usages.		
ITELab Modules are framed around the *DigCompEdu* areas of capability each of which is expressed in terms of specific competence and applications – with a total of 22 competences making up the full frame. These areas focus on different aspects of educators' professional capability and activity. [See Annex 1] These are:[1] *1.* Professional Engagement; using digital technologies for communication, collaboration and professional development. *2.* Digital Resources; sourcing, sharing and creating digital resources. *3.* Teaching & Learning; Managing and orchestrating the use of digital technologies in teaching and learning. *4.* Assessment; using digital technologies and strategies to enhance assessment. *5.* Empowering Learning; using digital technologies to enhance inclusion, personalisation and learners' active engagement. *6.* Facilitating Learners Digital Competence; enabling learners to creatively and responsibly use digital technologies for information, communication, content creation, wellbeing, and problem solving.			

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[1] From the final report of the DigCompEdu Project: *European Framework for the Digital Competence of Educators; DigCompEdu*, Redecker, C and Punie, Y (eds) (2017) EUR28775 EN.

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Unit 1	UNIT FOCUS: What is Learning Design?

Wks 1-2	• The nature & potential of Learning Design;
	• Learning Scenario thinking;
	• c21 Learning: capabilities for innovative teaching & learning.

Unit 1 is about building understanding of the key principles and practices of learning design & translating these into practical classroom/ learning focused activity in Learning Scenario format. The underlying model is that the beginning teacher/ student teacher experiences and practice aspects of using ICT more capably with their developing practice.

Wk1. What is Learning Design?

Start-up: watch and critically engage with a short video on Learning Design recorded a while back by Prof Grainne Conole:
https://www.youtube.com/watch?v=FaJrSwLL8Vg

Ask students to listen out for: the underpinning philosophy, the intended uses of the framework, and its seven elements.

Development: Working in small groups students first discuss the nature of the module and the 'new' thinking involved. They then visit the Co-Lab site and explore the idea of a Learning Scenario. (http://colab.eun.org/learning-scenarios).

Discuss the possible value of this approach and this format to developing teaching plans for class activity. Generate a 2-slide Presentation / Report on findings to share with the class.

Consolidation: Visit either the TPACK site (http://tpack.org/) or the EU DigCompEdu site (https://bit.ly/2zrfyb8). Discuss how one or other this might be used to add an extra layer of value to your scenario development.

Use a SMART Technologies *Online Learning Suite* page to share each group's enhanced Learning Scenarios plan.

Follow-out: Individually, save locally a personal version of the Learning Scenarios template. Customise to the module as necessary. (http:// https://bit.ly/2zS5xkg).

Capability building /DigCompEdu focus: 2:1 Selecting Digital Resources, 2:2 Creating & Modifying Digital Resources, 3:3 Collaborative learning.

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Week 2. c21 Learning: innovative teaching & learning

Start-up: Plenary discussion on the question what is 'innovative teaching'?
Taking the short presentation by Abd Karim Alias as a starting point, review as a
class the 'commandments' listed:
https://www.youtube.com/watch?v=z_smSLnPLLY

Decide if all / some/ none of these seem to have relevance to their situation.

Development: 1: Watch the SMART Technologies Report video here:
https://bit.ly/2OTWd8u 2: Have the students work in pairs/small groups to
develop a short presentation for sharing on the idea of *education technology
capability*. Suggest the SMART Technologies White paper on as a useful
source: https://bit.ly/2tNz3pb
3: Suggest a *think, pair, share* activity where they first think about the data
offered on p4 of the Report individually and then collaborate with their group
members to discuss and refine a group statement. 4: Share outcomes to a
Padlet or similar.

Consolidation: Using the Padlet List as prompt, hold a class discussion on
'realistic' / 'unrealistic' visions of capabilities as an anchor for 21 century
classrooms. Ask the students to identify a series of *One Change suggestions*
that they think wold improve the possibility of providing this type of learning
setting for learners.

Follow-out:
Set a Challenge Question such as: What school and system factors better
support innovative teaching practices? Refer the students to a research
report such as McMorrough et al (2016) at https://bit.ly/2QMcYkk Ask them to
be write a short personal blog / account of what they think school should do
to encourage 21st century engagement.

Capability building /DigCompEdu focus: 1:2 Professional Collaboration, 1:3
Reflective Practice, 2:1 Selecting Digital Resources, 4:2 Analysing evidence.

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Unit 2	**UNIT FOCUS: Meeting the Digital Design Challenge; personally and with learners.**
Wks 3-4	• Deeper Learning: the use of technology to enhance learning; • Using newly-acquired design knowledge. Unit 2 takes the discussion deeper in terms of how design can deepen learning experiences and translate into useful practical classroom/ learning activity. The underlying intention in this block is to encourage and support the beginning teacher/ student teacher experiences to engage more pedagogically with technology. **Wk3. Deeper Learning: the use of technology to enhance learning** **Start-up:** Watch and then deconstruct the video: **How are ocean currents formed?** https://bit.ly/2wFBeeN Ask students to consider in particular: the way the imagery and the brief, online messages carry the purpose of the lesson/ video and other aspects such as music, length etc. **Development**: 1: Ask them to consider in groups how this video might be built-into a learning activity. Use the Lesson Scenario headings to guide this discussion. 2: Set them to work in groups to 'reverse engineer' one of the example provided at the site of well-developed lesson-plans. Ask each group to pursue a different element / stage of the lesson design. 2: Share findings from the activity and outline the value of this approach and this format to developing teaching plans for class activity. **Consolidation**: Visit the TPACK site (http://tpack.org/) Ask the students to consider how the TPACK headings might be used to better understand a design task like the lesson planning they have just reviewed. Use a Padlet (or similar) to gather class-wide reflections. **Follow-out:** Set a post-class Challenge such as: *Design a learning scenario that makes use of a short media clip such as those considered during the session to anchor a learning activity for a group of your learners.* Ask them to share the outcome on a class website / blog & and to comment constructively on one other entry they find there before their next session. **Capability building /DigCompEdu focus:** 2:1 Selecting Digital Resources, 2:2 Creating & Modifying Digital Resources, 3:3 Collaborative learning.

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Week 4. Building Better; using newly-acquired design knowledge

Start-up: Plenary discussion on the idea that it is often better to take and customise than to design from scratch; particularly when using digital elements to support learning.

Decide if this concept is relevance without exception to their situation. Bring up the issue of 'pre-designed' / 'packaged' lessons and the dangers these can present.

Development: 1: Direct the students to the eTwinning Project Kits site. (https://bit.ly/2MK4HiA) Allow time for them to explore the site. Lead a discussion on the possible value of this and similar 'repositories' of teaching materials & suggested activities. 2: Suggest that they work in subject / interest groups to identify a possible kit that they might use in the near future in a learning setting. Ask them to discuss and decide on what to include / exclude form the range of suggestions offered; and to be able to explain and justify their decisions. 3: Share outcomes in a plenary way.

Consolidation: Discuss as a class the value of having a quality mechanism to help guide inclusion / exclusion activities such as the one they have just completed. Suggest that they visit and explore the work of Pollard on reflexive judgement; Pollard (2014) https://bit.ly/2wDjh1t . This is a *critical peer review process* based on seven key characteristics of reflective practice. Ask the students to identify ways that using such a framework could aid in their planning and design for learning.

Follow-out:
Set a Challenge Question such as: What are the advantages and more problematic aspects of using 'pre-designed' lesson materials?

Capability building /DigCompEdu focus: 1:2 Professional Collaboration, 1:3 Reflective Practice, 2:1 Selecting Digital Resources, 2:2 Creating & Modifying Digital Resources, 3:3 Collaborative learning, 6.1 Facilitating learners' Information & media literacy, 6.2 Facilitating learners' Digital communication & collaboration.

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Unit 3	UNIT FOCUS: Problems and Projects; design types for better learning.

Wks 5-6	• **Problem Based Learning**; getting a technical edge;
	• **Collaborative On-line Projects;** issues and practices.

Unit 3 moves the focus to how problem-based and task-based learning activities can be enhanced through the careful use of media and technologies and how this can designed into learning and teaching so as to add value to the learning experience, and how accessing online project activities – such as those associated with the idea of 'collaborative on-line' learning can be used to improve learner experiences.

Wk5. Problem-based Learning: getting a technical edge

Start-up: Watch the video used at a leading European university to introduce their students to the concept and practice of problem-based learning (PBL): https://bit.ly/1MS80YC

Ask students to consider if this approach may be relevant to their teaching settings: challenge them to find the positive as well as the problematic in the model.

Development: 1: Introduce the class to the fie PBL principles advocated for in this Microsoft Document: https://goo.gl/19eRoF 2: Have them consider in groups how these principles may be used to guide decisions in relation to the activity stages of the learning scenario design. Use *Lesson Scenario* headings – such as Explore, Map, Make and Remake to direct the work of certain groups. 3: Share outcomes from the activity to the whole-group.

Consolidation: Returning to their earlier work on Pollard and reflexive judgement; Pollard (2014) https://bit.ly/2wDjh1t . Ask the class to offer an interest group / subject group *critical review of the idea of PBL*.

Follow-out: Set a post-class Challenge to post a personal FlipGrid Report on the topic: *What do you see as the two or three key characteristics of 'authentic learning' and how does PBL seek to support these?* Ask them to share their FlipGrid response to an agreed class forum.

Capability building /DigCompEdu focus: 2:1 Selecting Digital Resources, 2:2 Creating & Modifying Digital Resources, 3:3 Collaborative learning.

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Week 6. Collaborative On-line Projects; issues and practices

Start-up: Ask the class to review the SMART Technologies video here: https://youtu.be/90ZRMvdn_ZQ and to then make individual reaction notes before doing a think, pair, share activity on the viewing, commenting on what they see as the key pedagogical approaches/teaching and learning activities that have been used in this project.

Development: 1: Direct the students to the SMART Technologies site. (http://bit.ly/1RRgDpr) Ask them to consider in particular the arguments made for the power of the *Learning Suite* ecosystem. 2: Suggest that look closely at SMART Technologies well-articulated approach to using a live/ remote learning environment in support of PBL type activity in engineering classes. 3: Generate a short report in pdf or pptx format on the group's findings. 4: Share the outcomes to a class SMART Learning Suite on Line, here: https://suite.smarttech.com .

Consolidation: Discuss as a class the elements that have come together to make this project successful. Discuss also as a class the challenge of designing access for all learners to activities such as those. Direct the class to a site such as https://www.itu.int/en/ITU-D/Digital-Inclusion/Pages/default.aspx which articulates well the need and the possible ways to begin working on more inclusive design and materials.

Follow-out:
Set a Challenge Question such as: *Are there any issues of cultural awareness and ethics that projects like this raise and which need to be addressed in ways that add value to the learning?* [Mention equity and access as needing considerable thought.]

Capability building /DigCompEdu focus: 1:3 Reflective Practice, 2:1 Selecting Digital Resources, 2:2 Creating & Modifying Digital Resources, 3:3 Collaborative learning, 5:1 Accessibility & Inclusion, 6.1 Facilitating learners' Information & media literacy.

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Module Assessment	Locally Arranged and Locally Framed
Lesson Scenario Development; Pedagogically strong & Technology Enhanced Learning	**The design, production, resourcing, and quality-testing of a set of Learning Scenarios suitable for use with a designated learner group and in a specified setting.** [SUGGESTED] [Locally framed and parametered as appropriate to a 3credit ECTS offering.]
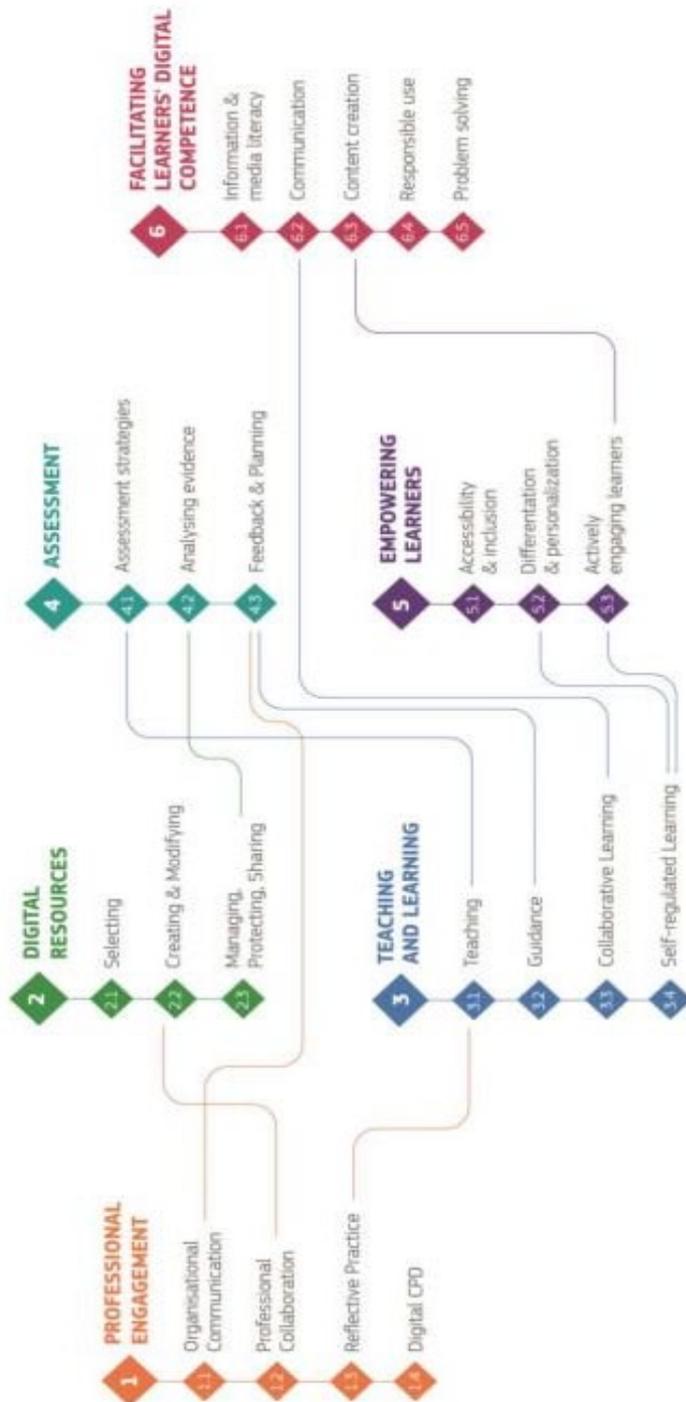
Figure 1: Overview of the DigCompEdu framework

From: Final Report of the DigCompEdu Project: *European Framework for the Digital Competence of Educators; DigCompEdu*, Redecker, C and Punie, Y (eds) (2017) EUR28775 EN

Link to the Learning Scenarios Template:

http://colab.eun.org/c/document_library/get_file?uuid=3a379a60-ef14-43d6-89f2-d454cdb5004c&groupId=5897016

Disclaimer

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