



QUALITY FRAMEWORK FOR ONLINE TEACHING AND LEARNING

Part 3 - Towards Quality Improvement

Ali Rashidi & Kateryna Puhachova
Folkuniversitetet Sweden



Content

Quality improvement of online education	4
Online design and preparation.....	4
Introduction.....	4
Preparation phase	4
Readiness.....	5
Preparing Students to Learn Online	9
Learning Outcomes:	9
Selecting Course Content	10
Tools for Online design and preparation.....	13
Video.....	13
Quality indicators for Online design and preparation.....	14
Educational material and curation	15
Content curation	16
Content Curation process.....	17
A Step-By-Step Guide To online learning Content Curation	18
Tools for educational material and curation	24
The quality indicators for digital content curation.....	24
Assessment and examination.....	26
Formative assessment.....	26
Types of online formative assessment.....	26
Summative assessment	27
Types Of online summative Assessment.....	28
Feedback activities	28
Tools for assessment.....	31
Quality indicators for assessment and feedback	32
Pedagogical approach	33
Group discussion	34
Designing learning approaches	34
Facilitating Online Learning.....	36
Quality indicators for pedagogical approach	37
Learners' engagement and support	38
Measure motivation during the course lifecycle.....	39
Questionnaire for measuring the motivation during course lifecycle	40

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Measure used by teachers to increase student motivation.....	42
Quality indicator for student support and engagement	43



Quality improvement of online education

Online design and preparation

Introduction

This section guides how to design an online learning/teaching course (from the needs analysis to the definition of learning objectives, sequencing, choice of learning strategies and delivery formats). It mainly addresses trainers and instructional designers who aim to create learning projects that match learners' needs by choosing different methods and delivery formats. The teacher takes on the role of a purposeful learning designer rather than (just) a curriculum implementer. The teacher is a designer translating learner needs, curriculum frameworks, teaching strategies and resources into a coherent plan for learning. The design framework is based on the following key quality approaches:

1. Learning is enhanced when teachers think purposefully about curricular planning. The design framework helps this process without offering a rigid process or prescriptive recipe.
2. The design framework helps focus curriculum and teaching on developing and deepening student understanding and learning transfer.
3. Understanding is revealed when students autonomously make sense of and transfer their learning through authentic performance. Six facets of understanding—the capacity to explain, interpret, apply, shift perspective, empathise, and self-assess—can serve as indicators of understanding.
4. Effective curriculum/course plan is planned backwards from long-term, desired results through a three-stage design process (Desired Results, Evidence, and Learning Plan).
5. Teachers are coaches of understanding, not mere delivering content knowledge, skill, or activity. They focus on ensuring that learning happens, not just teaching (and assuming that what was taught was learned); they always aim and check for successful meaning-making.

Preparation phase

Your strategic decisions regarding course structure, including synchronous vs asynchronous communications and events and different types of assessment, will impact how learners engage with the material and each other. Before delving in, consider 1) the readiness of the course in its current state

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



and 2) your comfort level with the educational technologies that can enhance it. Considering these elements will help you assess the effort required to adapt the course to an online environment.

All teaching requires planning and preparation, whether in a classroom or at a distance. However, there is a significant difference. The planning for classroom teaching focuses on the time that teachers and students are together, while in distance education, it is when teachers and students are separated. This makes careful planning extra important when holding a distance education because there is less room for improvisation and shortcomings in the planning. It is difficult to make changes during the course. Good planning lays the foundation for a successful course.

When planning a course that will partially or entirely use IT in various forms, begin by putting together an overall plan. What do you know about the participants? How much time and what technical tools do you have at your disposal? What learning should take place? What is the pedagogical for what you want to teach? Write down your own thought introduction to the learning opportunity, and formulate an objective that can be achieved with the help of the tasks and exercises you plan to hold.

Readiness

Level of teacher's Readiness



Your strategic decisions regarding course structure, including synchronous vs asynchronous communications and events and different types of assessment, will impact how learners engage with the material and each other. Before delving in, consider 1) the readiness of the course in its current state and 2) your comfort level with the educational technologies that can enhance it. Considering these elements will help you assess the effort required to adapt the course to an online environment.

Online course development typically takes longer to develop than face-to-face course development. It needs to evaluate three areas to estimate a teacher's readiness:

- The preparedness of face-to-face (F2F) course content
- Your experience with online teaching or learning
- Your perceptions of online learning

Exercise teacher readiness

While other variables impact scope, the instructor and course designer directly influence these areas. Complete the following survey to help determine the scope of work required to develop a course online.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Yes = 2 and No = 0

<i>The course and lessons materials are fully developed (for F2F, online or hybrid)</i>	Yes	No
Yes, the materials are fully developed as defined by the ABC core components / pedagogical elements		
The materials are developed but need revisions and updates		
The materials are partially developed and need revisions and updates		
The materials are mostly dated or unusable.		
<i>The course materials are in digital format (for F2F, online or hybrid)</i>		
Yes, all materials are in digital format		
Some materials are in digital format		
Most materials are not in digital format		
There are no materials in any format		
<i>Changes to be made to the curriculum.</i>		
There are no changes that need to be made to the curriculum		
There are minor changes that need to be made to the curriculum		
About half of the curriculum requires making changes		
Most of the curriculum will need to be changed		
<i>If the teacher had to teach next week online, he/she would be ready.</i>		
Yes		
No		
<i>your online teaching experience</i>		
I have taught online several times		
I have taught a hybrid or technology-enhanced course before		
I have never taught online		

A score of 6 or below is considered low on the content readiness spectrum. A score between 7-11 is average, and a score between 12-16 indicates a high level of content readiness. A course that is content ready has the following characteristics:

- The instructor has taught the course on multiple occasions (F2F, hybrid or online)
- Course and lesson materials are fully developed
- Materials are in a digital format

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- No changes to the curriculum need to be made
- Course could be taught immediately (F2F)

Learning new platforms, pedagogies, tools, and technologies can be a significant commitment. Time commitments decline when an instructor has taught online a few times and can take the latest concepts and apply them to their subject and teaching style. While less quantifiable, instructor perceptions or misperceptions of what is expected and/or needed can influence development hours. We explain all of this during orientation. If a teacher score low in scores readiness, you are missing critical elements from the list of characteristics above. This will increase the amount of time teachers need for course development. Accordingly, if your score is high, your development hours will decrease.

Learner readiness



Understanding the size and demographic of your learner population enables you to design a course that best addresses their range of needs. For example, the types of interactions in the course and the level of feedback you can provide will vary, depending on whether it is significantly large with hundreds of learners or just a few. Additionally, individual learner profiles should inform your course design. The considerations listed below are essential when you think about your learners and determine what kind of course design, content, and delivery method will help them grow. Answering these questions and understanding their reasoning is critical to genuinely connecting to your learners and creating an effective online environment for them.

The questions that must be clarified are:

- a) What motivates learners to take this course?
- b) Are learners taking my class to earn a degree or expand their professional skills in this subject area?
- c) Do my learners have any professional experience?
- d) Are learners familiar with the subject matter?
- e) Have the learners completed the appropriate prerequisite coursework?
- f) Do the learners have the technical skills necessary to complete assignments?
- g) How does access to electronic and web tools impact the learners?
- h) How will learners access your course? (e.g., computer lab or personal devices)



- i) Do the learners have access to all equipment necessary to complete assignments? (e.g., video camera or software)
- j) Are your materials universally accessible? (e.g., mobile-friendly)

Exercise – learner readiness questionnaire

	Agree	Somewhat agree	disagree
I am good at setting goals and deadlines for myself.			
I have an excellent reason for taking an online course.			
I finish the projects I start.			
I do not quit just because things get complicated.			
I can keep myself on track and on time.			
I learn pretty quickly.			
I can learn from things I hear, like lectures, audio recordings, or podcasts.			
I learn best when I figure things out for myself.			
I like to learn equally well in a group or on my own.			
I am willing to send emails to or discuss with people I might never see.			
I am reasonably good at using the computer.			
I am comfortable conducting searches, setting bookmarks, and downloading files			
I am comfortable installing software and changing configuration settings on my computer.			
I am connected to the Internet with a reasonably fast, reliable connection.			
I have headphones or speakers and a microphone to use if a class has a video conference.			
My browser will play several standard multimedia (video and audio) formats.			
I know someone who can help me if I have computer problems.			

The result will give the teacher information regarding:

- a) Self-Direction – if the students need support with time management
- b) Learning Preferences – the learner may need to use different media types, such as audio, to learn in an online course and work in an online group.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- c) Technology Skills – the learner may need to identify someone to be a technological support person before taking an online course.
- d) Computer Equipment Capabilities – The learner may need to upgrade or install additional software to ensure the best possible online learning experience. The learner should have a modern, up-to-date operating system, an up-to-date browser, a reasonably fast connection to the Internet, virus protection, and possibly headphones with a microphone.

Preparing Students to Learn Online

When planning an online course, it is essential to elaborate a study guide for the course/lecture. The purpose of the study guide is to formulate the information you created in the course planning. The study



guide is also seen as compensation for the teacher's physical presence in online education. It shall be well formulated and capture the participant's attention, interest, and motivation. A well-written study guide contains, for example, a syllabus, tips, advice for remote participants, contact details of responsible teachers, schedules, and a list of literature. Students new to online

learning may initially find this learning disorienting without the physical classroom space and guidance from the physical presence. Other students may initially misperceive online learning as "easier" than learning in a physical classroom. In reality, students often find the workload in an online course heavier because they must cover course material independently and type their discussion comments.

- a) Provide guidelines that detail detailing the minimum technological requirements needed for the course (d technical expertise).
- b) Provide a detailed worksheet with instructions on how to complete t completing the technical tasks required. For example, while it may be clear to you how to post a message for many students, such tasks are new. Also, while some students may be familiar with one online environment, do not assume they are familiar with all online settings. Some examples of information to provide include:
- c) Where to find information online (How to post a message and homework assignments, how to access course readings and take online exams
- d) Describe how to seek help immediately when having trouble
- e) Provide a tutorial on computer basics.

Learning Outcomes:

Learning outcomes are critical because:

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- a) They clearly state to your prospect exactly what your course will teach them and what skills they will gain from it – making it easy for them to understand your offer
- b) They clearly and explicitly explain the benefits, outcomes, results, and rewards that the learner will get as a result of taking the course – and as such help sell your course for you
- c) They help teachers keep completely focussed and on track when creating your course content – as you ONLY have to create content that directly aligns to a learning outcome. Any content that does not directly take students to achieve a learning outcome must be kept out or saved for another course, and thus saves you from course creation overwhelps.

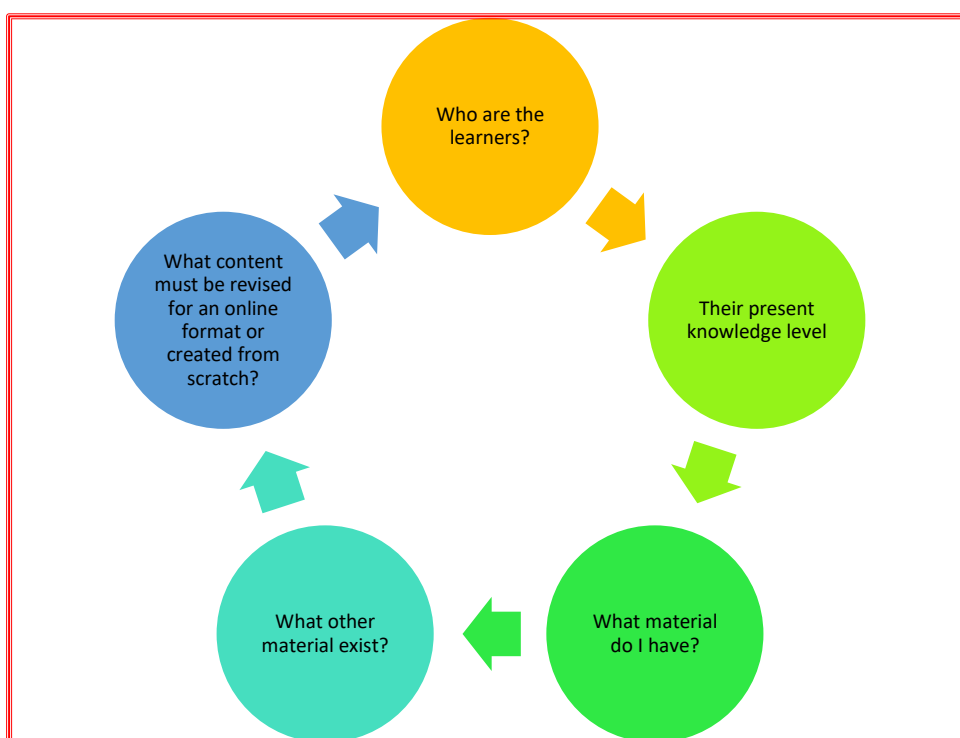
Selecting Course Content

This should be easy if you already have content and an existing audience, like from a Facebook group, blog, or YouTube and Facebook figure out what your most popular content is, and package it into a more structured learning journey

- a) Are learning intentions visible? Students will need explicit guidance and structure about how the tasks will be unpacked and the expectations.
- b) Identify Desired Results: What is the Learning - big ideas and skills? Is learning visible? • Is there success criteria? Build in checkpoints through the lesson/u to get a picture of how students are progressing.
- c) Determine Acceptable Evidence: How will you as teacher know they have learned?
- d) Know they have learned as a teacher or all or some students?
- e) The constraints and distractions inherent in online learning force changes to learning design – as teachers create shorter videos, explore the potential of flipped classroom models and keep instructions short, sharp and to the point in order to be explicit and engage students in the task at hand. Are there different modes and strategies for students to access and process learning?
- f) Are there opportunities to develop capabilities/competencies? Build authentic tasks into the learning design to ensure students will be engaged and have appropriate levels of challenge
- g) Give very clear instructions. What do the students need to read, watch, and write? How much should they write? How and do they set it out? Be clear about what you expect to see in their work. What key knowledge and skills does it need to demonstrate? Set it out as simply and concisely as possible.



- h) Keep passages of text and videos short. Concentration declines very quickly online, particularly with the distractions of social media close social media distractions more 'chunking' of information online than they do face to face.
- i) Feedback keeps students engaged and builds a sense of connection. Timeliness is difficult but particularly important. Screen-casting can be very effective for formative feedback. Aim to keep it as natural as possible and maintain authentic connections with students. This is more relationships than producing a perfect screencast. Monash's Digital Education Research team have published a very [informative resource about using technology to deliver student feedback](#)
 - I. Discussion or forum tasks need responses. This can be from teachers or other classmates – students will give up if they feel no one is reading or viewing what they have said.
 - II. Checklists help students to organise their thinking and their time.
 - III. Avoid getting lost in fancy tools. Keep the emphasis on teaching and learning, not the bells and whistles. There are many excellent resources available. Many amazing resources are reinvented.
 - IV. Provide scaffolder research tasks. The internet can be overwhelming without guidance. Project-based learning provides strong opportunities for differentiation.
 - V. Build-solid-assessment and reflection activities for students.
 - VI. It can be difficult learning online and it is ok to admit that it is complex to provide support when needed. Remote does not have to mean alone.
 - VII. Encourage presentation of work in a variety of formats.



The Group discussion

Essential Questions for New Online Instructors to Consider

- How can you accommodate different learning styles online?
- How might you convert the learning activities you use in the traditional classroom to the online environment? Is it possible to use your materials "as is" or will you need to rethink how they are presented?
- Lecturing is the most common method of presenting content in college classrooms. Why is lecturing a less productive method of teaching in the online environment?
- In way of virtual classroom, lectures are short and few. With this being the case, where will the students get the information they need to obtain the learning objectives?
- Are video, audio, and real-time activities beneficial in a text-based asynchronous online course? Why or why not?
- How will you inform your students of online expectations and realities and help ensure their success?
- What problems can you anticipate that students might have when beginning your course? How might you smooth the way for your students?



Pieces of Advice

Suppose a teacher already teaches a version of the online course in a physical classroom. In that case, they will need to adapt the existing materials to a digital format and factor in how to utilise the same technologies best online or choose different supporting technologies. One should remember that online course development is more extended than face-to-face courses because there is usually more media production and more time spent creating, testing, and troubleshooting the technology. The teachers should ask themselves:

Who are my learners? What motivates learners to take this course? Are learners taking my course to earn a degree or expand their professional skills in this subject?

a) What do my learners already know? Are learners familiar with the subject matter? Have the learners completed the appropriate prerequisite coursework? Do the learners have the technical skills necessary to complete assignments?

b) How does access to electronic and web tools impact the learners? How does access to electronic and web tools impact the learners?

How will learners access the course? (e.g., computer lab or personal devices) Do the learners have access to all equipment necessary to complete assignments? (e.g., video camera or software), Are the materials universally accessible? (e.g., mobile-friendly, closed captioned, meaningful.

Tools for Online design and preparation

([Link to toolbox](#))

Video

See the following Video:

<https://www.teachertube.com/watch?v=QvLFViQiGjI>



This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Quality indicators for Online design and preparation

Course-level learning objectives or competencies are measurable and describe what learners will be able to demonstrate as a result of successfully completing the course.		1	2	3	4	
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Online design and preparation	The module/unit-level objectives or competencies describe outcomes that are measurable and consistent with the course-level objectives.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The learning objectives or competencies are aligned with state standards and/or other accepted content standards	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Learning objectives or competencies are designed and written for the target student audience.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Prior knowledge in the discipline and/or required competencies are clearly stated.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Instructions make clear to learners how to get started and where to find essential course components.	1	2	3	4	5
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Learners are introduction for learners to the purpose and structure of the course developed	1	2	3	4	5	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Minimum technology requirements for the course are clearly stated, and information on how to obtain the technologies is provided.	1	2	3	4	5	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Etiquette expectations (sometimes called "netiquette") for online discussions, email, and other forms of communication are clearly stated	1	2	3	4	5	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Minimum computer skills and digital literacy skills expected of the learner are clearly stated.						
Educational material and curation	The program/course materials contribute to the achievement of the stated course- and module/unit-level learning objectives or competencies, and their relationship with learning objectives or competencies is clearly stated.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Educational material and curation

One of the main differences between online and face-to-face instruction is that face-to-face lectures involve students and instructors interacting in real-time. In contrast, online students work through lessons and other teaching material at their own pace. They ask questions on online discussion forums and must wait for an instructor or another student to respond. When switching from delivering face-to-face to online instruction, it is essential to reconsider the role of the instructor. Whereas the job of a traditional lecturer is to provide knowledge to a large group of students who, for the most part, sit quietly, an online teacher acts as a facilitator, encouraging students to interact with each other to discuss the material. While the instructor is vital in guiding discussions, they are not the only source of knowledge, as students are encouraged to bring their ideas and experiences to the debate. This learning mode can help promote independent thought and greater engagement with the material.

Think about the following:

1. Give self-explanation instructions. What do the students need to read, watch, and write? How much should they write? How do they set it out? Be clear about what teacher expect of their work. What critical knowledge skills does it need to demonstrate? Set it out as simply and concisely as possible.
2. Keep passages of text and videos short. Concentration declines very quickly online, particularly with social media distractions close at hand. Students generally need more 'chunking' of information online than they do face to face.
3. Feedback keeps students engaged and builds a sense of connection. Timeliness is challenging but critical. Screen-casting can be very effective for formative feedback. Aim to keep it as natural as possible and maintain authentic student relationships. This is more important than producing a perfect screencast. Monash's Digital Education Research team have published a very informative resource about using technology to deliver student feedback
4. Discussion or forum tasks need responses. This can be from teachers or classmates – students will generally give up if they feel no one is reading or viewing what they have said.
5. Checklists help students to organise their thinking and their time.
6. Avoid getting lost in fancy tools. Keep the emphasis on teaching and learning, not the bells and whistles. Many excellent resources are available, and the wheel does not need to be reinvented.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



7. Provide scaffolder research tasks. The Internet can be overwhelming without guidance. Project-based learning provides solid opportunities for differentiation.
8. Build-in self-assessment and reflection activities for students.
9. It can be complex learning online, and it is ok to admit that. Be available to provide support when needed. Remote does not have to mean alone.
10. Encourage presentation of the work in a variety of formats.

Content curation

Content Curation is a term that describes the act of finding, grouping, organizing or sharing the best and most relevant organising a specific issue. It is a powerful idea because curation does NOT focus on adding more content/noise to the chaotic information overload of social media. Instead, it focuses on helping any one of us make sense of this information by bringing together what is most important.

Over time, the idea of content curation has felt like more and catch phrase that encompasses many more minor activities that add structure and insight to the cacophony of information being published online. What if we could define content curation as a macro activity and look at how curation might be applied in particular situations? Here we share four potential models for content curation as share four potential content curation model is a flood of information online, and Google can only give teachers the best guess at the most relevant, but millions and millions of pages are returned for any search result. Aggregation is the act of curating the most appropriate information about a particular topic into a single location. Teacher still may have hundreds of pieces of source material – but just the fact that it is in a single location and not millions of pieces of information have a high value for people interested in a particular topic.

1. **Distillation** – The idea behind distillation is that adding a layer of simplicity is one of the most valuable activities that someone can undertake. **Distillation is curating information into a more simplistic format where only the most important or relevant ideas are shared.** As a result, there may be quite a bit of additional content that is lost for the sake of simplicity. However, the value comes from the fact that anyone digesting this content no longer has to contend with a high volume of content and can instead consume a more focused view of information.
2. **Elevation** – The smaller ideas often shared online in 140-character bursts or pithy mobile phone images may point to a more significant societal trend or shift. Height refers to curation with a mission of identifying a larger trend or insight from more minor daily musings posted online. Encompassing much of what many trend-focused websites do, this can be one of the

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



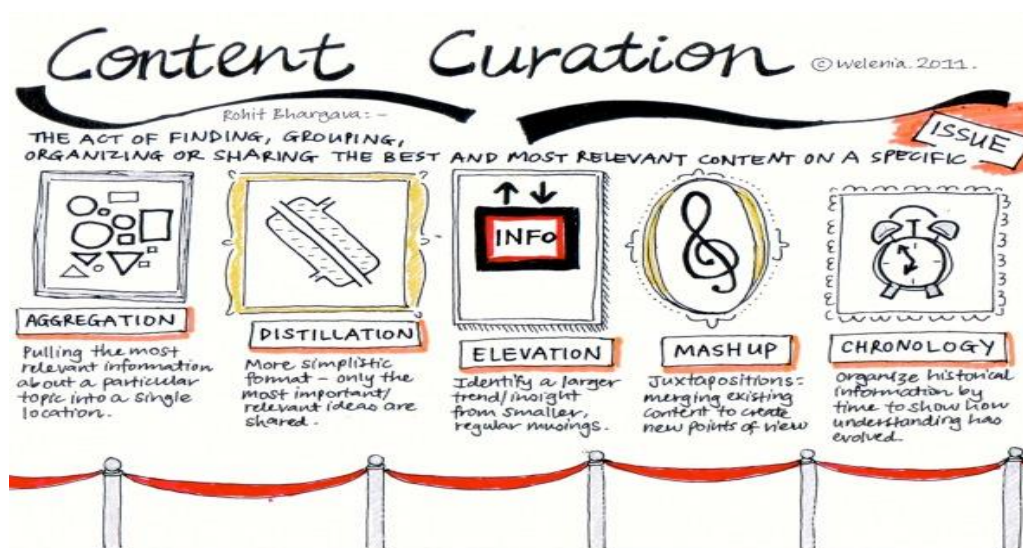
most complicated forms of content curation. It requires more expertise and analytical ability on the part of the person or organization during the curating. The benefit is that it can also be the most powerful in terms of sharing new ideas.

3. **Mashup** – A term often used in the music world to describe the growing trend of taking two or more pieces of music and fusing them– there is a broader implication for mashups concerning the information. Mashups are unique curated juxtapositions where merging existing content is used to create a new point of view. Taking multiple points of view on a particular issue and sharing it in a single location would be one example of this type of behaviour – and could be used to describe the sort of activity that takes place every day on Wikipedia. More broadly, mashups can offer a way of creating something new while still using content curation as a basis for it because teacher are building on existing content.
4. **Chronology** – One of the most exciting ways of looking at the evolution of information is over time – and how concepts or our understanding of topics has changed. Creating a Chronology is a form of curation that gathers historical information organized based on time to show an evolving understanding of a particular topic. Most useful for topics where understanding has shifted over time, this can be a powerful way of retelling history through informational artefacts that exist over time to prove how experiences and insights have changed.

Content curation is undoubtedly an emerging space where more and more thought leaders will continue to share their voices.

Content Curation process

Content Curation ensures that teacher eLearning course is more comprehensive. It gives teacher updated content that teacher can add to teacher eLearning course. It also provides reference online training material that learners can use outside of the online training environment. Best of all, real-time content gives practical experience to the theoretical classes that learners are taking. Unfortunately, curating content manually is quite labour-intensive. Teacher can automate the content curation process to save time and make the whole undertaking more efficient. Some types of automation require complex programming. Others are simply a matter of being more organized in teacher approach. Here are five tips to automate the content curation process.



Digital curation is finding, selecting, grouping, contextualising, and preserving teaching and learning material. Educators have abundant resources and content they would like to share with fellow teachers and their students. However, the challenge they face is figuring out how to efficiently organise all their different content sources in a coherent, easy-to-view. Digital curation, the alignment of curation with digital technology and participatory culture, is new and innovative and provides the opportunity for critical inquiry, a platform to demonstrate interpretative and creative abilities, and the potential for both faculty and students to develop digital literacies.

A Step-By-Step Guide To online learning Content Curation

Content curation can seem like an overwhelming task. How do teacher sift through all the available material and identify what matters to teacher online learners? In this article, we will walk teacher through each step of the content curation process.

a) Define The Ideal Content Curation Methods

According to Wikipedia, there are three main kinds of content curation: collaborative, semantic, and social. Collaborative filtering and social rating are similar propositions. They rate the value of content based on what people are saying about it. Platforms that use collaborative systems include Facebook, TeacherTube, Amazon, Reddit, and Pinterest. By looking at what others say about a piece of content, teachers can decide if it is worth teacher time. The semantic analysis uses keywords to categorise content teachers might be interested in. It will then curate and present the teacher with materials it thinks the teacher might be interested in.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



b) What learner needs

The content of the online learning course will depend on the needs of online learners. If teacher online learning course is already in progress, teacher online learning content curation will focus on supplementary learning materials. Ask teacher online learners what kind of content they require. Is it a case study for real-life context? A deeper dive into a topic they may not have fully absorbed. Some practical online training activities to apply the skills they have learned. If teacher know what they need, teacher have a better idea of where to look and how to find it.

c) Using Mind Map

When teachers trying to figure something out, mind maps are a helpful tool. They help teacher expand a single idea in different directions. They can also be used to merge seemingly discordant concepts by discovering overlapping points. Start with the central area of focus those online learners have requested. Teacher can write this idea in a circle at the centre of the branch. Draw little arrows and circles that branch outwards, with each process containing a tangent. Use this brainstorming technique to incorporate teacher online learners' requests. Within the same mind map, include teacher ideas for fulfilling those requests. Teacher circles can consist of questions to expand teacher thinking even further.

Types of learning

When you are designing an online course, you need to create content for the four main learning types.

To recap what those types are:

- a) Visual (Spatial)
- b) Aural (Auditory-Musical)
- c) Verbal (Linguistic)
- d) Physical (Kinaesthetic)

Following guideline structure can be of help to elaborate content for online courses with regards to type of learning:

1. Purpose: Recognize, list, describe, identify, locate

"What should your students remember after completing this course/module?"

- 1.
- 2.
- 3.

Define activities that will help your students remember the subject matter of this course/module, e.g.:

1. Memorize a list of facts
2. Describe the purpose of the course/module"

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



2. Purpose: Understand

Interpret, summarise, paraphrase, compare, classify, and explain.

"What should your students understand after completing this course/module?"

- 1.
- 2.
- 3.

Define activities that will help your students understand the subject matter of this course/module, e.g.:

1. Summarise the lesson
2. Explain the examples used in the presentation"
3. Apply: Execute, use, implement, illustrate, teach, solve, modify, calculate

"How will your students be able to apply their new knowledge or skills after completing this course/module?"

- 1.
- 2.
- 3.

Define activities that will help your students apply the subject matter of this course/module, e.g.:

Use the knowledge from the module to complete a quiz"

4. Analyse: Compare, contrast, categorise, differentiate, investigate, deconstruct

"What analytical skills will this course/module teach your students?"

- 1.
- 2.
- 3.

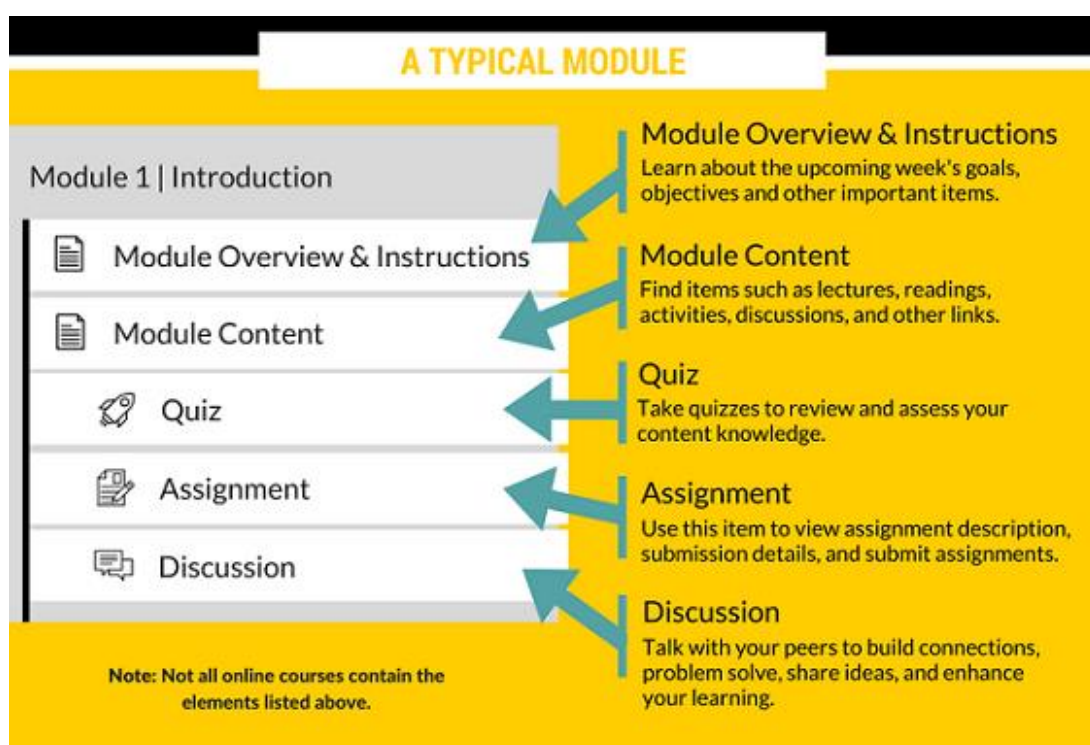
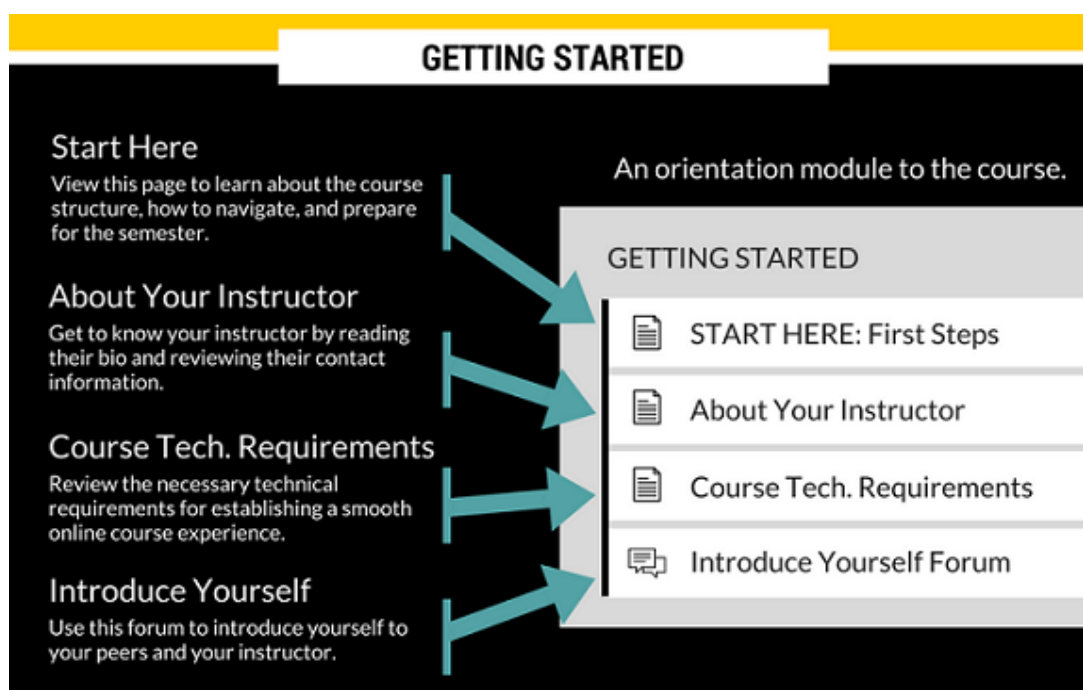
Define activities that will help your analyse relevant information using their new knowledge or skills,
e.g.: Compare two approaches discussed in the course"

5. Create: Design, construct, plan, produce, invent, plan, propose

"What will your students be able to create after completing this course/module?"

- 1.
- 2.
- 3.

Define activities that will help your analyse relevant information using their new knowledge or skills,
e.g.: Design a plan/strategy/model"



Student interaction with course material is a key factor in online learning. The design of course content should aim to deliver outcomes via a balanced use of online learning media, online support facilities and

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



(in the case of courses employing a blended learning approach) other teaching media. In particular, content should:

- a) be relevant, appropriate and presented
- b) build on and reinforce prerequisite concepts and skills
- c) introduce, assess and reinforce new concepts and skills
- d) be logically structured and sequenced
- e) incorporate interaction (student-content and student-student)

Teachers should match their use of the media and delivery modes available to them to the course outcomes identified in the analytical phase. There are tools available to support learning.

Use Multiple Media tools for Learning Materials.

Traditionally, many of us share content by asking students to read a chapter or article, and then we create by presenting additional content through lectures. We can accomplish these forms of sharing content in similar ways online. Many resources are available to give text versions of lessons, and we can also present classes through video conferencing or asynchronous pre-recorded video lectures online. In addition, the range of free resources is labelled online, such as pre-recorded videos and free open educational resources (OERs). A mix of media (text, video, audio, and graphics) is typically more effective than using only one type because the variety can help keep students more engaged. Teachers can use various tools to create digital lean Online learning content authoring tool is a piece of software that enables digital content creation. This could be as simple as making a Microsoft Word document or as complex as a graphic design tool. It can include compliance, on boarding, hard and soft skills etc. online learning authoring software ranges from powerful and highly specialised to very basic. The questions a teacher should ask himself:

1. Allow teacher to personalise and adopt a people-centred approach to learning.
2. It makes it easy to roll out online L/T courses in different locations and update content to comply with new regulations quickly and easily ease.
3. Allows teachers to continually improve online L/T by analysing data and collating feedback on the outcome
4. Enables teachers to adapt to new demands and produce online L/T content quickly.

Pieces of Advice

The following are recommended areas of consideration at this stage:

Content

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



The first area of concern for material designer's deals with finding a framework that aids the procedures to tailor the material in such a way it responds to the learning objectives, to the cognitive processes to be developed and to the topics and subtopics the material will, *per se*, cover. Furthermore, material designers need to regard it as imperative that the following will take place:

- a) The expected products are defined in accordance with the curriculum of the institution in which they will be used.
- b) The expected products are subject to a continuous evaluation stage¹⁴, which could possibly result in further modifications in order to ensure an offering of high-quality, resourceful, up-to-date and pedagogically based material for the educational community.

Structure

The structure of the material will be determined based on its *organisation* and its *interactivity* since both components allow the users to have not only accessible routes to utilise the materials but also to find appealing and practical modes for presenting content. The *organisation* of the material must take the following into account:

1. *Information*: Defining sections and activities contained in the material.
2. *Navigation*: Plotting how content moves from one point to another in the course material to ensure that the content is accessible to learners in various forms. The access to the material should be via buttons (e.g. previous, next, home/menu). They advise the following:
 - a) That buttons should be in the same position on all screens for ease of navigation.
 - b) That content units should be presented in small elements. The pages (visualised on the screen) need to be organised into "meaningful, self-contained chunks" that do not spread out onto the next page. This way, learners are provided with a concise flow of information that enables them to understand the content presented on a screen before progressing to the next.
 - c) That a bookmarking facility or system of menus should exist that permits learners to control the progress of the material (stopping, restarting, pausing, rewinding material, etc.) and also to move within the menus and exit the current section in which they are working as needed.
 - d) That help and hint buttons help learners resolve doubts regarding material content and technical issues.
3. *Material Design*: Clarity, aesthetics, and neatness are three features that help the material appeal to the eye, legible and understandable. Designers can achieve these by observing the following:

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- Combining images and text but avoiding excessive use of texts and images onscreen.
- Presenting the information in a clear, standard and labelled way (by using bullet lists, charts, different fonts, etc.).
- Using clear and succinct language in the texts.
- Using appropriate colours to help learners identify main ideas and to discriminate between different kinds of information.
- Having icons that help learners to visualise and recall recurrent information.
- Choosing clear images/graphics, and multimedia for specific and well-defined purposes.

Tools for educational material and curation

[\(Link to toolbox\)](#)

The quality indicators for digital content curation

Digital content curation	SEARCH - I know how to Pick a topic and discover content sources	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	SELECT - I know how to find and collect quality content to share	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	MAKING SENSE - Organise and editorialise the content, annotate the content and add value by comments, retitling, summarising, etc.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	SHARE - Determine where to share the content: social media, e-mails, web pages, etc.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The teacher can make sure I can produce content for their level and the correct voice	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The teacher can avoid repetition and focus on growing what they have learned.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The teacher can provide prerequisite materials to learners, and they can plan accordingly before the course begins	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The teacher will be able to curate content I already have means not having to start everything from scratch	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	When I am taking inventory of the varying stages of content will inform how much work it will require to prepare the content for online use.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



	The online learning content is well structured with clear relationships between elements and signposting of study routes through the course materials.	1	2	3	4	5
		○	○	○	○	○
	The specification of course content demonstrates appropriate matching of online learning media with educational objectives.	1	2	3	4	5
		○	○	○	○	○



Assessment and examination

It should be the goal of all online education to develop and implement assessment systems that are recognised as at least equivalent to those used in F2F teaching regarding their effectiveness and integrity. Assessment should include both formative and summative elements. Formative assessment provides feedback to students; summative assessment contributes to their course results. Individual items of assessment may fulfil either or both functions. Curriculum designers should address all the intended learning outcomes for a programme and ensure that there is an overall strategy for their assessment that reflects the diversity of the modes of knowledge and skills acquisition.

Formative assessment

The goal of formative assessment is to monitor student learning and provide ongoing feedback that students can use to improve their knowledge, helping them to identify their strengths and weaknesses and target areas that need work. It can also help academics to recognise and address problems more efficiently. Formative assessment can take various forms, from voluntary online self-assessment tests with built-in feedback to more formal assessment items. Formative assignments typically do not contribute to the student's final grade. However, items that are more formal may include a summative assessment role but also demand individualised feedback from a tutor or examiner. A student can judge their progress and reflect on their further learning. The part of formative assessment in online L/T curricula is crucial in overcoming the limitations imposed by independent learning. Curriculum designers need to exploit the opportunities offered by online L/T platforms to provide students feedback and allow regular assessment of progress. New technologies offer options for formative peer assessment (peer review). Students can use online communication tools such as forums, wikis and social media to view each other's work (perhaps in draft form) and provide constructive feedback. Students can use this feedback to improve their work before the final submission. Students will need guidance on providing constructive critical feedback to each other. Without such guidance, student feedback is unlikely to be sufficiently in-depth to help others. Self-assessment and reflection can be valuable in assisting the students in improving their work and developing as self-regulated learners.

Types of online formative assessment

Quick check - teachers can use short quick reviews to v. It can be by posing a general question about the previous day's lesson, like "Does everyone feel comfortable with what we learned about [fill in the blank]?" and have students respond individually by dropping an emoji or a thumbs-up/thumbs-down in

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



their chat box or video window. Students can also hold a sticky note or piece of paper to the screen with a response. They do not all have to be serious questions; funny questions can help engage students at the start of a lesson.

Tweets - To help students synthesise essential takeaways from a lesson, ask them to take one to two minutes during live class time to summarise everything they learned on a particular unit by typing it into a Google doc, in a chat box, or on a virtual message board like [Padlet](#).

Peer-to-peer evaluation - When learning outside the classroom, fostering student relationships is critical. Teacher can do both simultaneously, drawing a bead on teacher students' learning while encouraging deeper peer connections. Assign each student a virtual friend for the week, or pair off students randomly to get them talking across the class—and assess each other's learning. In pairs, students can be placed in breakout rooms on Zoom or another videoconference platform to do many of the same activities they once did in the classroom to check for understanding. Give each student a general rubric or use the [TAG feedback](#) to evaluate their peer's assignment; have them share the feedback with teacher. Alternatively, have students teach each other a concept while recording themselves (audio or video) and upload the file for teacher to review. These activities can also be adapted for asynchronous learning tools in Google Classroom.

Summative assessment

Summative assessment is aimed at awarding a grade or mark to the student. These grades determine whether the student progresses to the next programme stage or gains an award on completion. Procedures for summative assessment need to be:

- a) Explicit: the requirements for successful completion of the assessment item and the criteria by which marks are allocated should be clear to students and examiners alike.
- b) Fair: the nature of the assessment should not favour or disadvantage any particular student or group of students.
- c) Valid: the assessment should effectively test the achievement of the particular learning or skills outcomes under consideration.
- d) Reliable: the procedures for assessing performance and allocating marks should be internally consistent - concerning time, place, and the markers involved.
- e) Plural: not over-reliant on one particular form of assessment.



Types of online summative Assessment

1. **Online multiple-choice exams**

Students must choose from a specific set of answers. No written responses are required, and the answers are typically presented at random.

2. **Online Presentations.**

Learners create an online presentation that delves into a particular topic, which they must then share with their peers or in a public forum. The online presentation shows their mastery of the subject and determines whether they have learned the key concepts and ideas.

3. **Creating a website or blog.**

This is a modern twist on online presentation assessments, wherein learners are asked to create a site or blog that covers all aspects of the topic in question. They must put the information they find using their own words and create a design for the site, which also tests their communication and technology skills.

4. **Learners' online portfolios.**

Throughout the online learning course, learners are asked to place important online assignments and online learning activities into an online portfolio, which is then assessed at the end of the term by the teacher of the online learning course. They can also create an online portfolio comprised entirely of new work that is used to determine their final grade.

5. **Online group projects.**

Learner's work with their peers to complete an online group project that showcases their comprehension and skill mastery. For example, they might create a slideshow that highlights the key takeaways from the online learning course.

Feedback activities

Every learning activity should include feedback to guide learners in their learning journey. Without feedback, it is difficult for learners to know if they are on the right track. Therefore, it is essential to include feedback on correct and incorrect answers and create opportunities to remediate learning upon completion of the activity, if necessary. Feedback is most effective when provided immediately after completing the training, be it a quiz or a submitted assignment. Of course, an online quiz can be graded by the computer; therefore, learner feedback can be provided immediately. However, if learners submit an assignment, it will take time for the instructor to grade it and provide appropriate feedback. It is crucial to give the learners feedback within as short a timeframe as possible (2-5 days constitutes



acceptable practice). The most effective feedback is comprehensive and explained to the learners. Telling your learners that their answer is "Correct" or "Incorrect" is somewhat helpful; however, telling them why it is "correct" reinforces learning and telling them why it is "incorrect" guides them in the right direction.

1. **Group feedback on the board.** This is one of the most common techniques in teaching using the communicative method. After students have completed the assignment and compared their answers in pairs, invite them to write the correct answers on the board. One answer per student. You can simply tell each of them the number of the sentence or the question to which they will write an answer. The main thing is to carefully follow them while working on the exercise. After the answers have been written on the board, the students should be asked to check again whether there is an error on the board. In this way, they will double-check the exercise and be able to correct mistakes in a friendly atmosphere. With help of the [Miro board](#), you can provide students with the whiteboard and all necessary instruments to write their answers.
2. **A walk through the gallery of errors.** After students have completed the assignment, a teacher should collect all students' errors and attach them to the [Miro board](#) without writing correct answers. Then a teacher invites students to this board and asks them to walk in pairs and decide how to correct these mistakes. After that, you can check with the whole class whether everyone managed to find all the mistakes and correct them. This form of feedback will suit both responsible students and disobedient students who cannot concentrate. In addition, a teacher can make this exercise like a game by dividing students into teams and adding bonuses.
3. **You are a teacher.** This type of feedback is ideal for stronger students who often finish exercises faster than others do. When the first students have finished doing the exercise, the teacher gives them the correct answers to check. These students then work in groups with two or three other students and play the role of the teacher saying, "Try again" if they hear a mistake in a sentence.
4. **Targeted response.** Educators tailor an assignment and its assessment to a single learning objective. For example, students struggled with commas, so the teacher asks them to write a very short one-page paper about anything they want in any genre. It is called the Comma Paper, and its only criteria (and the only thing I give feedback to) is that they must include at least four correctly used examples of each type of comma we studied in class. To speed the assessment of and response to these papers, the teacher should have students turn them in on [Google Classroom](#). That enables to use of the Find Function (Command-F) to highlight all of the commas in the piece, so a teacher can quickly scan for comma issues. It also allows me to pre-populate



two comments in the comment bank (if you do not know how to do this, [here is a quick tutorial](#)).

One is a short congratulatory note for students who had no comma errors. The other is a message, which tells students the number of comma errors and lets them know that to get credit for the assignment; they must find the errors and fix them during the class time provided.

5. Micro-conferences. Conferences are a powerful feedback tool. The exact structures of micro-conferences should vary according to the topic and situation, but they work best with the same basic components:

- a. The teacher identifies one or two focus areas for the students and provides a mentor text or short activity to demonstrate to the students what he is looking for.
- b. Each micro-conference starts with the student telling the teacher about his self-assessment. The teacher then gives her thoughts and the conversation continues as needed. Sometimes the conversations last only about 10 or 15 seconds because the student clearly understands the focus area; other times they will go a bit longer because the student has questions or misconceptions, but the goal is to average 1 to 2 minutes, maximum.
- c. If the conference will need more time, the teacher can give the student a tangible task for the moment and politely ask to stop back by once everyone else has had a conference.
- d. Students engage in a self-assessment activity where they assess their current understanding and performance concerning the focus area(s) and back up those assessments with examples.



6. **Assessing prewriting.** Student prewriting provides a wonderful opportunity to give meaningful formative feedback in almost no time at all. When we ask students to share their work in its earliest stages, we can assess it and offer real, meaningful feedback in mere seconds—seconds that could save minutes for teachers and hours for students down the road. For example, we

Narrative Prewriting	
Title _____	
Author _____	
Topic (What is your story about?) _____ _____ _____	
Characters (Who?) _____ _____ _____ _____ _____	Setting (When? Where?) _____ _____ _____ _____ _____
Illustrate the main event to get your ideas ready: 	

can have students engage in the common prewriting activity of having them draw a visual map of a narrative, but instead of just treating that as brainstorming, we can use those maps to assess and engage in a dialogue about their initial story structure, characterization, details. Further, because the students are in the early stages, they are often more open to big suggestions about structure and character than they are once the paper has already been written.

7. **Blogging.** Receiving feedback from peers improves student performance. Try letting students choose their own blog topics to boost enthusiasm. Teacher helps students to create profiles and assist in writing post to get to know the interface. Having been acquainted with social network students have to publish well-argued posts (weekly) or video stories related to the content of classes. Scrolling students' feed teacher can provide them with quick feedback by commenting their posts and stories. Introverted students tend to share more online than they do in person, so blogging is a valuable way to know students better.

Tools for assessment
([Link to toolbox](#))



Quality indicators for assessment and feedback

Feedback & Assessment	The online teacher knows and understands the need for timely, constructive, personalized feedback to students about assignments and questions.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The online teacher is able to orient students to teacher's instructional methods and goals and invite students to provide feedback on their perceptions of how they are learning in a course.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The online teacher knows and understands techniques to maintain strong and regular feedback communication with students by using a variety of tools.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	There is an appropriate balance of formative and summative assessment, taking advantage of the opportunities of online assessment for providing timely feedback to students.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Assessment processes are well documented and all those involved in marking are trained in their role, work to common marking schemes and are subject to effective monitoring	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	All involved in assessment are aware of the particular problems of the identification of the work of individual students, and appropriate security arrangements are applied to summative components of continuous assessment and examinations	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The online teacher is able to create and implement assessments in online learning environments in ways that ensure validity and reliability of the instruments and procedures.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	The online teacher is able to develop and deliver assessments, projects, and assignments that meet standards-based learning goals and assess learning progress by measuring student achievement of learning goals.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Innovative assessment approaches, such as online collaborative work, peer assessment and self-assessment, form a part of the institution's practice in this area.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Pedagogical approach

When planning an online course, it is essential to elaborate a study guide for the raining/course/lecture.

The purpose of the study guide is to formulate the information teacher created in the course planning.

The study guide is also seen as compensation for the teacher's physical presence in online education. It



shall be well formulated and capture the participant's attention, interest, and

motivation. A well-written study guide contains, for example, a syllabus, tips,

advice for remote participants, contact details of responsible teachers, schedules,

and a list of literature. Students new to online learning may initially find this

learning disorienting without the physical classroom space and guidance from the

physical presence. Other students may initially misperceive online learning as "easier" than learning in

a physical classroom. In reality, students often find the workload in an online course heavier because

they must cover course material independently and type their discussion comments.

- f) Provide guidelines detailing the minimum technological requirements for the course (hardware and technical expertise).
- g) Provide a detailed worksheet with instructions on completing the technical tasks required for coursework. For example, while it may be clear to teacher how to post a message for many students, such tasks are new. Also, while some students may be familiar with one online environment, do not assume they are familiar with all online settings. Some examples of information to provide include:
- h) Where to find information online (How to post a message and homework assignments, How to access course readings and take online exams

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- i) Describe how to seek help immediately when having trouble
- j) Provide a tutorial on computer basics.

Group discussion

Essential Questions for New Online Instructors to Consider

- h) How can teacher accommodate different learning styles online?
- i) How might teacher convert the learning activities teacher use in the traditional classroom to the online environment? Is it possible to use teacher materials "as is," or will teacher need to rethink how they are presented?
- j) Lecturing is the most common method of presenting content in college classrooms. Why is lecturing a less productive way of teaching in the online environment?
- k) In the virtual classroom, lectures are short and few. With this being the case, where will the students get the information, they need to obtain the learning objectives?
- l) Are video, audio, and real-time activities beneficial in a text-based asynchronous online course? Why or why not?
- m) How will teacher inform teacher students of online expectations and realities and help ensure their success?
- n) What problems can teacher anticipate that students might have when beginning teacher course? How might teacher smooth the way for teacher students?

Designing learning approaches

The instructional model that frames how teachers plan their teaching and learning program in face-to-face class can be used as the foundation to design learning online. A teacher should consider where students are at with their learning, the curriculum content they need and the teaching and assessment strategies that can be effective. Alongside this, he /she should consider the technologies that are aligned, available and can be adapted to support engaging students, providing rich learning tasks and monitoring learning online. Learning design should be re-framed in the context of online environment. The important aspects of designing learning online are:

- a) Students will need explicit guidance and structure about how the tasks will be unpacked and the expectations.
- b) Identify Desired Results: What is the Learning - big ideas and skills? Is learning visible?
- c) Build in checkpoints through the lesson/unit to get a picture of how students are progressing. Determine Acceptable Evidence: How will teacher know they have learned?
- d) What do teacher need to be structured for all or some students?

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- e) The constraints and distractions inherent in online learning force changes to learning design – as teachers create shorter videos, explore the potential of flipped classroom models and keep instructions short, sharp and to the point in order to be explicit and engage students in the task at hand. Are there different modes and strategies for students to access and process learning?
- f) Build authentic tasks into the learning design to ensure students will be engaged and have appropriate levels of challenge
- g) Which learning partners could add value to the learning experience e.g. can teacher bring in a visiting expert virtually?

Practical steps for designing learning

Begin a lesson with short review - Recap the previous week/lesson at the start of the next lesson/week - keeps reminding students that they are learning and have completed work. Using mini whiteboards in pairs of students and asking quite short questions for them to respond to (based on previous lesson's content).

Link learning structures to success criteria. Use a range of visual, audio and written instructions.

Ask questions - Set up individual channels to allow private discussion to encourage understanding. Ask questions live, students can share questions in a thread or verbally.

Provide models and worked examples - Create video snippets or narrated PowerPoints with the teacher modelling so students can play back later.

Guide student practice - Facilitate group work and individualised support through online video meetings to guide instruction and support students.

Check for understanding - Exit passes with opportunities for rating explanations or posing wonderings.

Use Online formative assessment

Provide difficult tasks - Differentiate tasks inviting students to select the right task for themselves. Students use traffic light system to indicate the level of difficulty for them.

Engage students in weekly and monthly review success rate - Online weekly quizzes with immediate feedback to students and teachers. Reflection activities using journals/diaries



Facilitating Online Learning



The teacher's first and most well-known responsibility is to share their knowledge with the students. Whether in a classroom or an online course, the teacher needs to be an expert in their area to share their expertise so that the students understand it. However, do

not think that just knowing everything about the subject teacher want to teach is enough to succeed as a teacher. The good educator is the one who can pass along his knowledge in a clear and didactic manner. Even if teacher plan excellent, thought-out classes, some questions will undoubtedly come up during the course. Therefore, another responsibility of teachers is to know how to instruct their students and answer all those questions. In addition, even if they do not know all of the answers, it is the role of the educator to find these answers to help the students in the best possible way. Another way of teaching is to advise students to seek knowledge from other sources. For some students, this will be their first online training. Make sure teacher guide them from the beginning to the end so that they can see the advantages and benefits of this learning modality. Show them the steps, ranging from how to use and access the tools to how to organise themselves to complete the course evaluation successfully.

Some recommendations:

Familiarising with the modern formats of:

- a) **Training Webinars** - They are usually 1-2-hour lectures on a specific topic when the speaker and participants are simultaneously in the webinar "room"
- b) **Online coaching sessions** are usually performed by a small group of participants (12-18 people) in real-time with an instructor.
- c) **Video courses** are recorded lectures or lessons, which are usually accompanied by slides, infographics, and images on the screen. Learners can choose the time and duration of the training and pause the Video at any time.
- d) **Flipping online courses** - The flipped classroom is a crucial model of [blended learning](#), where the traditional sequence of educational activities has changed; mainly, the presentation of theoretical material in the form of lectures goes first, and the organisation of practical homework assignments is presented. Students independently study theory and conceptual apparatus before starting classroom studies in the subject.
- e) **Use various interactive tools** to facilitate online training Interaction is aimed at active learning

because learners tend to remember more when they apply new knowledge into practice instead
This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



of just listening and taking notes of lectures. "Thoughtful interaction" does not mean that teacher need to stuff every course slide with [quizzes](#) and animations. The purpose of [interactive online learning](#) is not about mind-blowing visual content but about creating engaging content, which helps to facilitate online training.

- f) **Encourage group collaboration** - Demonstrating the potential to collaborate successfully is crucial for students who move into cutting-edge workplaces. Employers are hoping to hire people who possess teamwork skills and test them on cooperating, completing projects with colleagues, and remotely. Thus, group activities give an excellent opportunity for learners to polish off such skills and improve their academic performance.
- g) **Provide learners with bite-sized training modules** - The popularity of [micro learning](#) approaches is constantly growing because it meets the needs of a modern learner in terms of flexibility, fast-delivered feedback, and just-in-time answers. Here are the specific features of micro learning that make it different from any other approach.
- I. Length: average duration of each module is approximately 5 minutes.
 - II. Focus: each unit provides a particular answer to a specific question.
 - III. Variety: micro learning includes a massive variety of content, such as video lectures, audio podcasts, presentations, games, assessments, etc.
 - IV. Mobile-friendly: content is meant to be responsive and user-friendly from any device.
- Quality indicators for pedagogical approach

Quality indicators for pedagogical approach

Pedagogical approach	Efficient delivery of structured teaching materials embedded testing and automated feedback provided online, allowing for flexible pace of study by independent learners working to self-determined schedules.	1	2	3	4	5
		○	○	○	○	○
	Online learning can provide access to information resources that are on a par with curriculum.	1	2	3	4	5
		○	○	○	○	○
	Various online social media tools are used for online collaborative learning. The pedagogical approach provide flexibility of study and will provide appropriate academic support	1	2	3	4	5
		○	○	○	○	○
	Fitness for purpose drives decisions on the selection of teaching and learning activities. The online learning/teaching is such that different methods and media are well chosen	1	2	3	4	5
		○	○	○	○	○



	within and between courses, both in distribution over time and extent of use.					
	Well informed decisions on the use of teaching and learning activities are made routinely and reflect the development of learner knowledge and skills	1	2	3	4	5
		○	○	○	○	○

Learners' engagement and support

Motivation is defined as 'a theoretical construct to explain the initiation, direction, intensity, persistence, and quality of behaviour, especially goal-directed behaviour' (Brophy, 2010:3). It is associated with individual cognitive and affective processes on situated and interactive interaction between learners and their learning environment in accordance to the contextual and social factors as enablers or barriers. Motivation, which is described as an 'engine of learning' (Paris & Turner, 1994) affects in what, how, and when of learners' learning. In their studies, Ryan and Deci (2000a, 2000b) argued that motivated learners are able to do challenging learning activities, which engage them actively in finding out appropriate strategies to facilitate their learning, enjoying them and indicating better, persistence, and creative learning.

In the context of education, engagement can be defined as a measure of a student's participation in the learning process. This includes their interaction and cooperation with the teacher and classmates. In short, the level of student engagement is a good measure of the likelihood that a learning experience will be successful. Engagement is what makes anything in life memorable. Education is no exception. In addition, therein lies the challenge – especially with online education. Low student engagement results in boredom, alienation, and consequent low achievement – and higher rates of dropout (from the class or the school). Moreover, nowhere is this truer than in remote education. Low student

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



engagement results in boredom, alienation, and consequent low achievement – and higher rates of dropout (from the class or the school). In addition, nowhere is this truer than in remote education.

As online learning requires students' participation on their own responsibility for their own learning, they are unable to just join along the class with other students. The requirement forces them to participate in the online class with their own awareness, to gain new knowledge and information while interacting with teacher and other student. Available research argued that the success of the students' learning was related to their motivation. To motivate students, be able to answer: "What's in it for them?" Following are some course components that will encourage participation in the online course:

- a) Require regular participation with weekly assignments or quizzes Make material relevant Present conflicting opinions class discussions group projects collaborative learning practical exercises immediate feedback articles and course information database independence in time and location
- b) What happens if I encounter low rates of participation?
- c) What about "low" levels of thinking?
- d) How do I encourage higher levels of thinking

Measure motivation during the course lifecycle

Fostering student motivation is a difficult but necessary aspect of teaching that instructors must consider. Many may have led classes where students are engaged, motivated, and excited to learn, but have also led classes where students are distracted, disinterested, and reluctant to engage—and, probably, have led classes that are a mix. What factors influence students' motivation? How can instructors promote students' engagement and motivation to learn? While there are nuances that change from student to student, there are also models of motivation that serve as tools for thinking through and enhancing motivation in our classrooms. This guide will look at three frameworks: the expectancy-value-cost model of motivation, the ARCS model of instructional design, and self-determination theory. These three models highlight some of the major factors that influence student motivation, often drawing from and demonstrating overlap among their frameworks. The aim of this guide is to explore some of the literature on motivation and offer practical solutions for understanding and enhancing student motivation. Below is a description of the three factors, according to the model, that influence motivation.

- **Expectancy** refers to a student's expectation that they can actually succeed in the assigned task. It energizes students because they feel empowered to meet the learning objectives of the course.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



- **Value** involves a student's ability to perceive the importance of engaging in a particular task. This gives meaning to the assignment or activity because students are clear on why the task or behaviour is valuable.
- **Cost** points to the barriers that impede a student's ability to be successful on an assignment, activity and/or the course at large. Therefore, students might have success expectancies and perceive high task value; however, they might also be aware of obstacles to their engagement or a potential negative affect resulting in performance of the task, which could decrease their motivation.

Three important questions to consider from the student perspective:

Expectancy – Can I do the task?

Value – Do I want to do the task?

- *Intrinsic or interest value*: the inherent enjoyment that an individual experiences from engaging in the task for its own sake.
- *Utility value*: the usefulness of the task in helping achieve other short term or long-term goals.
- *Attainment value*: the task affirms a valued aspect of an individual's identity and meets a need that is important to the individual.

3. Cost – Am I free of barriers that prevent me from investing my time, energy, and resources into the activity?

It is important to note that expectancy, value and cost are not shaped only when a student enters your classroom. These have been shaped over time by both individual and contextual factors. Each of your students comes in with an initial response, however there are strategies for encouraging student success, clarifying subject meaning and finding ways to mitigate costs that will increase your students' motivation. Not everyone may end up at the same level of motivation, but if you can increase each student's motivation, it will help the overall atmosphere and productivity of the course that you are teaching.

Questionnaire for measuring the motivation during course lifecycle

Self-Efficacy			
Nr	Question	Yes	No
1	I'm certain I can master the skills taught in this course		
2	I'm certain I can figure out how to do the most difficult work		
3	I can do almost all the work in the course if I do not give up. Even if the work is hard		
4	I can learn it. I can do even the hardest work in this course if I try		
Persistence			

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



5	I often feel so lazy or bored studying course literature that I quit before finishing		
6	I often give up when I'm studying difficult issues and focus on the easier ones		
7	I have no difficulties in motivating myself to complete the study tasks even if they are not particularly interesting to me		
8	I work really hard to do well in my studies, even if I don't like all the tasks or the material I am reading		
Self-Regulation- time management			
	I can stick to the schedule I have made for myself. I stick to a certain timetable when I am studying. I use the time that I have reserved for studying efficiently		
	I always stick to the study schedule that I have made. Self-Management I try to accommodate my own style of studying so that it would match with the requirements of each course		
	Before a study assignment, I often go through its different steps in my mind. I set learning goals to be able to direct my studies		
	After a study assignment I often think about how I did and how I could improve my performance. Persistency I often feel so lazy or bored studying course literature that I quit before finishing. I often give up when I'm studying difficult issues and focus on the easier ones		
	I have no difficulties in motivating myself to complete the study tasks even if they are not particularly interesting to me		
	I work really hard to do well in my studies, even if I don't like all the tasks or the material I am reading		
Self-Regulation - Persistency			
	I often feel so lazy or bored studying course literature that I quit before finishing		
	I often give up when I'm studying difficult issues and focus on the easier ones		
	I have no difficulties in motivating myself to complete the study tasks even if they are not particularly interesting to me		
	I work really hard to do well in my studies, even if I don't like all the tasks or the material, I am reading		
Goal Orientation - Mastery			
	It is important to me that I learn a lot of new concepts		
	One of my goals is to learn as much as I can. One of my goals is to master a lot of new skills		
	It is important to me that I thoroughly understand my work. It's important to me that I improve my skills		
Goal Orientation - Performance approach			
	It is important to me that other students think I am good at my work. One of my goals is to show others that I'm good at my work		
	One of my goals is to show others that work is easy for me. One of my goals is to look smart in comparison to the other students		
	It is important to me that I look smart compared to others		
Goal Orientation - Performance avoidance			
	It is important to me that I do not look stupid. One of my goals is to keep others from thinking I'm not smart		



	It is important to me that my lecturer/tutor doesn't think that I know less than others		
	One of my goals in class is to avoid looking like I have trouble doing the work		
Goal Orientation - Disengaged			
	I am only interested in passing the course		
	As long as I pass the course, I don't care about how stupid I look compared to others		
	I don't care about what I learned, as long as I pass the course		

Measure used by teachers to increase student motivation

Set Expectations and Model Engagement

Introduce yourself as teacher before start of the course - Consider sending an email to students 1-2 weeks before the start of the semester to introduce yourself and to pass along any information they will need to be successful, including things like if/when there will be scheduled synchronous class meetings, info on the course textbook or any other materials they may need for the course, when the course will become available in Blackboard, etc. Consider also reaching out a few times before the course starts to include students who are just joining or checking in themselves. It also helps to post an announcement and send an email in case students only check in to one system.

Provide a timetable of the activity and assignment due dates for your course. This could be accomplished in multiple ways, ranging from including a matrix with activity due dates in the course syllabus, creating a course quick guide with listing of due dates by week/unit/module, and/or using due dates in Blackboard activities and assignments so that they are listed in students' Blackboard course calendar and activity stream.

Welcome your students to the course and open the course early to give them time to explore and become familiar with the course navigation. Send an announcement out to let students know the course is available.

Set specific times for office hours to allow students to ask questions and to connect with you periodically throughout the course. If you have a TA, encourage them to also host office hours and to do periodic outreach to students in the course to keep them engaged.

Let your student know what is expected of them and how they can meet those expectations. It is important to add these to your syllabus, but students will appreciate being reminded of the expectation within the course. Consider adding discussion etiquette guidelines to discussion forums or being specific about attendance requirements before a virtual class meeting.

Establish norms

Revisit any norms the class may have established at the beginning. What should still hold true in the new format and what may need to change?

See if the platform allows users to set up profiles. Have students personalize theirs with a picture and pronouns.

Decide if students should speak up or if they should use the "raise hand" feature or another signal.

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Ask students to set an intention and to be present. Consider whether they should close their other browser windows, move phones, and take notes.

Promote engagement

Give clear instructions to avoid unnecessary confusion. Post instructions in the chat room so that students can readily access them.

If students are in a breakout room, **circulate through the rooms and check in on how students are progressing**.

Encourage students to come prepared to lead discussions themselves — have them prepare questions or take on a role that helps facilitate the class (recorder, timekeeper, and reporter).

Give students stretch breaks for sessions longer than 40 minutes.

Quality indicator for student support and engagement

Student support and engagement	The quality of study materials and guidance documents is reviewed by experts to check that they are suitable for self-directed e-learning	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Materials to support the acquisition of required learning skills are built into courses, or are available to students at institutional level when needed	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Students are clearly informed about the kind of pedagogic support they will receive in each course	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Tutoring of each course is carefully planned. Guides about tutoring activities are available to students and tutors prior to the course	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Feedback and responses to students' concerns and questions are delivered within a short period of time	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Advice, guidance and tutoring are supported via asynchronous and synchronous online tools (e-mail, forum, chat, videoconference, etc.).	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Students have access to recordings of synchronous sessions, to be used because they could not attend or for reflection and revision.	1	2	3	4	5
		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



Technology

When the pedagogical content of a course or education is determined, choose the type of aids teacher want to use. Think about which technology is the best for teachers' purpose. Also, consider what knowledge and skills teacher have regarding technical aspects. Teacher does not have to be an expert in all programs and apps; teacher come a long way with a burning interest and curiosity.

- i. Which technology is most suitable for teacher specific purpose?
- ii. What tools are easy to use in that group? How experienced are the participants?

A lecture online can be done through video conferencing or filming with a video camera. The benefits of a filmed lecture are many. This gives the participants the chance to participate in the lecture even though they cannot physically be present or missed the opportunity when the lecture was held. An online lecture makes distance learning more vibrant and supports more learning styles among participants. It also makes it easier for teacher as a teacher because teacher do not have to travel to different places and instead can share the lecture with several people several times. A video lecture allows giving live classes to the participants in the course where the interaction becomes more vivid than if the lecture was recorded in advance. Participants can ask questions in real-time, both orally and via chat. A video lecture can also be used for supervision or various types of group work.

Online lectures can become a "teacher monologue" where teacher as a teacher/lecturer tell, and the participants listen. It will be evident if there is a lecture that is taped in. Therefore, it is of the utmost importance that teacher activates the students between lessons instead. Ask them to comment on each other's texts, discuss different dilemmas, cases, or problems. Ask them to work in groups or submit short assignments between lessons. Please also participate as a teacher in the discussions that arise.

Learning Management System

A learning Management System (LMS) or Learning platform is a tool that allows teacher to present, distribute, and collect data. These platforms also include chat features, archives and message boards for information. Different schools and organizations use other learning platforms; check if teachers' institution has a developed platform that is available to teacher if teacher want to teach remotely. Then make sure that teacher also have a contact person who introduces teacher to how the program works and how teacher will administer different This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



courses.

Social media

Social media is a tool used to produce, distribute, and communicate with friends and acquaintances. Examples of social media that are actively used today include Facebook, Twitter, Teacher tube, and blogs and chat services. In distance learning, social media is a welcome way for participants to keep in touch with each other, encourage each other and do group work together. Encourage the participants in the distance groups to stay in touch via the social media they prefer, which means that the group reduces the distance and motivates each other to study.

Technical equipment

Today's technology market is overflowing with new ideas, devices, and updates. A new computer is an old tomorrow, and the standard programs are being developed with new features and interfaces all the time. How does teacher know what it is worth investing money in? What should I invest in to get the technology I need? What technique can I expect to have on the teaching ground? If teacher give a lesson/lecture in a new place, check what technology teacher must count on with space managers. Is there a video projector? Is there a computer connected to it, or should teacher bring teachers' laptop or tablet? Is it possible to play movies with sound? Is there an internet connection? Do teacher need computer or internet login information? Today, many classrooms and teaching spaces are equipped with standard technology so that teacher as a lecturer can show both documents, sound and image. However, get into the habit of checking out what is available and needed, and teacher will avoid many boring tech hassles or bet money on teachers' portable equipment. Computers, speakers, and small video projectors are available at reasonable prices today. In the end, however, it is not the technology that determines the quality of teaching. Technology is a compliment and a tool for spreading knowledge. If teacher have a computer/tablet/ smartphone that teacher enjoy working with and can create materials and presentations, teacher can do most things. Today there are free programs most of the time, and teacher does not understand how teacher use them; just Google, and there will be a video where some kind soul describes the grunge functions. Before each class, go through the material and update some names and maybe some links.

Where does teacher save material?

Does teacher have access to it wherever teacher is, or do teacher save everything on a hard drive-in teacher computer? If teacher is on the go, it is easy to use the "cloud services" available. iCloud, Google Docs, Dropbox, or SkyDrive are some examples of free services where teacher can store

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



teachers' content and access it from any device if teacher have an internet connection. If teacher do not want to put teachers' thoughts on the internet, teacher can have a tablet or a USB stick with all the material on it.

Creative Common

When teacher is up and running creating materials for lessons, lectures, and courses, spend countless hours planning and producing the material – teacher may want to protect it in some way. Then a Creative Commons license is a great protection! The starting point is that teacher own the material teacher create and thus have exclusive rights to teachers' works. This means that anyone who wants to use teachers' works must ask permission from teacher to use it – which does not work in the rapid rise of the internet. If teacher is one of the authors who wants to offer other people to make some use of teachers' material, Creative Commons is a very good solution. License is free worldwide and can be used by anyone on the works teacher have created teacher self. If teacher choose to use a Creative Commons license on teachers' works, tell everyone else how they can use teachers' material. The license clearly states what rights, restrictions teacher have chosen to apply to teachers' material, and thus people who want to use teachers' work see what applies and thus do not need to contact teacher personally to ask permission. Creative Commons has different symbols that can be combined with each other when different types of material are signed. In total, they have four different conditions that, in combination with each other, create six different licenses. Each condition has its own symbol:



Recognition - Teacher must provide the author, the name of the work and the license applicable to the work.



No processing - The Work must not be processed, only copying and disseminating the exact work is permitted.



Non-commercial - Use of the work may only be done for non-commercial purposes. The work may therefore not be sold or used in commercial contexts



Share equally - Any work created by processing a licensed work may only be disseminated under the same conditions as the original work.

These licenses allow teacher to license teachers' texts, images, presentations, audio files, or teachers' entire blog if teacher wish. However, if there are other people in teachers' photos, it may be fair to ask for permission before putting a license on the images, especially if teacher choose a license that gives permission for commercial distribution. In addition, if teacher are several people who create something together, it is important to agree on what is licensed and with what kind of license. These licenses allow teacher to license teachers' texts, images, presentations, audio files, or teachers' entire blog if teacher wish. However, if there are other people in teachers' photos, it may be fair to ask for permission before putting a license on the images, especially if teacher choose a license that gives permission for commercial distribution. In addition, if teacher are several people who create something together, it is important to agree on what is licensed and with what kind of license. The four terms can also be combined with each other, creating six different licenses that Creative Commons offers teacher as an author. The four terms can also be combined with each other, creating six different licenses that Creative Commons offers teacher as an author.

Types of technologies

Within the educational environment, AT can help enhance learning by capitalizing on one's strengths while modifying areas of difficulty. Distance learning is often guided by an increase in the volume of reading a student is responsible for, from additional printed or digital readings, postings on Canvas, and associated online resources and websites that classes may tie together to round out the experience. Assistive Technology can provide support with reading, enhanced comprehension, and built in tools, such as dictionaries, built in highlighting and note-taking features, and visual tracking support, that can make you more efficient while reading. Explore different forms of educational assistive technology:

- a) Dictation/Speech-to-Text
- b) Grammar/Spell Checkers
- c) Mind Mapping/Brainstorming Tools
- d) Time/ Task management
- e) Accessibility tools
- f) Open Access Textbooks and Literature

The toolbox should be organised according to:

This project has been funded with support from the European Commission. This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Quality indicators for technical aspects

Technical	The online service is available and fully functioning 24 hours per day, seven days per week over the learning period, except for planned maintenance.	1	2	3	4	5
		○	○	○	○	○
	Maintenance and updating is performed as quickly as possible, and at the time of lowest student demand, with all users clearly notified in advance.	1	2	3	4	5
		○	○	○	○	○
	Guidance and information, including FAQs, about technical issues is available to students.	1	2	3	4	5
		○	○	○	○	○
	A technical helpdesk is provided and support service opening hours are arranged to suit the needs of students	1	2	3	4	5
		○	○	○	○	○
	Students are made aware of any technical incidents causing a loss of service.	1	2	3	4	5
		○	○	○	○	○
	Students and prospective students are clearly informed about the personal equipment they require; what technical support is available; and when and from whom it can be obtained.	1	2	3	4	5
		○	○	○	○	○
	Online services are available on mobile, small-screen devices.	1	2	3	4	5
		○	○	○	○	○