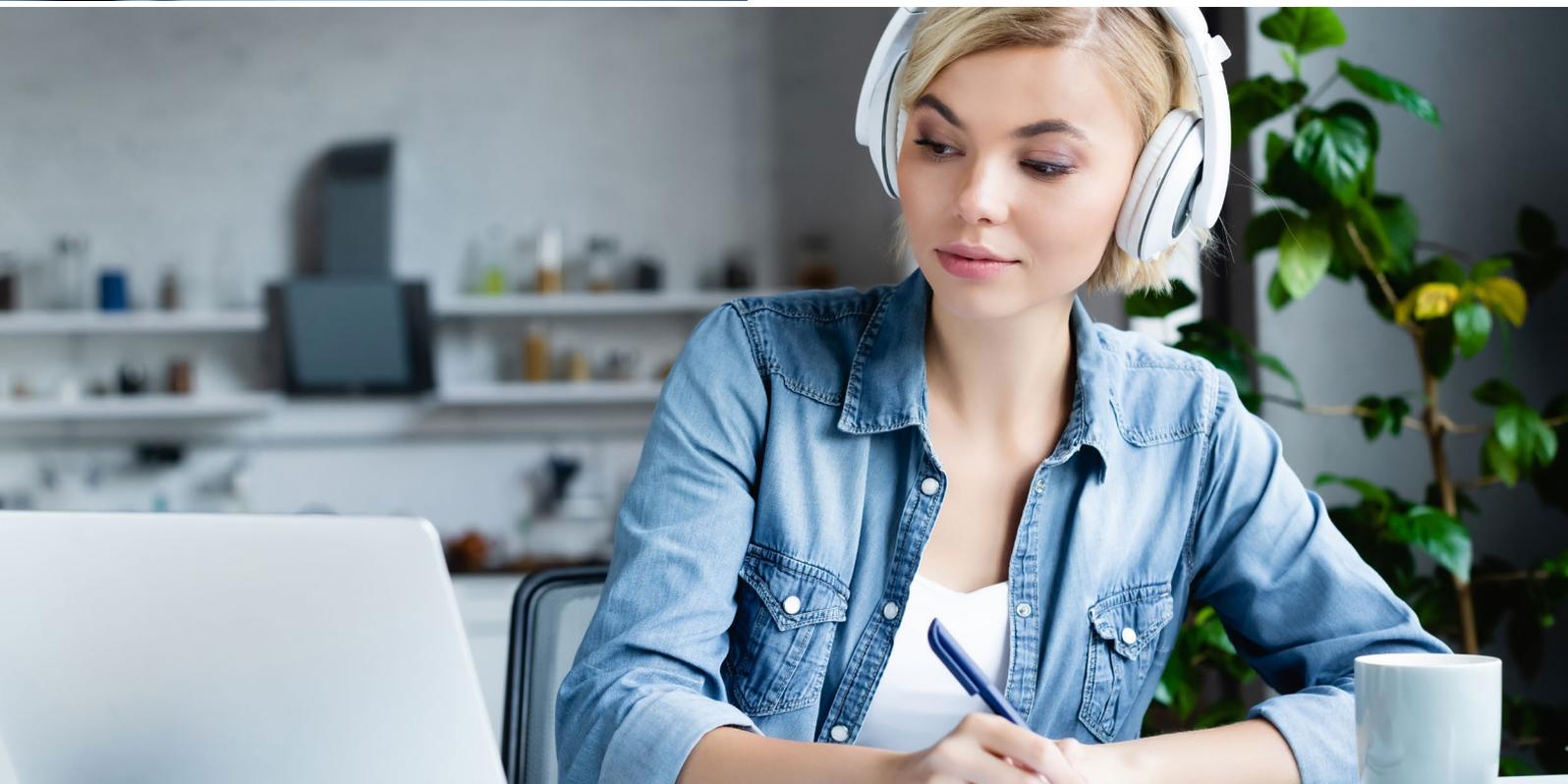Future (4)

Manual for e-learning design

Abstract

This manual will give ideas and instructions on how to create e-learning courses and how to use its-learning as a learning management system (LMS). It also discusses pedagogical aspects and teacher´s conceptions on students and learning.

PhD., Development Director Tuija Arola
e-learning expert, Suvi Aaltonen

Kouvola Vocational Institute Ltd. Eduko, Finland

Creative Commonse Licence

contents

I. Digital pedagogy, e-learning, m-learning and d-learning

The forms and concepts of education are changing, and this requires new environments, methods, and devices. Digital Learning environments and digital learning materials can serve pedagogical purposes both in remote/online learning and physical learning environments e.g., during face-to-face learning in a classroom. The use of the e-learning environment increases flexibility and personalization in all learning environments and supports, for example, students with special needs or language challenges. Based on Alexander's (2009, 540) definition, pedagogy is not restricted to understanding what happens inside the classroom only, because it also requires an awareness of the interaction between teachers, students, the learning environment, and the world outside. Alexander (2000, 540) states that pedagogy encompasses the performance of teaching together with the theories, beliefs, policies, and controversies. The digital pedagogical competence of a teacher determines how well digitalization and digital technologies are used to support students´ learning and utilization of digitalization in future working life (Töytäri 2019, 34).

The terms electronic learning (e-learning), mobile learning (m-learning), and the digital learning (d-learning) are used indifferently or in a complementary way to denote technological learning. E-learning is an alternative to traditional education, and it can also be a complementary to it. On the other hand, the m-learning is the complementary of both traditional learning and, e-learning. (Basak, Wotto & Be´langer 2018, 192.) All the three technological tools, e-learning, m-learning, and d-learning, have an important role in the modern education and help teachers as well as learners to take responsibility of their personal growth and learning. Therefore, it can be concluded that learners and teachers need to acquire technological skills to prosper in the digital learning environments. (Basak, Wotto & Be´langer 2018, 206 – 209.) Simuth and Sarmany-Schuller (2012, 4456) list principles for e-pedagogy:

- Ensure and facilitate frequent and regular contact between the teacher and students as well as among students.
- Promote reciprocity and cooperation among students.
- Provide students with more feedback than evaluation.

- Create a positive and supportive learning environment.
- Respect and pay attention to the diverse talents and learning styles of the students in creating the learning activities and materials.
- Provide students with clear expectations from the beginning of the course.
- Provide students and teachers with appropriate training for e-elearning.

Learning can be organized in various ways, and it is important to use the available spectrum appropriately based on both the wanted learning objectives and external factors. The basic division of various learning spectrums can be divided as follows:

Face to face	Instruction happens in a physical setting. Technology may be used to complement in-person teaching.
Blended	Instruction mainly happens face-to-face in a classroom setting, while technology is used to deliver learning materials, goals, assignments, and assessment. Education technology is used to augment the face-to-face framework.
Hybrid	Instruction happens both online and face-to-face in the classroom setting. This can include staggered learning, or cohort learning where one group of students is on campus while the other is online. Online learning can be both synchronous or asynchronous.
Remote/ Online	When the classroom shifts online with more than 90 % of teaching and learning activities taking place on a digital medium. Face-to-face interaction (if any) is limited.
Flexible	Nearly all teaching and learning happens online. Additionally, students have the flexibility of determining how, what, where and when they learn. There is a higher degree of engagement because students learn at their own pace and in their own time.

Table 1 Spectrum of learning

2. Conceptual and theoretical perspectives

Pedagogically oriented theoretical and conceptual perspectives offer researched knowledge and understanding about teaching and learning (Luoma 2009, 12). One factor that strongly affects the teaching and learning processes is the conception of learning. It is a personalized conception of what learning is and how an individual learns. Teachers typically base their teaching practices and their pedagogical thinking strongly on their own conception of learning as well as to their personal assumptions and beliefs related to teaching (Murtonen 2017, 63; Nevgi & Lindblom-Ylänne, 2009, 194). Teachers´ conceptions might stem from various sources:

- Teacher´s own learning experiences during their learning path from childhood basic education to higher education,
- Teacher role models e.g., colleagues, influential lecturers,
- Teacher´s own learning identity = How do I learn best? What methods have been effective form me?
- Pedagogical training and various trends,
- Practical experience of teaching, results, and feedback from students and
- New technologies.

Because teaching and learning is always interactive, it should be kept in mind that there are also other conceptions of learning. The conceptions of the student and the teacher interact with each other as well as with the conceptions related to the subject of learning. The teacher should therefore listen to and interact with the student so that they can become aware of the different conceptions (including their own) and understand the effects of these different conceptions on the learning process (cf. Nilssen & Solheim, 2015).

Learner	• Conception of oneself as a learner • Conceptions of fellow learners • Conceptions of learning
Subject of learning	• Conceptions of knowledge • Conceptions of the subject/content to be learned
Instructor of the learning process	• Conceptions of oneself as a teacher • Conceptions of teaching/facilitating the learning process

Table 2 Learning and teaching environment (Murtonen, 2017, 68).

2.1 Learning Theories

Different learning theories based on scientific research explain learning. They incorporate theoretical hypotheses related to knowledge and it´s construction as well as to humans and human perception (Nevgi & Lindblom-Ylänne, 2009, 194). Learning theories have changed along with social development and as research has evolved and expanded. Every teacher should have a theory-in-use and an acknowledged concept of learning as a foundation of their teaching activities.

According to Nevgi and Lindblom-Ylänne (2009), transformative learning theory highlights the importance of considering different aspects, reflection, and critical questioning in the learning process as well as the important role of discussion and exchanging ideas. According to this theory, a person's previous experiences create a reference framework through which they interpret and assign significance to new experiences and knowledge they gain. With regard to learning, it is crucial for a person to become aware of how and from which perspectives they interpret their experiences. This will happen through conscious reflection; a central part of the learning process is to find a new perspective on previously familiar things through critical reflection. Reflection and reflection skills are today considered a key working life skills as well as a prerequisite for continuous learning.

According to the learning theory called constructivism, human beings are active processors and seekers of information and knowledge. For example, constructivism emphasizes the importance of learning objectives set by the students themselves and commitment to them in the learning process.

By discerning the objectives and committing to them, students create a meaningful skill set for them-selves. Constructively aligned teaching that guides how teaching is structured describes, for example, how assessment guides the students to set learning goals for themselves and how the teacher, first by becoming consciously aware of what the course's expected learning outcomes, can also support the students in creating learning goals aiming for deeper learning by adjusting, for instance, the assessment (Nevgi & Lindblom-Ylänne, 2009, 226). Constructivism is a certain kind of umbrella term that 'covers all such learning theories that focus on the student's own active process in knowledge formation' (Nevgi & Lindblom-Ylänne, 2009). For instance, there are differences in the emphasis between the different movements of constructivism, ranging from individual to social (Tynjälä 2002, 39).

2.2 Phenomenon-based learning

Phenomenon-based learning starts from the shared observation of holistic, genuine real-world phe-nomena in the learning community. The observation is not limited to one single point of view; the phe-nomena are instead studied holistically from different points of view, crossing the boundaries between subjects naturally and integrating different subjects and themes. (Silander 2015b, 17.)
The phenomenon-based approach to teaching and learning invites teachers to break the boundaries of traditional subject teaching and to move toward interdisciplinary explorations of phenomena. (Symeonidis & Schwarz 2020, 43.) In the learning process, teachers are seen as facilitators of learning tasks, who use their expertise not necessarily to transmit facts but, more importantly, to encourage and guide students to deal with a problem they have identified (Silander, 2015a). According to Symeonidis and Schwartz (2016), there are five dimensions of a phenomenon-based approach to education: holistic-ity, authenticity, contextuality, problem-based inquiry, and open-ended learning processes. Combined, these dimensions provide a working model for educators when designing a PhenoBL module. Silander (2015b, 13) identifies the components as follows:

- Viewing phenomena from the viewpoints of multiple different subject-based disciplines helps students to see the world in its complexity and to look for inclusive solutions to com-plex problems.
- The dimensions of authenticity and contextuality underline the importance of exploring a real-world phenomenon. Authenticity refers to applying knowledge to something tangible,

rather than engaging with only hypothetical and theoretical ideas. A contextualized phenomenon is connected to a context in which it emerges. Scaffolding is necessary for students to move beyond what they currently know toward what is to be known.

- Problem-based inquiry and open-ended learning processes are also interlinked dimensions of PhenoBL.

2.3 Problem–Based Learning PBL

Problem-Based Learning (PBL) is a teaching method in which complex real-world problems are used to promote student learning of concepts and principles as opposed to direct presentation of facts and concepts. In addition to course content, PBL can promote the development of critical thinking skills, problem-solving abilities, and communication skills. It can also provide opportunities for working in groups, finding, and evaluating research materials, and life-long learning (Duch, Groh & Allen 2001, 6.) PBL can be incorporated into any learning situation. In the strictest definition of PBL, the approach is used over the entire semester as the primary method of teaching. However, broader definitions and uses range from including PBL in laboratory and design classes, to using it simply to start a single discussion. PBL can also be used to create assessment items. The main thread connecting these various uses is to connect it with a real-world problem. Any subject area can be adapted to PBL with a little creativity. While the core problems will vary among disciplines, there are some characteristics of good PBL problems that transcend fields (Duch et. al. 2001):

- The problem must motivate students to seek out a deeper understanding of concepts.
- The problem should require students to make reasoned decisions and to defend them.
- The problem should incorporate the content objectives in such a way as to connect it to previous courses/knowledge.
- If used for a group project, the problem needs a level of complexity to ensure that the students must work together to solve it.
- If used for a multistage project, the initial steps of the problem should be open-ended and engaging to draw students into the problem.

According to Yew and Goh (2016, 78) PBL is an effective teaching and learning approach, particularly when it is evaluated for long-term knowledge retention and applications.

2.4 Flipped Classroom

Flipped Classroom is a pedagogical teaching method that challenges traditional teaching, i.e., lecturing in a classroom and transferring information. Compared with the old, traditional method, flipped teaching approaches the question from exactly the opposite direction. (Kirkkomäki, Kavander, Tuunanen & Kettunen, 2019, 544.) A learning experience based on flipped classroom must have a clear structure, and the objectives and contents are verbalized and introduced in a comprehensive way. The teacher plans and prepares the learning materials and assignments for the students to be studied independently prior to the coming contact lesson. During the contact lesson the learning material contents are elaborated and practiced more deeply, and the teacher helps and counsels the student´s work if needed. For the purpose of assessments and feedback the learning can be measured by small tests and learning assignments and give students short feedback on them. This procedure makes sure that the student can follow her or his individual learning during the learning experience. If the tests and assignments are diverse enough the final course exam will not be needed. (Kirkkomäki, Kavander, Tuunanen & Kettunen, 2019, 545.)
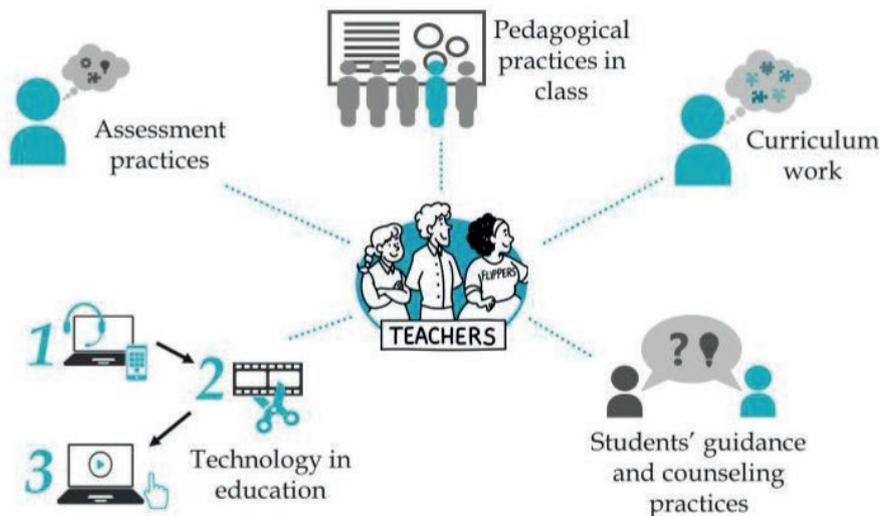
Figure 1
Elements of flipped classroom institutional training
(Hyypiä, Erkko, Hirsto, Valtonen 2019, 69)

In using Flipped Classroom, the basis is curriculum work, because it guides the entire process of planning, preparing, designing, developing, implementing, and assessing the courses. The second element, pedagogical practices in class, contains information and instruction regarding the teacher's role in the Flipped Classroom model, such as how to organize the contact lessons so that they would support students´ learning in the best way. As technology is deployed in various ways in the Flipped Classroom method, various devices and applications, tutorials for their usage, and the benefits of technology for both teaching and learning must be considered in the planning process. Moreover, students' guidance and counseling practices must focus on ways of familiarizing and supporting them with the learning method. Finally, assessment practices should emphasize the use of formative assessment and its beneficial impact on student learning. (Hyypiä, Erkko, Hirsto & Valtonen 2019, 68.)
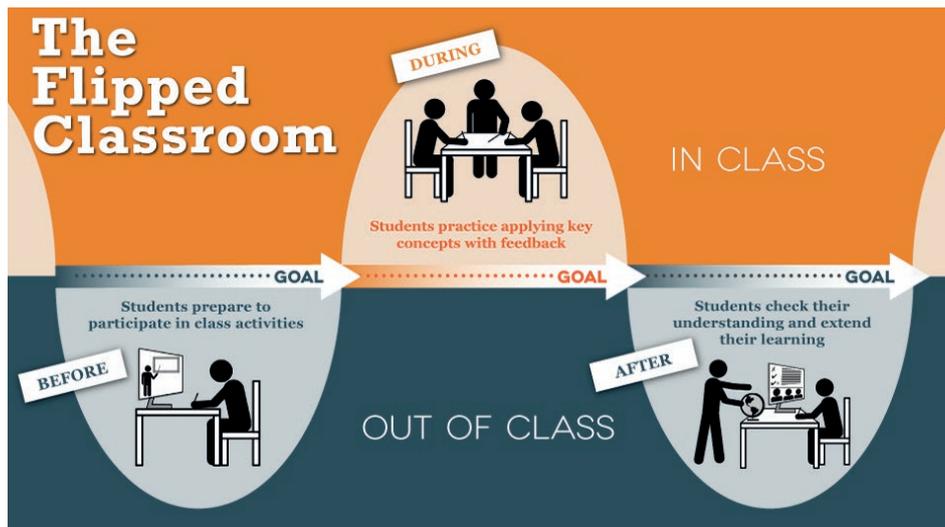
Figure 2
The flipped classroom

https://
connectwithlanguage.
com/es/blog/article/how-
flipped-learning-helps-you-
learn-more-effectively

As a learning method, Flipped Classroom is well suited to higher education. According to the research results of Väisänen and Hirsto (2020, 366) university teachers explicated that a teaching and learning environment utilizing Flipped Classroom approach supported the development of university students´ generic skills. Teachers also appeared to utilize several features of the teaching and learning environment and pedagogical solutions to support the development of the students´ working life skills.

2.5 Blooms Taxonomy – six steps to learning

Bloom's taxonomy has been used in pedagogy as a useful tool to create clear structure, vision, and learning process parameters on which any course can be built and developed (Anderson, Kratwohl (Eds.) 2001; Pikhart 2018). The original Bloom's taxonomy was introduced in 1956 and was a breakthrough in the pedagogy and psychology of learning. The revised taxonomy from year 2001 refined the original terminology and introduced a few new concepts but retained the core principles of the original taxonomy. The specific tools used in Bloom's taxonomy can be utilized in any kind of instructions in the learning process; however, according to Pikhart and Klimova (2009, 1), the taxonomy can be very useful when using digital learning environments, i.e., in online and blended learning.

Bloom's taxonomy simply distinguishes six steps or levels in the learning process, which are achievable through the process of education, and attainable while going through the course. According to Pikhart and Klimova (2019, 3) the steps or levels are:

1. **Remember**—recalling facts, information, and basic ideas memorized by heart; this is just plain memorizing and learning by heart without any creative approach or specific performance, yet important and useful at very early stages of the learning process.

2. **Understand**—being able to explain to others the idea that has been remembered, in the form of a presentation or any other means that will prove that the student understands the idea.

3. **Apply**—being able to use the acquired information in new contexts and situations and transferring it into everyday life; this means transferring acquired ideas into a practical context, bringing them into life and usage.

4. **Analyze**—creating connections and trying to compare and contrast them with each other; analyzing means being able to find connections and causal relationships in reportedly disconnected items.

5. **Evaluate**—developing a more creative approach while being able to appraise and defend one's own opinions and ideas; evaluation creates a very high level of understanding and mental skills by being able to defend the ideas acquired in the learning process.

6. **Create**—highest level, means being able to produce a new idea based on the items already learned; creativity is the highest achievable goal that proves that the student has reached independence.

All the six skills are necessary in the learning process; however, they create a naturally developing sequence starting from number one as the easiest, to number six, which is the most complicated but also most desired. They all in various volumes and widths, are present in any learning process; however, Bloom's taxonomy helps us to deliberately use them with a rather more systematic approach to the blended learning process and online course creation. (Pikhart & Klimova 2019, 3.)
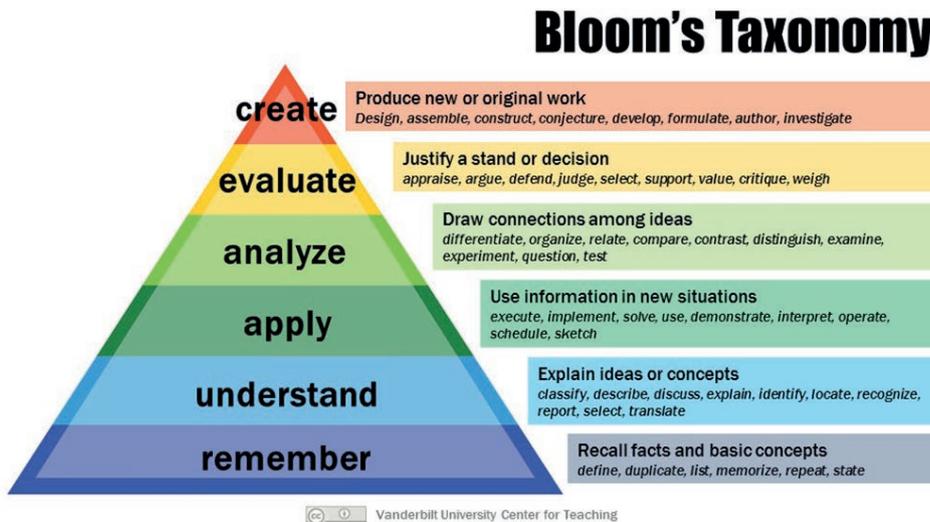
Figure 3
Bloom´s Taxonomy

(https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/)
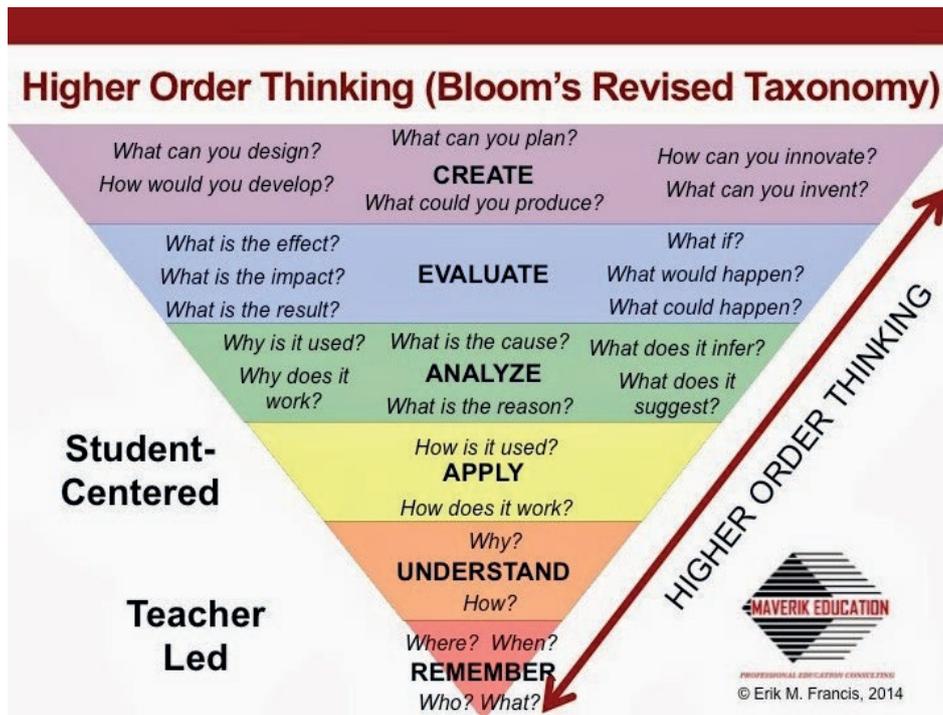
Figure 4
Revised Blooms Taxonomy

http://maverikeducation.
blogspot.com/2014/03/
what-exactly-is-thinking-
curriculum.html

Despite the fact that Bloom's taxonomy may seem old-fashioned and not appropriate for modern online courses, it has proved to be extremely helpful and highly increased students' satisfaction, which could eventually lead to better outcomes and success in their learning process. Moreover, simply the improved satisfaction and clarity of the tasks will necessarily lead to better. (Pikhart & Klimova 2019, 7) The taxonomy also provides ideas on what kind of assignments and activities can promote student-centredness and the development of students´ higher-order thinking skills. Bloom´s taxonomy can also be viewed in the perspective of how the development of students working life skills can be promoted with various pedagogical choices and methods.

Beneitone and Bartolomé (2014, 60–61) introduce a list of global generic competences that can be placed on the various levels of Bloom´s Taxonomy:

1. Ability to apply knowledge in practice

2. Problem solving

3. Capacity for abstract thinking, analysis, and synthesis

4. Ability to work autonomously

5. Decision making

6. Oral and written communication

7. Capacity to learn actively

8. Information management skills

9. Teamwork

10. Critical and self-critical abilities

11. Concern for quality

12. Creativity

13. Computing skills

14. Interpersonal skills

15. Ethical commitment

3. Learning experience design, LXD

A pedagogical manuscript is a way to plan and organize teaching and learning events. The chosen pedagogical model provides the theoretical structure for the teaching situation and the learning process. In the design process you can use various tools e.g., design templates and canvases that can help the teacher to recognize and structure the various phases of the learning experience.

Figure 5

Learning experience canvas

(https://thecanvasrevolution.com/product/learning-experience-canvas)

When constructing learning processes, it is useful to be aware of at least some of the theoretical principles that guide teaching and learning. The following example of the design process is modified of the one introduced by the Teaching and Learning Centre of Tampere University and the original model, and some further information can be found from webpage:

https://www.tuni.fi/tlc/en/planning-and-implementation-of-teaching/digital-pedagogics/planning-teaching/

3.1 From learning outcomes to the learning process

The in-depth learning of complex issues require both individual and collaborative work and teacher's guidance. The teacher should think about the actions related to teaching and learning methods as a sequence of events for both the teacher and the students.

> **Key questions for the teacher**
>
> - What kind of knowledge and skills do you want to develop? (content knowledge, generic skills)
> - Do all the aspects (teaching methods, guidance, learning assignments, assessment) support the achievement of these goals?
> - Does the workload in the course correspond to the number of credits?
> - Do the available guidance resources match the teaching workload required by your plan?

3.2 Collaboration and sharing knowledge

It is important to choose the teaching methods of a course in a way that supports collaborative capacity building and knowledge sharing. Different and varying learning methods bring variation and keep up the interest. The same teaching methods as in the classroom can be used in online teaching, but they often require more careful planning and phasing in digital environment.

Key questions for the teacher

- Which ways of working promote best goal-oriented learning?
- Which teaching methods and models suitable for digital environments are appropriate for this course?
- How do I plan the interactions taking place in the digital learning environments of the course?
- How do I evaluate and give feedback?

3.3 Learning assignments

Learning assignments are a concrete way to facilitate progress in one's work and they guide the build-up of learning. Assignments should support reaching the learning outcomes and enable the individual consideration of students. Group assignments can be activating and motivating for the students, based on problem-solving or highlighting prior knowledge and understanding. The structure and pace the learning process in the same way as face-to-face lessons.

Assignments are a key tool for guidance in digital environments. Learning assignments allow the teacher to steer the learning process in the right direction and help the students to process and apply available information. When designing a learning assignment:

- Clearly describe the purpose, objective, completion method, assessment criteria, guidance, timetable, and the extent of the assignment.
- Make sure that the assignment is clearly instructed and that it guides the students' work towards attaining the learning outcomes.
- Consider the activities in the learning environment in which the work will take place.

3.4 Interaction and activation

In digital environments, interaction is often textual, lacking the gestures and facial expressions that are used in face-to-face interaction to interpret messages. The risk of misinterpretation is therefore high. Demonstrating one's presence also happens with messages. It is good to go through the rules of interaction with the students:

- Ask/insist that the students keep the cameras open.
- Use tools that promote participation and activity during the learning experience e.g., discussion boards, chat, Mural, Miro, Padlet.
- Avoid monologues. Discuss previous texts. Ask, do not assume!
- Stick to the timetable or let the students know about absences or delays.
- Be patient. Others may not read or respond to your messages immediately.
- Assigning roles may be helpful (e.g., chairperson, summarizer, group observer etc.).
- Discussion does not work well in very large groups. Divide the participants into smaller groups.
- Accept incomplete ideas from yourself and others, even if they remain visible in writing.
- It is good to draw together ideas or agreed issues in the discussion.

Real-time interaction via video also requires careful planning. You can utilize a versatile range of small group workspaces and the possibilities the digital environment offers to engage the participants in interaction through, for example, discussion, annotations, or chat messages.

Pay special attention to group cohesion in the digital environment. The group members can easily remain 'faceless' because it is harder to have informal conversations and get to know each other virtually than in face-to-face meetings. Commitment to the group and its objectives is generally higher if the participants have at least some degree of familiarity or feel connected with the group. It is also useful to give the group an opportunity for more informal discussions or to reserve time for group formation at the beginning. Before the actual work begins, groups can be encouraged to agree on common work methods and timetables and to discuss the objectives more generally.

3.5 Plan and create the content/ learning material

Planning the learning process is strongly linked to the production of teaching and learning materials. Any consideration about how the material will be used in the course should always be based on a pedagogical starting point. Digitalization offers more opportunities for doing this. The learning environments used alongside the digital learning materials influence how the material can be used as a part of achieving the learning outcomes. When designing the materials, it is also worth considering how to involve the students in collaborative knowledge production. On the one hand, digital learning

materials must be invested in and, on the other, digitalization enables the use of very diverse and varied materials in teaching. For this reason, mastering content production and the scripting of learning materials are an important part of a teacher's professional skills. It is advisable that the content for digital learning environments is produced in smaller parts using a variety of formats (e.g., text, image, video, interactivity, etc.). The format of digital learning materials should be considered more carefully than usual. Think about what contents should be produced as text and which parts of the text could be replaced by videos, audio files, images, animations, games, exercises, or quizzes. It is also worth thinking about how to involve the students in the knowledge production role.

Many factors contribute to the pedagogical quality of digital learning materials. Such materials combine meaningful assignments and the central content to be taught in a well-executed, visually pertinent, and technically functional package without forgetting the power of community.

There is plenty of other online material that can be used to help and support teaching, which at its best is an excellent material for a course. However, take care when you use materials created by others in your teaching. While there are more opportunities in educational use, always check whether the author has restricted the use of the materials. Also, consider how you give others access to your own openly available materials.

Key questions for the teacher

- Which materials do you need to support learning the content? How can you illustrate the subject matter?
- Have you considered co-creation with your teacher collegues?
- Is the learning material versatile and multichannel?
- Who is the producer of material and content in this course?
- How do you guide the students to take an active role in knowledge production?

3.6 Copyright and other permission policies

Copyright issues must be considered in all teaching including digital learning. In copyright terms, teaching is a public and organized activity based on an established curriculum. Restrictive provisions allow

for certain, more liberal uses of copyrighted material that include, for example, educational or scientific purposes. The copyright issues that arise in teaching can be roughly divided into two basic questions:

1. On what basis and how can a teacher or a student use material created by others as a part of their teaching or coursework?

2. Who owns the copyright of materials created in the context of teaching and learning, and how can the rights be transferred?

High quality e-learning is based on multichannel learning. For this reason, it is also important for the teacher to be familiar with other permission policies, such as permissions that might be needed if students appear in videos or photographs, for example. The institution should have instructions on the various permission procedures and the validity and retention of them.

Because writing tasks often feel challenging to students, there might be temptation of plagiarizing written work. Higher education students have also been found to use artificial intelligence to write their theses. The following actions can help you in preventing plagiarism:
- Clearly define plagiarism to the students.
- Express clearly, that plagiarism will lead to consequences.
- Provide examples of proper citation and insist on the systematic use of references from the very beginning of the studies.
- Inform students about support services.
- Avoid assignments that tempt plagiarism. Create assignments that require students to think for themselves and apply their knowledge to practical situations, for example.
- Use online plagiarism detection tools.

Also, in itslearning, there are plagiarism services, which can be acquired as an add-on:
- SimCheck (TurnItIn)
- Urkund (now known as Ouriginal)

Plagiarism control can be enabled by the site administrator with a site setting: ‚Plagiarism settings'

Key questions for the teacher

- What copyright guidelines does your university have?
- Are there national guidelines issued by educational or other authorities?
- Do you know the permission policies of your university related to e.g., recordings, videos, and photographs?
- Do you use citations as instructed?
- What measures do you take to prevent plagiarism?
- Does your organization have a policy for the use of artificial intelligens, AI?

3.7 Accessibility

Accessibility creates a better learning experience for all and supports student-centredness. When the e-learning courses comply with the accessibility standards, all users are able to more easily understand, navigate, and interact with your e-learning content. Accessibility in e-learning means that the content is designed with all learners in mind – including those with visual, auditory, physical, or learning disabilities.

The European Accessibility Act and the EU Directive on Web Accessibility require that the online experiences are made more accessible and inclusive for everyone. Currently, the focus is primarily centered on websites and online services associated with the public sector. The same legal requirements are likely to also impact digital teaching and learning materials created for and by educators in the coming years. There are many online courses and instruction manuals available to help to guide and inform educators on the importance of using high quality digital materials that are truly accessible. (Marcus-Quinn, 2022.)

To make sure that your e-learning course is accessible, you can use e.g., the checklist made by the NCCCS Virtual Learning Community.

https://www.waynecc.edu/wp-content/uploads/vlcCourseAccListUpdated.pdf

Key questions for the teacher

- Are you familiar with accessibility and it´s criteria?
- Do you know the national or institution specific accessibility standards?
- Have you evaluated the structure and content of your course from an accessibility perspective?

4. Technical Tips

You can find all the up-to-date instructions and tips from itslearning support web page. The following instructions are a selection of the vital basic things you need to know when you start creating your own itslearning course. The administrative operations are not included in these instructions.

4.1 Plans

Plans are a great way for teachers to prepare a course roadmap with structure, scope, and sequence, and it can be customized based on the teacher's needs. For example, blocks of information may be set so that only the teacher may view the information. It is recommended that you build your course through Plans.
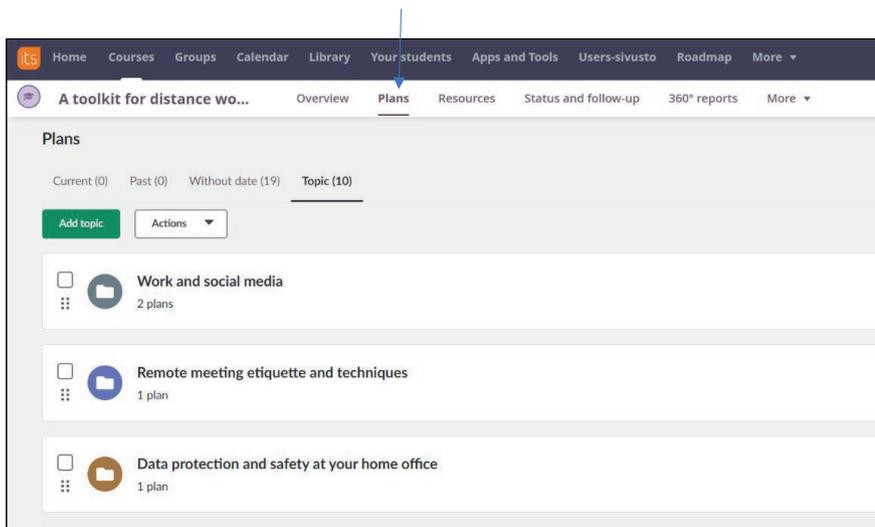
Keep in mind that Plans can be customized to meet your instructional needs. The above sample is from a relatively traditional teaching format.

4.2 Building a Plan

When you build within Plans, topic/unit folders are automatically created in the resource tab. Then, if you align lessons with learning objectives/standards, the resources and activities that are added from Plans will automatically be tagged with those learning objectives and built into the folder within your resources saving teachers a lot of time.

The Plans block on the Course overview provides direct information to users. Parents, students, and teachers will all access information from this block on the Course overview. Parents cannot open the resources tab in a course, so it is key that teachers utilize the lesson outline to share important information. The fields within plans may include text or interactive context.

- Now that you are ready to build your plan, go ahead and click on Plans (1).
- Next, you can begin by adding a topic (2). Give a title and Create (3).

After the topic, you can add plan.
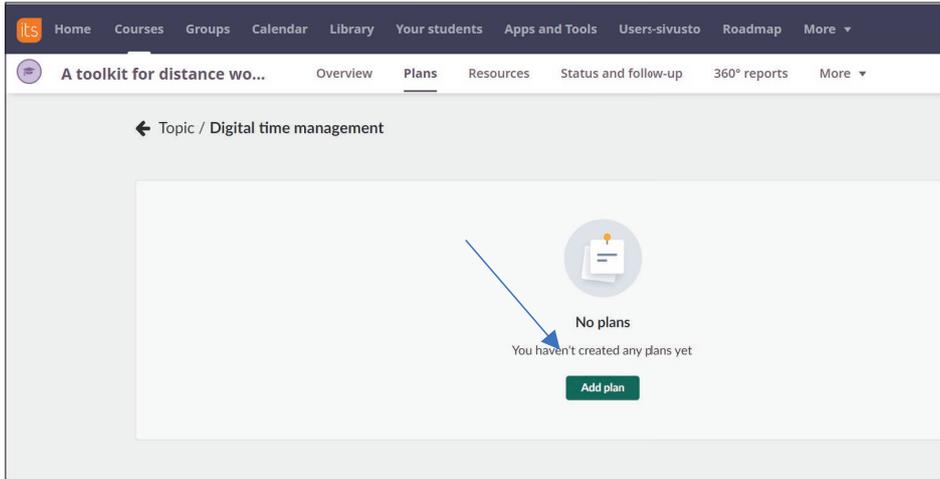
Add image, title, date, description, learning objectives, resources, activities and make plan visibility or not visibility. Then, press Create plan. It is also possible to create an empty plan first and then start to add resources.
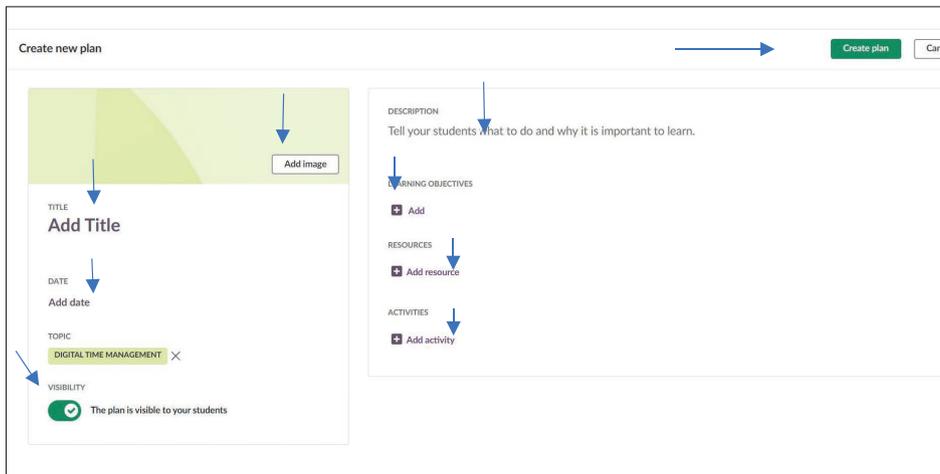
4.3 Plan Actions

Teachers can apply specific actions on selected Plans. It is important that you select the plan first before applying an action. Actions include:
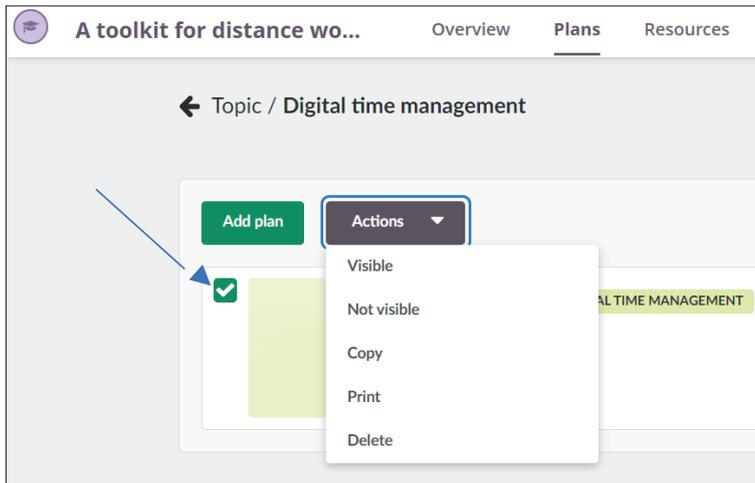
4.4 Adding Resources in Plans

While there're many ways to add resources to a course, it is recommended to add resources and activities through Plans to help with course organization since Plans is meant to be the hub for all teaching and learning materials.

First, align your plans to the appropriate standards/learning objectives (1). When standards/learning objectives are aligned to a plan, they will automatically align to assignments, tasks, and tests to track mastery. In addition, the library will populate results based on the learning objectives. (You will find more on the library in another section.)

Then, begin adding resources (2) and activities (3). You can pull elements directly from the course, library, or create a new element. Click ‚show all' to see more options.
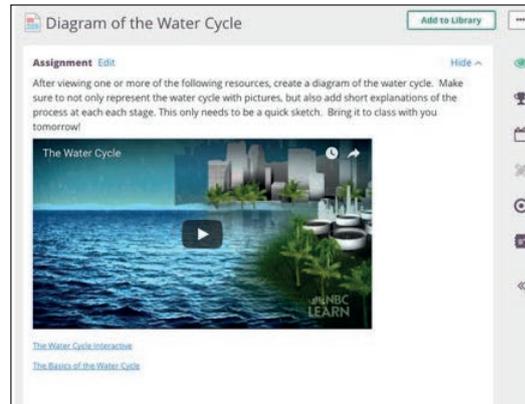
4.5 Assignments

An assignment is a performance task assigned to students and requires a digital response. The student will receive a notification for the assignment in their task block. When creating an assignment, you can insert content and/or directions into the rich text editor. Use the rich text editor to provide ample information to students on how to complete the assignment. For example, you may ask them to watch a video and submit a summary.

Assignments offer the following options as seen in the image to the right in the picture below:

- **Visible:** If an assignment is visible, students can see it. It is possible to make an assignment visible forever, only for a specific period of time or not visible.
- **Deadline:** When students submit their work, the assignment response will be stamped with a submission date and time. If you choose to give students a deadline for an assignment, they will have up to that point in time to submit their response. It is also possible to allow students to submit a response after the deadline. In that case, the date and time will be marked late.
- **Homework:** It is possible to mark an assignment as Homework. By doing this, it adds a purple tag that says Homework to the assignment, so students know it is homework. This tag is added to the assignment, the students' tasks block, and plans.
- **Learning objectives:** must first be added to the course and then attached to the assignment. When standards are attached to an assignment, the teacher may track standards mastery. Standards-based rubrics with assessment criteria can also be created.
- **Assessment Scale:** When grading an assignment, it is important to select an assessment scale and if the assignment will be added to the grade book.
- **Peer and self assessment:** allow students to assess themselves or fellow students. Since R122, teachers can also select to enable ,anonymous peer assessment'.
- **Results:** It is possible to make results of the assignment visible to the students. Note they will only see their results, they will not see any results for other participants.
- **Group Activity:** Allow students to work in groups.
- **Anonymous Submission:** Disguises student names from the teacher until all grades have been calculated. More information in the anonymous submission page.

- **Plagiarism Control:** Checks for student plagiarism (subscription required.)
- **Not Mandatory:** Students can view progression of a course with mandatory assignments using follow up and reports. Only visible if the Progress report is enabled for the course.

4.6 Tasks

Tasks are non-digital submissions such as artwork, oral presentations, hand-written essays or a face-to-face discussion. It is also possible to create and add Microsoft or Google files and allow your students to work on them using the Task tool. Tasks allow the teacher to provide digital directions and grading specifications, but the work will be submitted, assessed, and graded manually. Tasks have the same types of options as assignments, however assessment also has the options to allow participants to track their completion.

4.7 Assign

A teacher can assign Tasks to all course participants in the course, select individual students, or groups of students. The default is to ‚all course participants'. Click Change for the other options.
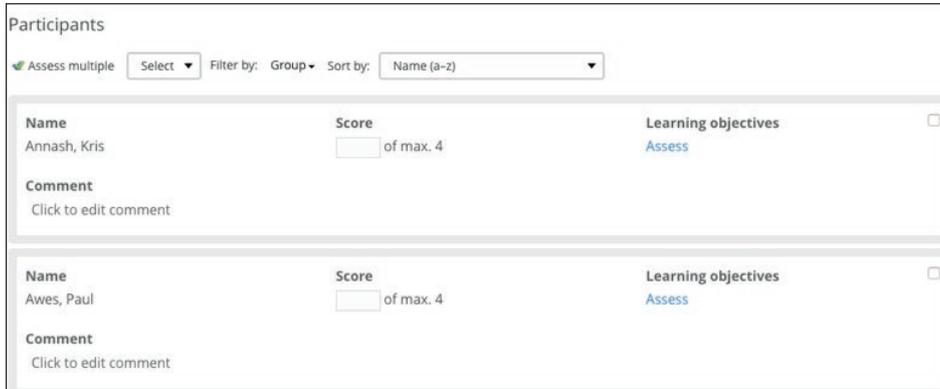

4.8 Add files

Share a file with you students. Simply select from your computer, Dropbox, Google Drive or OneDrive. To use cloud features, the teacher and students must have an account with Google or Office 365. All students, regardless of connected cloud service accounts, will get permissions to access the task and the file added by teacher.

4.9 Assessing Tasks

It is quick and easy to assess Tasks. A teacher may grade an art project or sculpture and type in grades and comments one by one. Alternatively, a teacher may assess multiple students at the same time.

Mastery may be adjusted by choosing 'assess' under the learning objectives option. Notice that the score will be automatically calculated based on the rubric (by default). The teacher can override this.

4.10 Notifications and Messages

When you log on to itslearning, you will immediately see if you have a new message or notification on the top banner menu. The bell icon provides notifications, and the speech bubble icon gives you quick access to the internal messaging option.

Teachers will receive notifications in several instances including when:
- They receive a project invitation.
- They are added to a hierarchy.
- Reminders are sent by a mentor or headteacher.
- A resource booked via the calendar is changed.

Students will be notified in these instances:
- A new announcement is posted in a favorite/starred course.
- They receive a project invitation.
- They get an attendance mark or behavior remark.
- Assessment or feedback is available on a test, assignment or task.

* *Students will not receive notifications for unstarred courses. To do this, go to the course cards homepage and unstar the course.*

The internal message system is how you send messages to groups, or a group of course or project participants, or simply send messages to teachers or students who are using itslearning without having to leave itslearning. This is especially helpful when using the mobile app.

- Click on the speech bubble icon and a pop-up will open.
- Click New to send a new message. You can even add attachments to the internal messages.
- Selecting „all messages," will open a popup menu to access more messaging options.

Mass messaging is available only if your system administrator has enabled it, so please check with your system administrator.
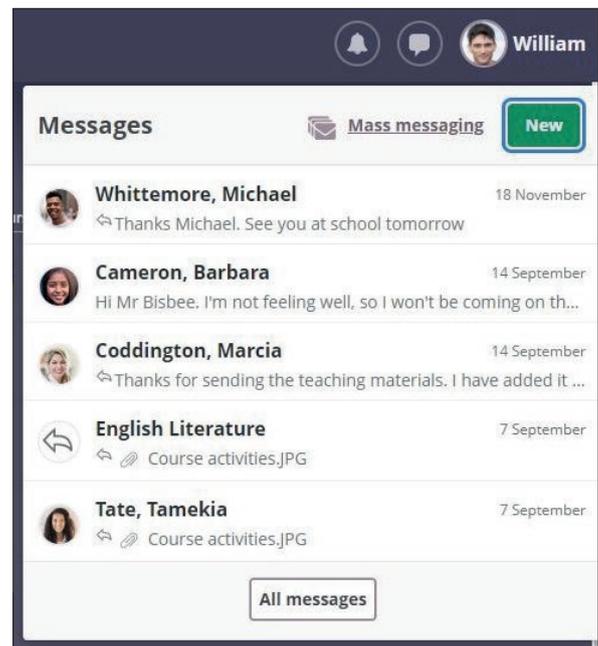
references

Anderson, L.W.; Krathwohl, D.R. (Eds.) (2001) A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives; Addison Wesley Longman, Inc: New York, NY, USA, 2001.

Basak, S.K., Wotto, M. & Be´langer, P. (2018) E-learning, M-learning and D-learning: Conceptual definition and comparative analysis. E-Learning and Digital Media 2018, Vol. 15(4) 191–216.

Beneitone, P. & Bartolomé, E. (2014). Global generic competences with local ownership: a comparative study from the perspective of graduates in four world regions. Tuning Journal for Higher Education, 1(2), 303–334. https://doi.org/10.18543/tjhe-1(2)-2014pp303-334

Duch, B.J., Groh, S.E & Allen, D.E. (2001) Why Problem-based Learning? A Case Study of Institutional Change in Undergraduate Education. In Duch, B.J., Groh, S.E & Allen, D.E. (Eds.) The Power of Problem-based Learning. A Practical How to for Teaching Undergraduate Courses in Any Discipline. Stylus Publicing. pp. 3-11.

Hyypiä, M., Erkko, S., Hirsto, L., Valtonen, T. (2019) Key Components of Learning Environments in Creating a Positive Flipped Classroom Course Experience. International Journal of Learning, Teaching and Educational Research Vol. 18, No. 13, pp. 61-86, December 2019 https://doi.org/10.26803/ijlter.18.13.4

Luoma, K. (2009). "Theories as tools: An innovative course design for teaching theoretical knowledge in an integrative manner. In: O. Kallioinen (Eds.): Learning by developing – New ways to learn: 2009 Conference proceedings (Pp. 12-33). (Laurea Publications D7).

Kirkkomäki, A., Kavander, P.,Tuunanen, M. & Kettunen, S. (2019) Foreign Language Learning with Flipped Classroom Method in Higher Education in Finland, ICERI2019 Proceedings, pp. 542-548. DOI: 10.21125/iceri.2019.0187

Marcus-Quinn, A. (2022) The EU Accessibility Act and Web Accessibility Directive and the implications for Digital Teaching and Learning. https://routledgeopenresearch.org/articles/1-30

Murtonen, M. (2017). Käsitykset ja uskomukset oppimisen tukena tai esteenä. Teoksessa M. Murtonen (toim.) Opettajana yliopistolla. Korkeakoulupedagogiikan perusteet. Tampere: Vastapaino, 63–82. (in Finnish)

Nilssen, V. & Solheim, R. (2015). "I See What I See from the Theory I Have Read." Student Teachers Learning through Theory in Practice. Journal of Education for Teaching: International Research and Pedagogy, 41(4), 404–416.

Nevgi, A. & Lindblom-Ylänne, S. (2009). Oppimisen teoriaa ja käytäntöä. Teoksessa S. Lindblom & A. Nevgi (toim.) Yliopisto-opettajan käsikirja. Helsinki: WSOYPro, 194–236. (in Finnish)

Pikhart, M. & Klimova, B. (2019) Utilization of Linguistic Aspects of Bloom's Taxonomy in Blended Learning. Educ. Sci. 2019, 9(3), 235; https://doi.org/10.3390/educsci9030235

Sikora, Y.B. (2017) The use of knowledge management methods for e-learning organization. Inf. Tech. Learn. Tools 2017, 61, 162–174.

Silander, P. (2015a). Rubric for Phenomenon Based Learning. Retrieved October 5, 2016, from http://www.phenomenaleducation.info/phenomenon-based-learning.html

Silander, P. (2015b) Digital pedagogy in Pasi Mattila and Pasi Silander (eds.) HOW TO CREATE THE FUTURE – Revolutionary thinking and design from Finland. University of Oulu. 9 – 25.

Simuth, J. & Sarmany-Schuller, I. (2012) Principles for e-pedagogy. Procedia – Social and Behavioral Sciences. Volume 46, Pages 4454–4456.

Symeonidis, V. & Schwarz, J. F. (2020) Phenomenon-Based Teaching and Learning through the Pedagogical Lenses of Phenomenology: The Recent Curriculum Reform in Finland

Symeonidis, V., & Schwarz, J. F. (2016). Phenomenon-based teaching and learning through the pedagogical lenses of phenomenology: The recent curriculum reform in Finland. Forum Oświatowe, 28(2), 31–47. http://www.edite.eu/wp-content/uploads/2017/11/Phenomenon-based-teaching-and-learning-through-the-pedagogical-lenses-of-phenomenology_The-recent-curriculum-reform-in-Finland.pdf

Tynjälä, P. (2002). Oppiminen tiedon rakentamisena. Konstruktivistisen oppimiskäsityksen perusteita. Tampere: Tammer-Paino Oy. (in Finnish)

Töytäri, A. (2019) Näkökulmia ammattikorkeakouluopettajan oppimiseen ja osaamishaasteisiin. Perspectives into higher education teachersˊ learning and competence challenges at Finnish Universities of Applied Sciences. Doctoral Dissertation. University of Jyväskylä.

Väisänen, S. & Hirsto, L. (2020) How Can Flipped Classroom Approach Support the Development of University Studentsˊ Working Life Skills? – University Teachersˊ Viewpoint. Education Sciences, 10 (12), [366]. https://doi.org/10.3390/educsci10120366

Yew, H., J. & Goh, E. (2016) Problem-Based Learning: An Overview of its Process and Impact on Learning. Health Professions Education. Volume 2, Issue 2, December 2016, Pages 75 – 79.

Manual for e-learning design