Digital Facilitator Trainer Role

THE DIGITAL FACILITATOR TRAINER ROLE

GUIDELINES FOR VET TEACHERS AND TRAINERS

FROM TURKEY, SPAIN AND ROMANIA

Cooperation for innovation and exchange of good practices

VET – Vocational Education and Training

DIGITAL FACILITATOR TRAINER ROLE

DigiFacT

Guidelines for VET Teachers and Trainers

From Turkey, Spain and Romania

Information

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Abstract	Humanity is running into the 21st century where technology knows no bounds. This is the phase of radical development where technology is taking over every niche and corner. The development and use of digital technologies have spread like waves over schools and society. Rapid growth and enhanced access to technologies are said to pose new possibilities to teach and learn. Digitalization of education is a powerful trend in terms of reformation and modernization of the global education environment. Digitalization means transformation of all information types (texts, sounds, visuals, video and other data from various sources) into the digital language. Digitalization in education refers to the use of desktop computers, mobile devices, the Internet, software applications, and other types of digital technology to teach students of all ages. Digital Facilitator Trainer role represents a comprehensive pedagogical methodology which includes ITC tools to insert in the field of digital education.
Keywords	Artificial intelligence, gamification, data analytics, digital facilitator, digital tools, training, instructional design, teaching methodology, 5E Model

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Contents

Introduction

Digital technologies are clearly integral to the future of education around the world. The imperative for technologically driven forms of education is seen to be exacerbated by the changing backgrounds.

The professionalization of adult educators has been recognized as an increasingly important theme in adult education. The ongoing digitalization in the training sector produces new demands on the media-didactical competence of trainers. Technology-based learning plays a significant role in training and development. There is growing pressure on trainers to implement distance learning and online learning strategies for their students in these difficult times. As we work together to bring the best in online collaboration and learning tools, students around the world need to be able to continue with their educational career. Changing drastically from face to face to online lessons in the blink of an eye can seem daunting to both trainers and students. To help ease this task and in solidarity with our fellow team, this course would like to offer some bits of advice and a few ideas on how to use some tools for online and distance teaching.

Despite the challenges of this course, the following implications for practice can be inferred. Digital media are substantial components of training and development and it is stated the need to promote the media-didactical competence of trainers. For adult education practice, it is relevant to develop effective courses for trainers and control their contributions to media-didactical competence, self-efficacy, attitudes and the actual use of digital media.

The purpose of this course is to research digital teaching platforms in accordance with the 5E instructional model. This study seeks to answer the following question: *How can a trainer become a digital one?* The solutions presented in this course are based on the principle of the 5E instructional model:

This course aims to improve the knowledge and skills of trainers in order to make digital experiences for the students:

- Comprehend the 5E Instructional Model;
- Learn how to use digital teaching platform;
- Create playable activities;
- Integrate artificial intelligence into their teaching;
- Transform data into valuable information.

Using digital technologies while training will promote innovation in education. This based-use of technology or digital learning is expected not to be a burden for trainers and students, but on the other hand it tries to aid the learning and teaching process to be more effective. The use of instructional technology can improve and optimise students' knowledge and substantially motivate them to continue their learning and stimulate their creativity and passion. Technology in education can boost variety and increase the diversity of learning environments and opportunities and enhance the quality of the learning experience by making class content more varied and accessible to almost each individual learner. Thus, ensuring more participation and engagement among learners.

Target groups

This course is specially created for people who contribute directly to the educational activities and want to have a digital teaching style, such as digital facilitator and trainers.

Giving trainers this opportunity, at least once, is surely a fundamental aim of trainer development, but in an 'ordinary' classroom this awareness is a key element of the modification of schemes.

Effective trainers in the digital age context will be part of a highly skilled profession focused on student learning. The trainers will have strong content knowledge appropriate for the level and subjects being taught, pedagogical content knowledge, the ability to cement learning relationships, and understand how to gather, analyse and apply learning data within their teaching practice. Digital innovations provide communication tools, electronic evidence management and analyses systems and will continue to be developed to enable and enhance the process of teaching and learning.

Instructional design for VET digital facilitators. The 5E Model

From an academic perspective, instructional design is defined as "the systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information resources, and evaluation."[1] Evidently, the starting point of instructional design consists in the clarification of what students should learn (Norbert, Thomas, Patrick, & Oleg, 2017, p. 1). In other words, instructional design is creating learning or instructional experiences that facilitate the acquisition of new knowledge.

Instructional designers create and deliver educational and training materials to learners from all walks of life in a variety of ways. They work with traditional paper materials, such as handouts and manuals, as well as eLearning technologies and multimedia. Their work can be seen in elementary and secondary schools to universities and adult training facilities. They're also found outside the academic sector in a range of industries including health care, retail and the military.[2]

Instructional design in practice presupposes a specialised and highly applied knowledge. The knowledge needed for the design of effective learning environments not only contains knowledge about particular subject matters to be taught (i.e., content knowledge). To design effective instruction and/or learning environments one needs also to possess knowledge about various generic strategies and methods of instruction, diagnostics, testing, and assessment (i.e., general pedagogical knowledge). Last, there is the need for knowledge about didactical and diagnostic potentials of content specific tasks idiosyncratic experiences concerning useful forms of presentation and representation, an understanding of what makes a specific content easy or difficult to learn, as well as basic knowledge about preconceptions with which learners of different age and social background enter the learning environment (i.e., pedagogical content knowledge). (Norbert, Thomas, Patrick, & Oleg, 2017, p. 20)

There are numerous ID models that instructional designers can use as their foundation when developing various learning exercises. The five most common and widely used instructional design models are: Bloom's taxonomy, ADDIE Model, Iterative Design, SAM Model, Learning Circle Framework. instructional design practices calls for all instruction to include three primary components that form the Magic Triangle of Learning: (1) learning objectives – the goals are outcomes for the student and they should describe what the learner will be capable of at the end of a course, (2) learning activities – the actions which the instructional designer plans during the design phase. When creating both objectives and activities keep the learner in mind, (3) learning assessments – It is imperative that they are aligned with both the learning objectives and learning activities.[3]

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[1] University of Santiago, "What is instructional design?". *https://onlinedegrees.sandiego.edu/what-is-instructional-design-examples/*

[2] Purdue University, "What is instructional design?". *https://online.purdue.edu/blog/education/what-is-instructional-design*

[3] Wengroff, J. (2019, 21 June), "What is the Magic Triangle: Aligning Learning Objectives, Training Activities and Assessment Methods". https://getsynapse.com/blog/what-is-the-magic-triangle-aligning-learning-objectives-training-activities-and-assessment-methods/

Instructional design is most effective and learning outcomes are most successful when these three pillars are built with the "intention of interdependence," or in a way that all three support each other. Using the theories of instructional design to build teaching exercises can elicit numerous positive benefits for learners: creates focused/customised programs, encourages more student participation, sets clear and measurable objectives, creates consistency, simplifies learning for students.

The 5E Model has been used to help frame the sequence and organisation of programs, units, and lessons and consists of the following phases: engagement, exploration, explanation, elaboration, and evaluation. Each phase has a specific function and contributes to the trainer's coherent instruction and the students' formulating a better understanding of scientific and technological knowledge, attitudes, and skills.

This model was developed in 1987 by the Biological Sciences Curriculum Study and it promotes collaborative, active learning in which students work together to solve problems and investigate new concepts by asking questions, observing, analysing, and drawing conclusions. 5E instructional model moves from a traditional model of instruction to a next generation model of instruction:

Engage means that the trainer is not showing or telling the students what to do anymore. The activity should make connections between past and present learning experiences, expose prior conceptions, and organise students' thinking toward the learning outcomes of current activities.

Explore gives the students the opportunity to unpack problems, develop models or gather data. The trainer is not the one who gives, demonstrates or shows the model. During the exploration phase, students actively explore the new concept through concrete learning experiences.

The Explanation phase allows the students to think and understand how they did something. Now, it means digging deeply into where the question has been answered or the problem solved, and using evidence to support claims.

Elaborate step is less about reading, watching or introducing new ideas. The trainer lets the students make valuable connections: concept-to-self, concept-to-concept and concept-to-world connections that help tie anchor and investigative phenomena together.

Evaluate cannot simply mean vocabulary assessments or graded journals anymore; now it means reflecting critically on the investigative process, the hypothesis, and the anchor phenomena.

As it can be seen, the 5E Model is based on the constructivist theory of learning, which suggests that people construct knowledge and meaning from experiences. By understanding and reflecting on activities, students are able to reconcile new knowledge with previous ideas. This model allows educators to create a unique learning experience for students. Trainers who can incorporate instructional models like the 5E Model into their classrooms help students build a strong foundation of knowledge through active participation. In the classroom, constructivism requires educators to build inquiry, exploration, and assessment into their instructional approach. In many ways, this means the trainer plays the role of a facilitator, guiding students as they learn new concepts.

1. Engage

Purpose

The educator works in the first step of the learning cycle to gain an understanding of the previous experience of the students and recognizes any knowledge gaps. Fostering an interest in the upcoming topics and hooking the attention of children to that topic and subject is important.

To take the attention of the students to the teaching topic teachers may assign students to open questions or write down what they already know about the subject. This is also when the notion is presented for the first time to the learners.

Engagement part is the first and arguably the most important part of the 5E model. The main goal of this step is to catch students' attentions to the topic. In order for students to be more interested in the title, teacher should cover more than a single aspect of their students. There are different aspects that a teacher needs to take into consideration while teaching students such as the different backgrounds of students, also their tendencies to different topics. Though each student has their own interests, and in order to make them reach some outcomes, a teacher has to consider more than one aspect. Therefore, the main goal of the teacher should be to help as many as students reaching the required point.

Asking a question, defining a problem, showing a discrepant event, and acting out a problematic situation are all ways to engage the students and focus them on the instructional task. The teacher's role is to present the situation and identify the instructional task. The teacher also sets the rules and procedures for establishing the task. Successful engagement results in students being puzzled by, and actively motivated in, the learning activity. Here, the word "activity" refers to both mental and physical activity. For further implementation, teachers can use books and videos from reputable sites or sources, books that correlate to the concept, real-life pictures effective discussion, and brainstorming.

1. Engage

There are several ways to effectively engage students in a lesson. You might create or use an existing video, a book, or just pictures. Engaged students think in depth when teachers encourage effective questioning about the concept. Using students' prior knowledge through discussion, about everyday examples, might help them to understand or explore the concept.

Activities

In this digitalized education system teachers can prefer to use web 2.0 tools to draw the attention of all students to the topic, to take their attention and to provide reflection on the subject at the beginning of any training program, lecture or lesson. With a variety of voting/quiz/right false, yes-no, or free word or sentence options, the interest of the class and the level of readiness can be quickly measured. The results are shown to the group instantly so that they have instant information about the information, need and motivation degree on the subject in the group.

For example, if the word cloud activity is done, a short discussion is provided on the subject based on the most repetitive words. If short sentences related to the subject, concept or terms are requested, these will be shared with the class and a productive introduction will be made to the course through correct or false highlighting. If the test is done, the readiness of the class to the course can be seen together from the correct and incorrect answer rates given to the questions and the necessary level can be continued. The tools listed below can also be used as a means of measuring attention in the later stages of the lesson and as a means of repetition/reinforcement or reminder at the end. The most important benefit/feature of these tools is to get feedback from the whole group very quickly, to analyze and show it to the group. All tools can also be used in distant learning or webinars.

Mentimeter

Why mentimeter?

In a world of online teaching and distance learning, teachers are trying to keep students engaged and connected in new ways. Mentimeter is a perfect tool to increase classroom engagement, and to make sure that everyone's voice is heard. Mentimeter can be used as an engagement tool at the beginning of the lesson to see the readiness of the students and also to create formative assessments, spark discussions and test knowledge with fun quiz competitions. It can be used at all types of education and training with people from different age groups.

What to expect from the students?

Mentimeter enables students to engage them to the lesson using live polls, word clouds, quizzes, multiple-choice questions and more. It is also used to see the background of the students on the topic that is going to be taught. In order to join the mentimeter students do not need to download mentimeter app or have an account to join. It is interactive and one can join the event by writing the code. Since it is interactive the responses will immediately appear on screen as dynamic and colorful visuals, helping them better connect with the group.

Mentimeter step by step

1. Create an account on https://www.mentimeter.com/
2. Create a mentimeter quiz
3. Choose a question type and write your question
4. Write options and choose the correct option
5. Create a code
6. Share the code withy the students and ask them to enter menti.com with that code.

Mentimeter features

- Easy to join
- No need to download the app or have an account
- Can be used in online and face to face
- Engaging and enjoyable
- Quick feedback

Wordwall

Why Wordwall?

Wordwall is a free online tool for creating learning activities. With Wordwall, teachers can enter the topic that they would like to cover in class into the Wordwall and receive a variety of ready-made, fully customisable activities such as quizzes, word games, maze chases and much more. Wordwall is designed to help teachers create an array of interactive and engaging class activities for students in person or online. This platform provides various templates for teachers to select from.

What to expect from the students?

Even if the teachers or the students are not perfect in using technology it wouldn't take so much time to use it in the classroom. It is a perfect tool to engage students into the topic of the lesson with its ready made templates to create well-known activity types such as multiple choice, groupings, matching or more complex games and quizziz. Wordwall is web-based and with a good internet connection one can create activities quickly and easily in minutes and share in different ways.

Wordwall step by step

1. Create an account on the webpage https://wordwall.net/
2. Create a customized resource with just a few words and a few clicks.
3. Select a template due to your teaching topic or theme

Wordwall features

- Easy to use
- Just need a computer or tablet
- There are many templates to use and shareable

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www.digifactproject.com
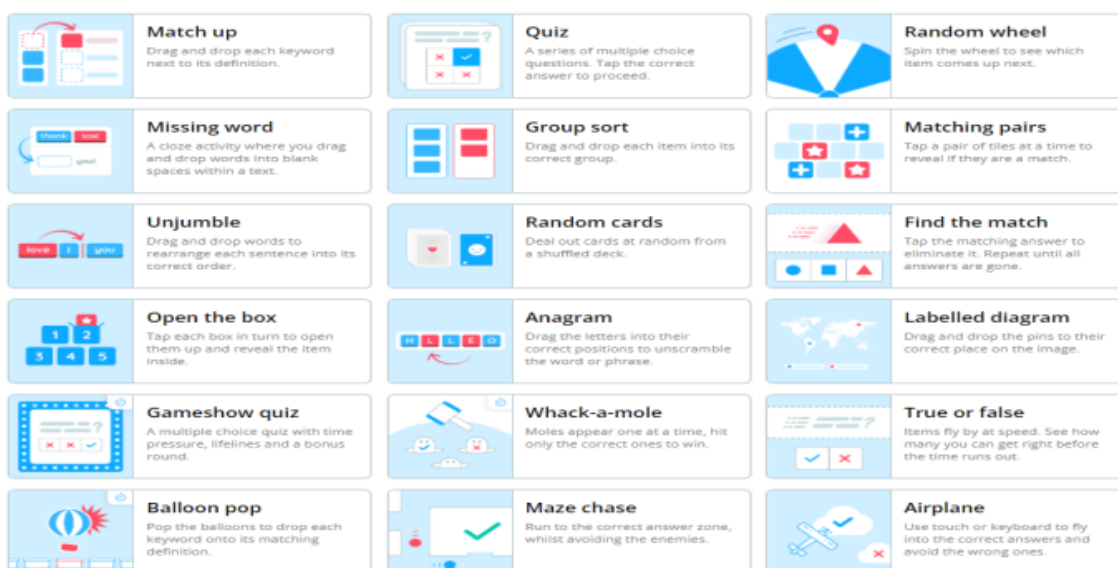
Plickers

Why Plickers?

Plickers is a simple web 2.0 tool that makes it easy to solve test-questions. While solving the questions you also have fun at the same time. While using Plickers you do not need to be in a computer lab or each student does not have to have a mobile phone or a tablet. It is a tool that every teacher can use in his classroom and that is why it is preferred so much. Plickers is an application that will make a difference in the classroom and ensure that your students participate in the class with pleasure. You can use plickers as an engaging and motivating tool at the very beginning of the lesson for engagement or as an evaluation tool at the end of the lesson. It also attracts the attention of the students who do not like to solve tests and participate in the lesson / activity.

Plickers is one of the tools that win the hearts of teachers with its features such as being used for every grade level, including primary school, not requiring many devices, instant viewing of results, practical use

### What to expect from the students?

It is an engaging tool that increases motivation and competition in a way. While using this tool students do not have to have a tablet or a mobile phone or need internet. They only need to read the questions carefully and keep the printed QR codes sheets. These code sheets, which are very similar to each other, have a card number and 4 answer options. Whatever the answer is, the students show their papers so that it stays on that stylish top.

After the questions are prepared teachers distribute the cards to the students according to their names and start to apply. After downloading the Plickers app to your phone or tablet, you select the class. The questions you select from the questions assigned to that class will be displayed on the screen when the 'Live View' section of Plickers is selected on your teacher's computer. When students read the question and remove the correct answer, it will be reflected on this screen as you scan the QR codes with the camera of your phone or tablet, and the students will see if they answered correctly.

Plickers step by step

First you need to have an overview on Plickers and using Plickers in class

1. Have an account on Plickers https://get.plickers.com/
2. Add your classes and students
3. Create content by building set of questions
4. Print or purchase your plickers card
5. Open the Now Playing window
6. Open the Plickers app and start your quiz
7. Enter the scanner
8. Scan your students' answers
9. View instant results
10. Move on to your next question or end the session
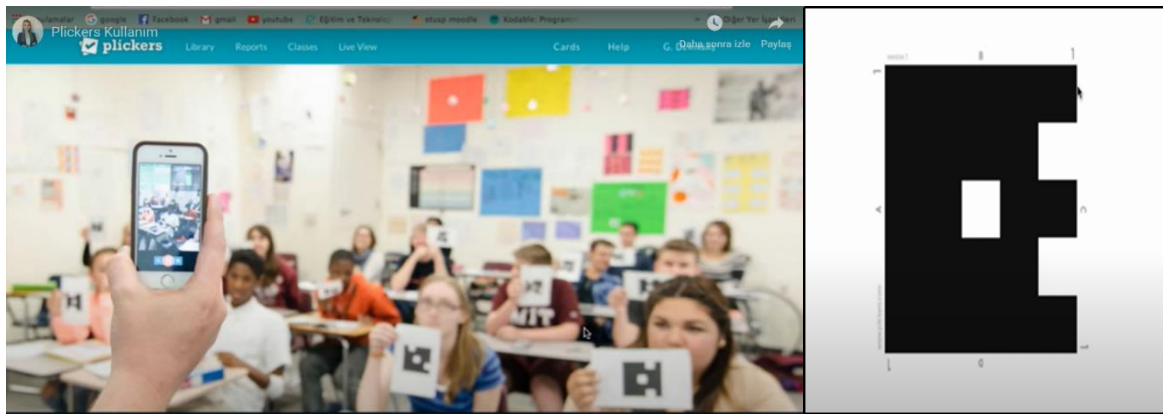
Plickers features

Plickers allows teachers to check in on students understanding

It is a free, interactive tech tool that uses printable "paper clickers" instead of clicker devices

- With the data collected from the students at the engagement state teacher can direct his/her lesson plan and its content to the level of students' readiness.
- Students stay engaged at the lesson as they watch to see if their card was scanned, and their answer displayed.
- The cards can either be bought online or downloaded and printed.

Blendspace

Why Blendspace?

Blendspace is a digital learning platform for teachers to access various resources and forge bundled and interactive lessons. It is the easiest way to blend your classroom with digital content. It is a free and collaborative web.2 tool which can be used to create interactive presentations, quizzes, worksheets, events, projects, discussion environments in a very short time. It can be used as an engagement tool at the beginning of the lesson to see the readiness of the students on the topic and to increase their motivation. It can be used as an evaluation tool at the end of the course. Teachers prepare digital contents that support in-class or out-of-class learning activities. Blendspace is compatible with mobile devices.

What to expect from the students?

Blendspace is a time saver tool. It avoids teachers and students from fumbling with flash drives, losing valuable class time, opening emails and attachments. It is a perfect tool to flip the classroom and to save that vital classroom time for student interactions, engaging activities, or having students work independently while teachers facilitate their activities and provide feedback one-on-one.

Blendspace step by step

1. Create an account
2. Create an online session
3. Organize the settings –Choose a grade level for your students - Give your lesson a title
4. Organize the content
5. Drag&Drop Resources
6. Share the Lesson - Collaborate
7. Test the lesson

Blendspace features

- Avoids time consuming
- Interactive and collaborative
- Enjoyable

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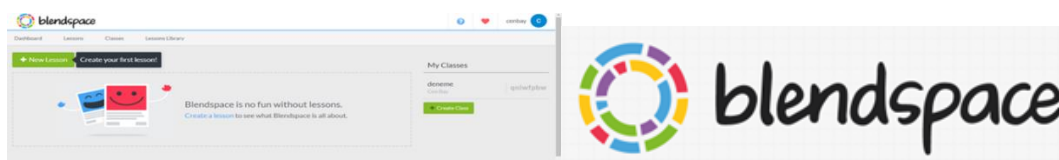
2. Explore

Purpose

Students consciously explore the new concept during the discovery process through concrete learning experiences. They may be asked to go through the scientific method and collaborate and make observations with their peers.

This stage enables learners to learn in a hands-on way.[4]

Exploration: Once the activities have engaged the students, the students have a psychological need for time to explore the ideas. Exploration activities are designed so that the students in the class have common, concrete experiences upon which they continue formulating concepts, processes, and skills. Engagement brings about disequilibrium; exploration initiates the process of equilibration. This phase should be concrete and hands on. Educational software can be used in the phase, but it should be carefully designed to assist the initial process of formulating adequate and scientifically accurate concepts. The aim of exploration activities is to establish experiences that teachers and students can use later on to formally introduce and discuss concepts, processes, or skills. During the activity, the students have time in which they can explore objects, events, or situations. As a result of their mental and physical involvement in the activity, the students establish relationships, observe patterns, identify variables, and question events. The teacher's role in the exploration phase is that of facilitator or coach. The teacher initiates the activity and allows the students time and opportunity to investigate objects, materials, and situations based on each student's own ideas of the phenomena. If called upon, the teacher may coach or guide students as they begin reconstructing their explanations. Use of tangible materials and concrete experiences is essential.[5]

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[4] https://lesley.edu/article/empowering-students-the-5e-model-explained

[5] https://bscs.org/wp-content/uploads/2022/01/bscs_5e_full_report-1.pdf
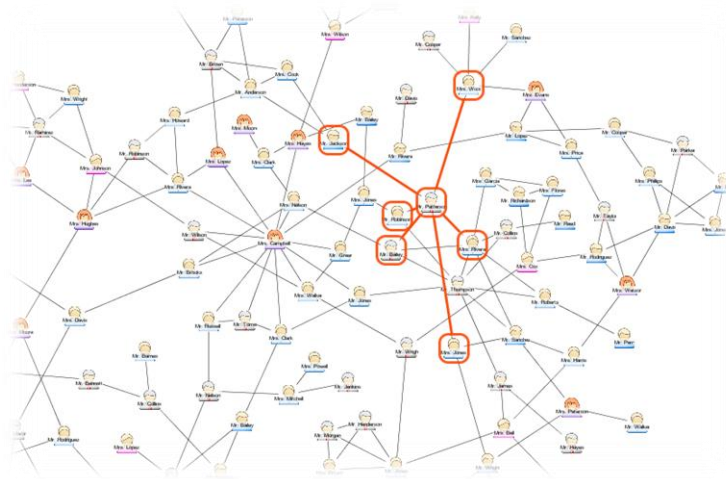
Activities

Slatebox

Why Slatebox?

Slatebox is an online collaboration and drawing tool which delivers a simple mechanism for drawing, collaborating and sharing content. It is a perfect tool for explore stage of the 5E model.

It offers a variety of good-looking templates and intuitive tools for designing and editing mind maps and charts. Creating a mind map is a simple matter of selecting a template and using the visual editor to place text and images in boxes. Those boxes can be resized and rearranged using the drag and drop editor. If you need more text boxes, simply add more.

What to expect from the students?

Slatebox is an interactive tool to do brainstorming in the classroom. It can be used on the interactive whiteboard, too. When students plan a project or a diagram a concept teachers can offer Slatebox, it is a fast and responsive mind mapping tool. If you just want to create organization templates for your students to use offline, you can use Slatebox for that too. Create your template, download it as an image, and print it out.

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Slatebox step by step

1. Registration is free for individual users of Slatebox.
2. You have the ability to create unlimited mind maps ("slates") which can be private or public.
3. In order to save the slates do not forget to close the welcome screen so that you can access more of the menu.
4. Even with the individual option, you can collaborate with one person by sharing a provided link.
5. The premium versions of Slatebox will give you more flexibility as edits can be made and viewed in real-time by multiple collaborators.

Slatebox features

Slatebox can be used to implement a variety of instructional strategies:

- Brainstorm ideas
- Develop a course outline, learning module, or research project draft
- Develop story ideas or even develop a digital story
- Develop a mental model of a subject
- Map the steps of a procedure
- Map the relationships between elements of a process
- Illustrate organizational relationships
- Collaborate in real-time.

MindMeister

Why MindMeister?

Concept maps are individual learning tools. They are concrete graphs that indicate the connections of a single concept with the other concepts in the same category. It is used to make meaningful connections between one's previous knowledge and the new gained information. It functions such as visualization, association, concretization, classification of information and also it can be used effectively in defining the scope of the new units to be learned, determining the readiness levels of the students, revealing and eliminating conceptual misconceptions and revealing how the students structure the information.

Mindmeister allows us to create very nice solutions and concept maps in 10-15 minutes with less effort. It is an online interactive tool that each participant can interfere, let others change the mind maps you create and also create online brainstorms.For example, by sharing the concept map we have created, you can direct your students to this service and create a common concept map. Thus, a product will emerge as a result of Student-Teacher work. Or we can divide them into project groups and enable our students to create a common concept map. You can also decide whether the people you invite can only view or edit your maps by them.

What to expect from the students?

It is a collaborative work in which student-student or student- teacher can collaborate. It is a perfect tool to see what the students already know about the topic of the lesson and to make connections

with the topic that will be learned. Students of all ages can utilize MindMeister to study more efficiently, unleash their creative potential, and get ahead in their educational career.

MindMeister step by step

1. Visit www.mindmeister.com to access the MindMeister dashboard.
2. Click the plus icon (+) at the top of the dashboard to create a new mind map.
3. Double-click the central (root) topic in your mind map to name your map.
4. Press ENTER to create sibling topics.
5. Press TAB to create subtopics.

Mindmeister features

- Students can create their own mind maps including keywords, links, branches, and hierarchical levels to help them brainstorm ideas for essay writing.
- Maps can be shared with others for easy collaboration.
- Templates are provided to easily start a new mind map.
- Can be accessed easily in Teams and use SD72 Microsoft login to create accounts

Storyjumper

Why Storyjumper?

Storyjumper is an application where students at different levels, from preschool to higher education, can create digital storybooks individually or in groups. The application can be used for different purposes such as concept learning, authorship, creativity, development of collaborative working skills, story-based subject learning.

It is a platform that allows you to create digital stories through a website. Story Jumper offers a wide range of users and offers you fairytale-like environments, characters, objects and pictures to use in your stories. Thanks to this platform, you can edit your digital story as you want with the visuals on Story Jumper and transfer it to the reader. With Story Jumper, users can both publish their own stories and read other users' stories. The most important feature that distinguishes Story Jumper from other book creation tools is that the pages can be created with sound when you want. So you can create digital stories with sound on Story Jumper, which allows you to add voice-overs to your stories.
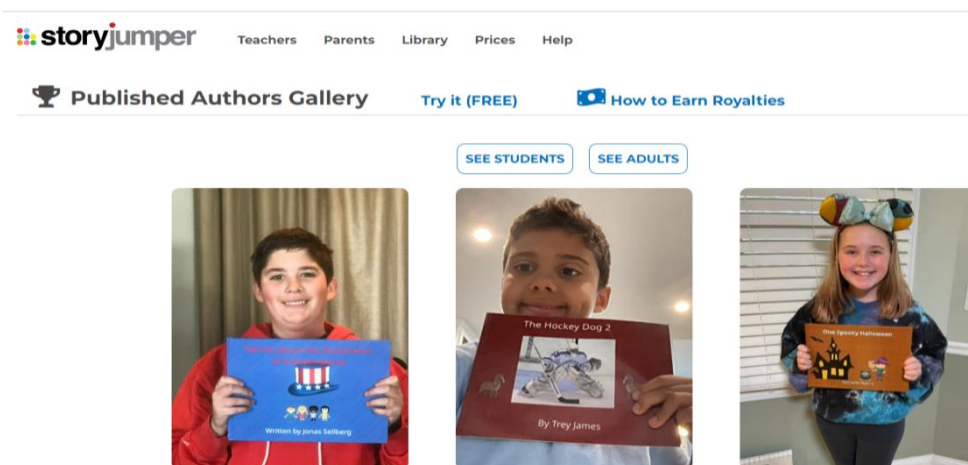
What to expect from the students?

With Story Jumper, users can add their own characters, their own environments and different voices to their digital stories created by using their imaginations. Users can share the digital stories created

or read a shared story. If you're a teacher, you can create your own class and add students on Story Jumber. You can follow the stories your students have made and make corrections if you wish. By giving your students group or individual assignments, you can support the development of their imaginations. You can offer your students a draft digital book and direct them to improve it.It is an amazing and engaging way of improving students digitalization and imagination at the same time. Also a perfect collaborative instrument to work in peers, in groups or in class. A good tool representing 21st Century Skills.

Storyjumper step by step

1. Visit www.storyjumper.com and sign up an account
2. Plan your lesson
3. Create a book
4. Add your classes
5. Add students or teachers
6. Students create books
7. Review the books
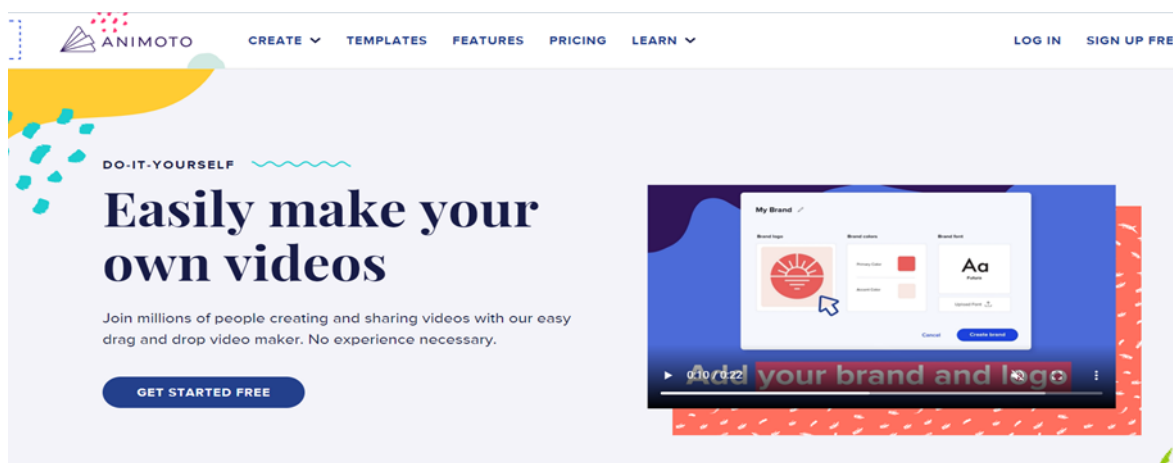8. Publish books and share with the target group (parents-students-school manager and teachers)

Storyjumper's features

- Brings authors and readers together who mutually support and encourage each other to create amazing new books
- Improves imagination and using digital tools
- Improves collaborative skills and writing skills
- A good way of process evaluation

Animoto

Why Animoto?

Animoto is a cloud-based video creation service that produces video from photos, video clips, and music into video slideshows, and customized web-based presentations. It is a Web 2.0 tool that allows users to produce videos that blend photos, video clips, text and music. Teachers can use Animoto in their classes by examining their existing curriculum to decide where the use of Animoto will support their learning objectives. It is a great choice for those who need to create videos on the fly. For someone who is complexly new to video and editing, this tool process is a major resource. No matter if you are casual user, professional, or need video editing for YouTube videos, Animoto can cover all needs.

What to expect from the students?

Students who are interested in the course can easily learn the learning topics with animoto.With the Animoto web 2.0 tool; teachers can remarkably share subheadings or important parts of the topic with their students when switching to a new topic or a new unit. With the Animoto web 2.0 applications, you can prepare it in advance to use during the lecture and use it to explain the crucial parts of the subject. In this way, the most important parts of the subject are permanently learned. With the Animoto web 2.0 applications, teachers can process their lesson more efficiently with interactive materials by creating their course streaming video. With Animoto web 2.0, teachers can ensure that the students learn permanently by repeating the important points of the subject at the end of the lessons. For project and performance assignments, teachers can ask their students to do it from the Animoto app. Thus, the students; By using their interest in technology, teacher can allow them to have a more fun homework process for them, help develop their creative abilities, and make your students experience the happiness of having produced something.

Animoto step by step

1. Visit to https://animoto.com/ and create your account. It is easy and Quick
2. Select a templates or start from scratch
3. Add images and video clips, either by uploading your own or browsing our Getty Images stock library.
4. Create videos using photos and video clips from your phone, camera, Facebook, and more. Choose from over 70 unique video styles
5. Caption photos, trim video clips, add text
6. Easily share on any social media account

Animoto's features

- Independent, active learning.
- Differentiated instruction.
- Real-world applications
- Student engagement.
- Peer collaboration.

3. Explain

Purpose

The 5E's Model Explain phase focuses on allowing students to synthesise the new acquired knowledge and ask questions if more clarity is needed. This is a process led by trainers, they should ask students to share what they learned during the Explore process for the Explain phase to be successful before presenting technical knowledge in a more direct way. This is often when educators use video materials, applications for computers, or other aids to improve comprehension.

The explanation phase is an essential, minds-on part of the 5E Model. The explanation phase enables students to describe their understanding and ideas and pose questions about the concepts they have been exploring. Before the educator attempts to provide a deeper explanation, the students must first have the opportunity to express their own explanations and ideas.[6]

Source: Femxa

Therefore, the Explanation phase has two differentiated and consecutive parts. During the first part students have a distinctive opportunity to articulate their own understanding of the concepts encountered during the lesson cycle thus far. The educator must be a facilitator and asks and guides students through their explanations of the concepts gained during prior phases. During the second part, the teacher helps focus students' attention on a particular aspect of their exploration experiences by providing scientific explanations, introducing important vocabulary, or discussing and clarifying misconceptions. Formal definitions, notes, and labels are provided. The teacher may also decide to integrate videos, or other visual aides to help with student understanding.[7]

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[6] Ballone Duran, et al., 2004, p. 49

[7] Duran, et al., 2011, p. 57

The explain phase allows educators to help students organise the new knowledge acquired during exploration, as well as provide them with technical and more advanced concepts and ideas to build on the students' knowledge. It is important to provide students with an opportunity to organise their knowledge in a way that facilitates acquisition of new knowledge and skills, and the ability to later apply the lessons learned. When students are given an organisational structure which fits new knowledge, they learn more effectively than when they are left to infer this conceptual structure by themselves.[8]

Activities

Popplet[9]

Why Popplet?

Popplet is an online tool that offers a digital platform to collaboratively create graphics – synchronously or asynchronously - and to organise our ideas, resources, images, etc. It has multiple functions as we can create virtual walls, concept maps, compilation of resources, timelines, etc. with a visually clear and attractive result. The tool allows users to capture facts, thoughts and images and create relationships between them. Popplet allows students to elaborate visual representations of the knowledge and interconnected concepts they have learned, and educators can use it as a tool to help students better comprehend new knowledge.[10]

What to expect from your students?

Popplet helps students develop a framework for organising their knowledge about a subject by providing visuals and key vocabulary words. At the same time, it can be used as a pre-lesson strategy by inviting students to share what they already know about a particular concept. After or during the development of the lessons, teachers should ask students to help add to the map as a group. This provides a visual aid for building upon their prior knowledge with the new acquired information. Popplet can be a useful resource to help students:

- Model how to identify the major ideas or concepts in a text, publication, or lesson.
- Organise their ideas and knowledge in categories, timelines, etc. And include links to resources as they discover more about a specific subject.
- Mapping of concepts constitutes a visual aid to represent and reflect the different interconnections between ideas and concepts.

Popplet step by step

1. Create an account.
2. Make a new popplet with a Title and a colour and start adding bubbles or "popples".
3. Add users to work collaboratively. There are different strokes, and options to add content.
4. Export and share your popplet.

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[8] Ruíz-Martín, et all, 2022.

[9] Popplet. Retrieved from: https://www.popplet.com/

[10] Arrausi, J.; Ribosa Martínez, J.. «Driving maps: El uso de mapas mentales para orientar el Aprendizaje Basado en Proyectos a través del Design thinking». Gráfica, 2018, Vol. 6, no 11, pp. 25.
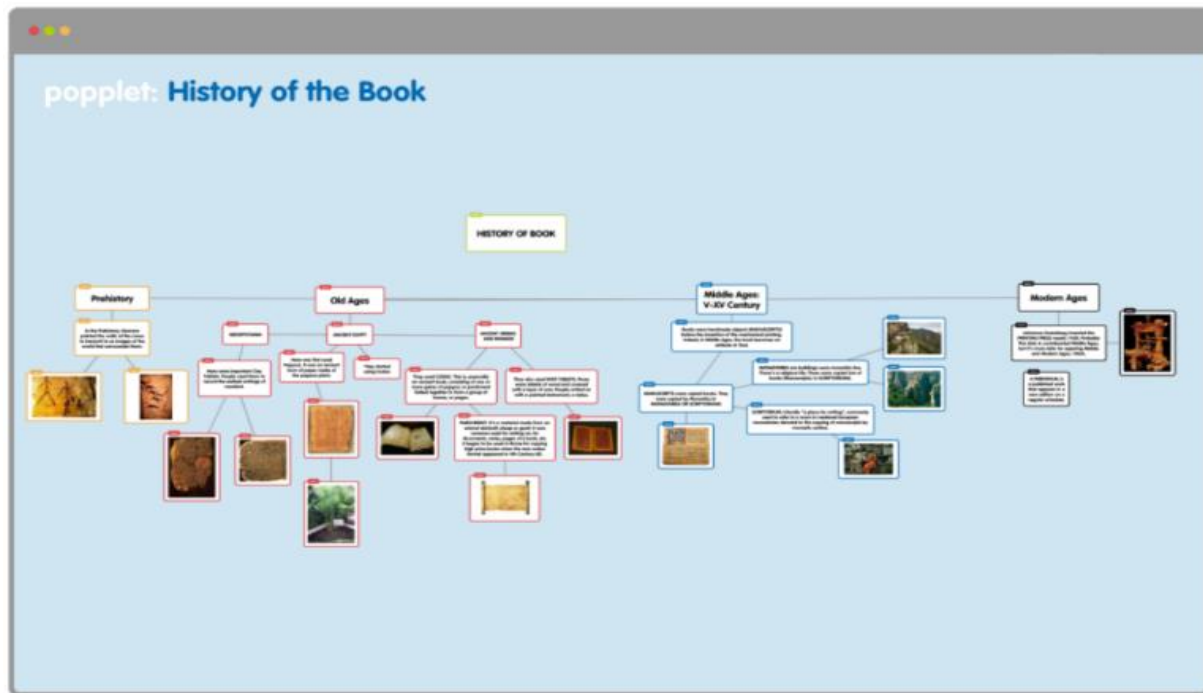
Source: Popplet

Popplet's features

- It is structured in the form of a desktop in which we can create bubbles, "popplets", in which text, strokes, images, maps, videos and more can be introduced.
- It allows collaborative use in real-time.
- It is available in over 100+ languages.

Editable online KWL Grid[11]

Why Editable online KWL grid?

A KWL grid is a simple visual learning tool that can be filled prior, during and after learning in a new topic or theme to show: What is already known (K), What would like to be known (W) and What has been learnt (L). Children and adults can use this as a working document and share it through collaborative online tools to discuss the subjects with the class or exchange notes with other students.

KWL charts are designed to encourage reading or guide a learning session. This resource can be used as an online resource or in a paper, and it is especially useful for distance learning as it helps to refresh your knowledge about a certain topic or identify knowledge gaps in an easy organised way.

What to expect from your students?

KWL grids allow students to activate prior knowledge, develop a purpose for learning through interests and summarise what they have learned. This allows students to compare new knowledge with what they already know to construct meaning from what they've been learning. This allows them to monitor their learning and identify any knowledge gaps.

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[11] **Twinkl. Retrieved from:** https://www.twinkl.es/resource/t-c-6811-editable-kwl-grid

By taking notes during each stage of the learning process (current knowledge, questions or areas or interest, and learnings), KWL grids help teachers tailor their lessons to what the students feel like they need to know. Not only does this ensure students are not left with knowledge gaps, but it also makes students feel involved with the learning process.

Editable online KWL grid step by step

1. Download a customizable KWL grid template that adapts to the objectives of your subject. You can download free templates available in multiple languages in platforms such as Twinkl
2. Give clear instructions for students to individually or collaboratively (e.g., using an online collaborative tool such as Blackboard) fill each field.
3. Collect the grids and use the information to design your lessons around students' knowledge, gaps and misconceptions; or to initiate a discussion between students.

Editable online KWL grid's features
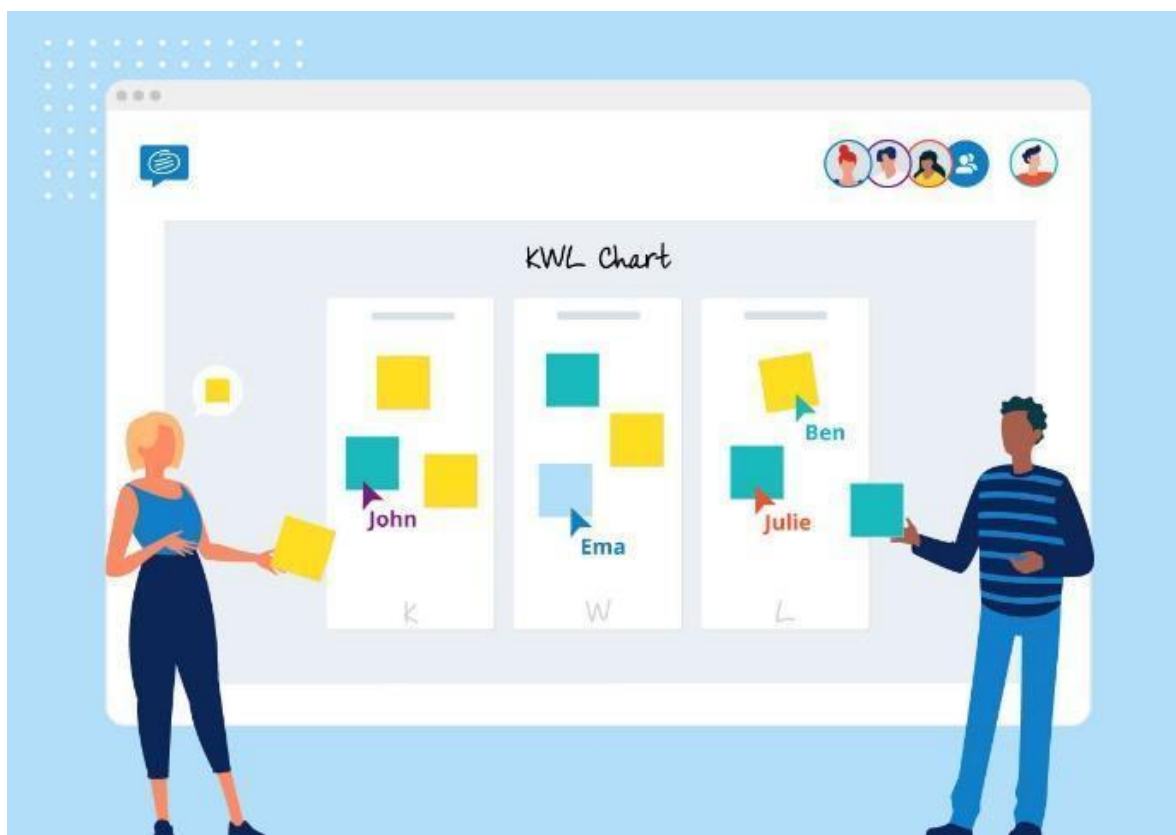
Source: Twinkl

- Allows students to organise their knowledge around a specific subject, their gaps, and to determine their own learning objectives.
- It can be used collaboratively, thus allowing students to compare and exchange their notes.
- It can be customizable to fit each class and subject specific needs, for the information collected to be more useful for both teachers and students.

Playposit[12]

Why Playposit?

Playposit is an application for creating interactive videos, either selected from YouTube or another platform, or using one of your own, and enriching it with activities, images or comments, establishing a series of pauses during its duration for students to solve, investigate or reflect on it. It allows students to enrich the learning process of students by extending and/or consolidating their knowledge in an iterative and fun way. Playposit is an example of a digital tool that allows educators to develop flipped classroom strategies, that is, a teaching method where students become the protagonists of their learning.

What to expect from your students?

Playposit is an intuitive and easy to use tool that, with fewer digital skills, allows educators to create powerful learning resources for students, tailor to the learning objectives and to the diversity of needs of the group of students. Its benefits include the following:

- Promotes deeper and more meaningful learning.
- It favours the development of competences and consolidates knowledge through individual and interactive work.
- It motivates students.

Students will be able to develop their critical thinking and problem-solving skills through the solutions of the different questions. The application helps students to focus on the content and consolidates it by resolving the multiple questions that educators add to the videos. It also allows comments and links to external resources during key moments of the video, that students can access to deepen their knowledge in the subject or resolve their doubts.

Playposit step by step

1. Create an account with the classroom profile.
2. Create an activity by uploading a video and editing it. Multiple types of questions, pauses, and comments can be added.
3. Invite students to register. Students will have to create their profile and access the classroom content by introducing the code number visible in the classroom profile.
4. Set up deadlines to complete the video lessons by students and monitor their progress. The teacher can keep track of what each student has answered.

Playposit's features

- Edit interactive videos for students. Educators can upload videos to include multiple types or questions: multiple choice, fill blank, short responses, etc. They can also add comments, insert reflexive pauses or and links to other online resources.
- Students can rewind the videos if they need to watch a part they did not understand again.
- Playposit allows you to monitor students' results. Educators can check the results for each student and the time needed to answer it. It is possible to view graphics of the responses and, thus detect if a question is too complicated or poorly explained.
- There is a chat option that allows students to interact between each other while performing the tasks, as well as with the teacher. This allows to extend the conversation when doubts arise or in order to continue the discussion on an issue and go deeper into it.

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[12] Playposit. Retrieved from https://go.playposit.com/
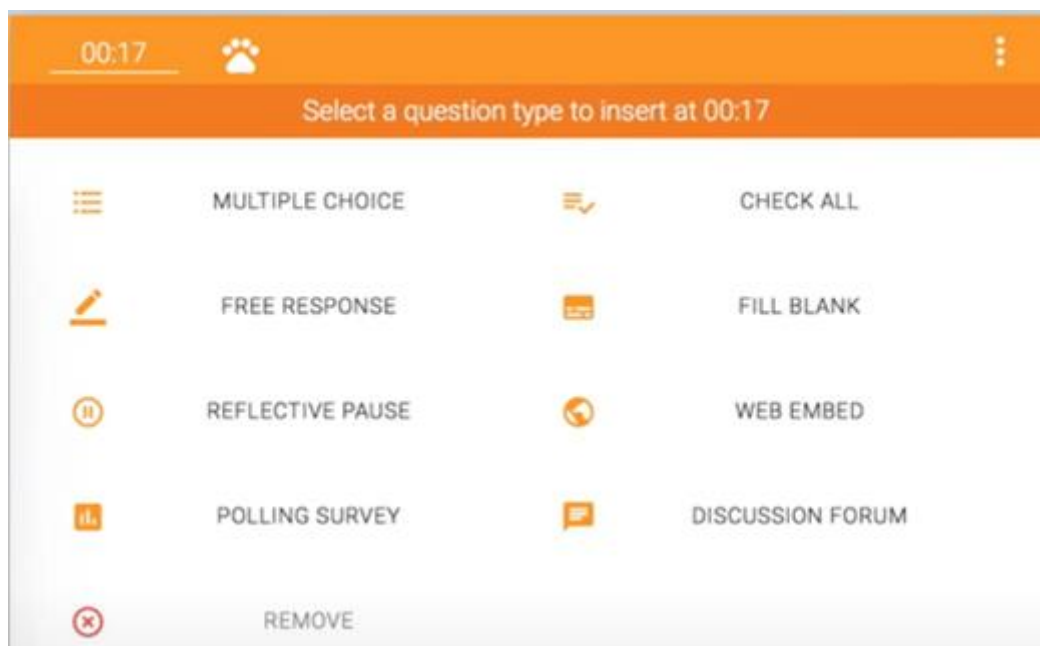
Source: YouTube

Wooclap[13]

Why Wooclap?

Wooclap is a digital tool to create interactive and visually attractive presentations that allows students to participate in the lessons and teachers to view students' responses. With this application teachers can create presentations or upload their already created ones with PowerPoint or Google Slides and include activities so that they can make students active participants in the lessons, such as surveys, quizzes and more. Students can answer in real-time through any device, including their smartphones, tablets or PCs, and educators will be able to see their responses immediately and use these data to adjust their lessons when necessary.

What to expect from your students?

Introducing interactive activities for students as part of educators' presentations will help to maintain students' focus on the subject being explained. The presentations will be instantly more attractive for listeners both in synchronous and asynchronous lessons. The main benefits of this digital tool are:

- Boost lectures, seminars and conferences.
- Measure the understanding of your learners.
- Stimulate participation and motivate your audience.
- Improve learning and collaboration.

Wooclap step by step

1. Register in Wooclap
2. Create or upload a presentation.
3. Edit the presentation. Educators can include questions, quizzes, and more features to allow students to participate in other ways. There are tutorials available in the same app to guide you through the different possibilities.

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[13] Wooclap. Retrieved from: https://www.wooclap.com/

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4. Save the presentation and use it in your lessons. You can also use it asynchronously by choosing the features that are compatible with this option.

Source: Wooclap

Wooclap's features

- Multiple question types to assess the level of understanding of participants, to give your participants the floor, to develop a brainstorming, to develop a competition, and more.
- Anonymous or authenticated participation (with username), to adapt to your audience.
- The answers of participants can be shown in real time to just the teacher or all the audience.
- Students can choose to make questions, like the questions of their peers or respond to them from their devices in real-time.
- The Confuse feature allows students to show they are not following, and the educators can use the data to deepen in an explanation.

Pocket[14]

Why Pocket?

Pocket is a digital storage tool that allows you to save information offline that you later can review even if you do not have an internet connection. It also allows you to sort the information saved, and it can be accessed by any device. Teachers and students can both benefit from this platform by organising materials for the classroom or interesting websites' posts, videos, or online articles about a specific subject that can be visited later without connection, to study or work on a project.

What to expect from your students?

Students will be able to easily save the resources searched in their independent research, and to have access to organise resources about specific subjects provided by educators. Pocket allows to save and organise multiple types of content found online; this will provide students with:

- A safe and accessible way to save online resources.

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[14] Pocket. Retrieved from: https://getpocket.com/es/

- An easy to use and visually attractive storage application, fostering consulting and reading of useful content.
- Provide clarity and organisation of educational resources through categorization.
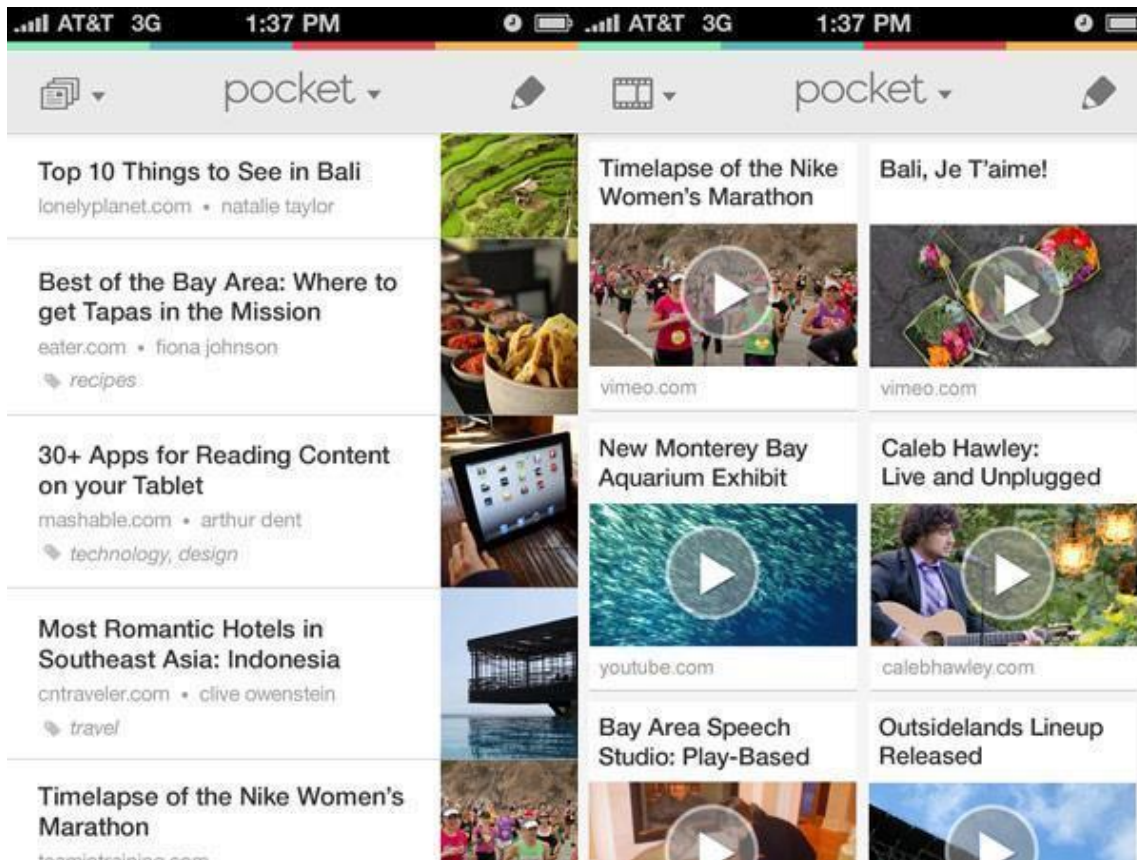
Source: IOSXtreme

Pocket step by step

1. Create an account. Compatible with PC (extension), smartphone or tablet.
2. Start to save online resources in your account and organise it by categories.
3. Access pocket to revisit the online content saved and to edit your categories.
4. Create a public profile to share your saved resources with students.

Pocket's features

- Storage for videos, articles, websites, photos and anything found online.
- Organisation and visual categorization of the resources.
- Save your Favourites.
- Multiple reading options and the "Text to speech" option, to listen to articles.
- Easy access from any device with and without internet connection.
- Possibility to synchronise your different devices, so you would have the information saved in all of them.
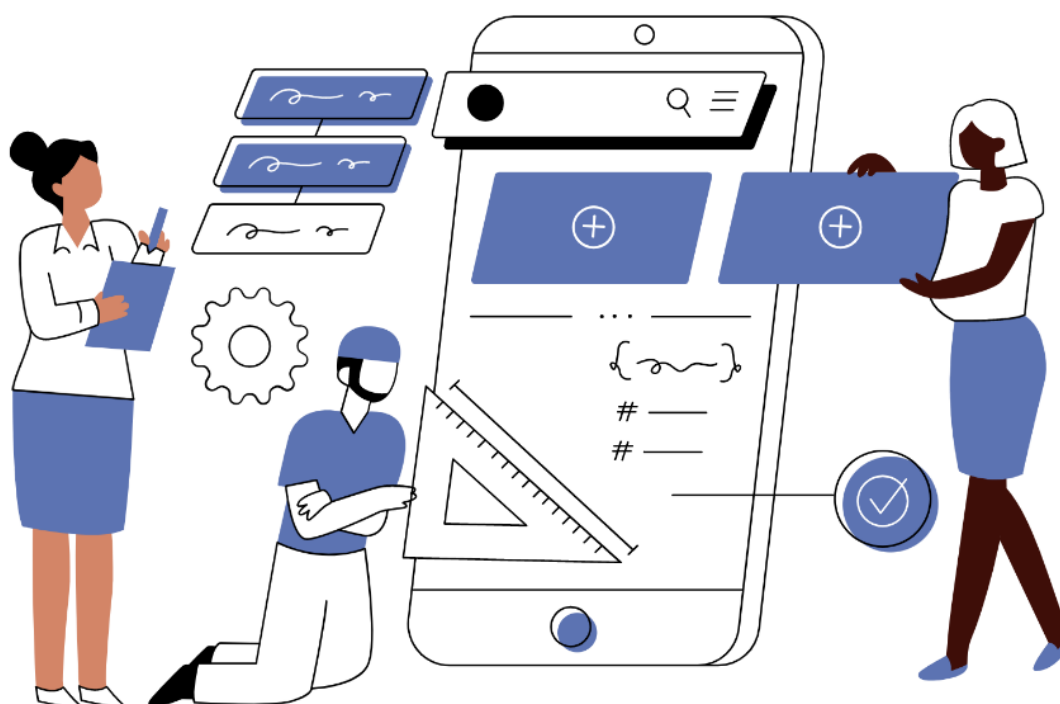
4. Elaborate

Purpose

The 5E Model's elaboration process focuses on giving students room to apply what they have learned. It enables them to develop a deeper understanding. To strengthen new skills, trainers can ask students to build presentations or perform additional investigations.

Before evaluation, this stage helps students to consolidate their skills. The exploration phase, meanwhile, allows the students' pre-instructional views to be tested. Based on their exploration in the second phase, students develop a plausible explanation for the phenomenon, with guidance from the trainers. The elaboration phase provides extension activities that enable students to reinforce and use the new knowledge acquired. This phase is characterized by the applications and extension of the concepts learned and skills acquired through conducting new, novel, or additional activities. Essentially, the elaboration phase provides activities for students to apply, develop, extend, or reinforce the newly constructed knowledge and acquired skills (Eng, et al., 2021, p. 173).

In the elaborate stage, students are given experiences to apply their knowledge to new contexts. In other words, the fourth phase, elaborate, seeks to extend and challenge students understanding of the content they have learned in the previous three phases. Students work through additional activities to develop an even broader and deeper understanding of the content. Students should also directly apply what they learned in the explain phase in a new way (Zackary, 2019, p. 29).

Source: Canva

To better understand, here it is a stimulation for the elaboration stage of the 5E model. Let's suppose that there is a lesson with and its topic is derivation of the formula for the total surface area of a right circular cone. In the elaborate stage students should apply their gained knowledge by solving several textbook examples calculating the total surface area of right circular cones in pairs (Schallert, Lavicza, & Vandervieren, 2020, p. 11).

During the stage of explanation, learners should articulate their findings, supported by their trainers, who might help learners to find appropriate terms or concepts. Two further essential inquiry features which involve students trying to link their explanation to scientific knowledge as well as communicate and justify explanations could be addressed in the explanation phase. The elaboration phase aims to involve students in additional activities facilitating the transfer to closely related but new situations to generalize concepts, processes or skills. By applying what students have learned during elaboration, students might give priority to evidence in response to questions and formulate explanations from evidence (Schallert, Lavicza, & Vandervieren, 2020, p. 4).

Activities

Kialo Edu[15]

Why Kialo Edu

Kialo Edu, or „how to have a classroom debate online", is the world's largest argument mapping and debate site, specifically designed for classroom use. Its clear, visually compelling format makes it easy to follow the logical structure of a discussion and facilitates thoughtful collaboration. Kialo's mission is to promote well-reasoned discussion online, and to that end, it is free for educators to use.

What to expect from your students

With clear visualization of arguments and with powerful, easy to use navigation tools, Kialo is the perfect resource to help students' master critical thinking and reasoning skills. The students have the opportunity to put their knowledge into action, to demonstrate their understanding and to engage constructively each other.

Kialo is a public discussion platform designed to facilitate reasoned debates about complex topics online. Kialo Edu allows educators to curate spaces for students to work through complex subjects together, while giving students the space to ask questions, discuss, and evaluate new ideas. Many academics see Kialo as a solution to the many issues existing in online discourse today.

Kialo Edu step by step

1. Create an account.
2. Invite students: Click on "Teams" – "New Team" – "Name the team" – "Create" – add members by email or sending a link
3. Set up a debate. Click on "Create discussion" and follow the instructions.
4. Assign the discussion to your students.

Kialo's features

- There can be added a super link to support the given arguments;
- The students can also vote other students' arguments. The results of the voting are visible;
- The students can ask for review;
- The trainer can chat directly with the student;
- The platform offers lesson plans specially made for the trainers;
- Kialo has a discussion tree that is a graphical representation of the debate;
- The trainer can filter the data from their students (e.g. if the trainer wants to follow the progress of a specific student).

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[15] Kialo Edu. Retrieved from https://www.kialo-edu.com/tour
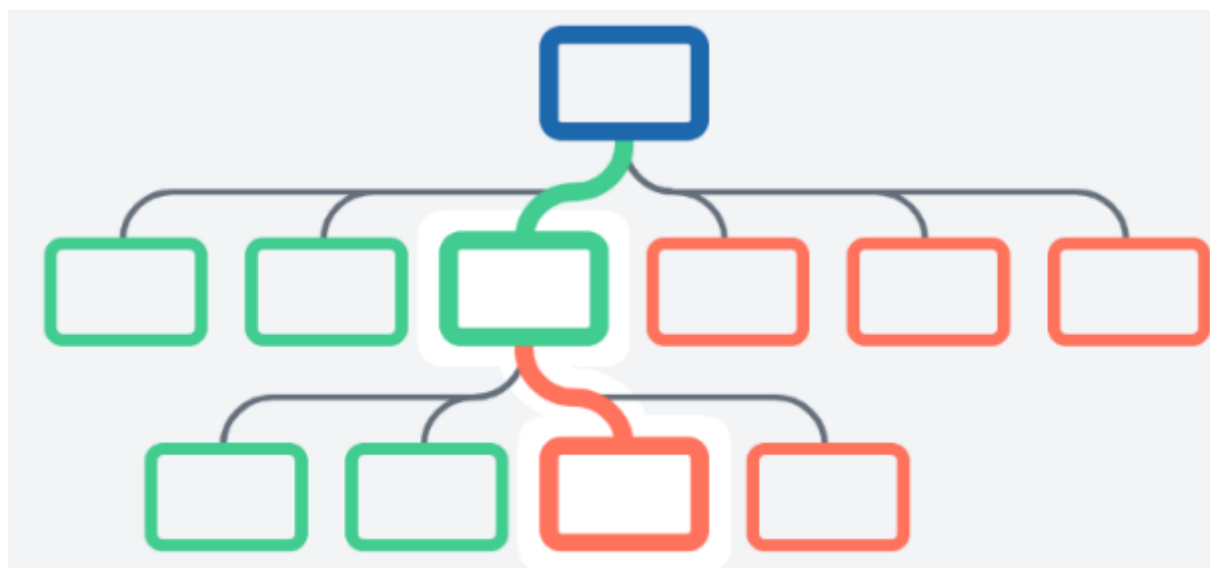
Source: Kialo

This image depicts the discussion tree of the debate. The blue rectangle is the main idea, the debate topic that was chosen by the trainer. The green rectangles represent the pros and the red ones represent the cons.

Nearpod[16]

Why Nearpod

Nearpod is a dynamic student engagement platform with loads of pre-created that the trainer can use with their students. With Nearpod, the trainer can add formative assessments directly into their lesson to drive student engagement. The trainer can start with a resource they already have, or check out the standards-aligned, pre-made lessons. He can get real-time insights into what students know, and access reports after their lesson.

What to expect from your students

A survey of over 2,100 students gives Nearpod high marks on personalization, creativity, and collaboration. The survey relieves that: 89% of students rated Nearpod activities as appropriately challenging. 82% of students feel that they can express themselves creatively using Nearpod, and 42% of students feel that Nearpod allows them to express themselves creatively to a greater extent than other classroom activities. 82% of students feel accountable for the work they do during Nearpod activities, and 50% of students say they participate more when using Nearpod. 73% of students say that during Nearpod activities, they interact with other students in a way that helps them learn.
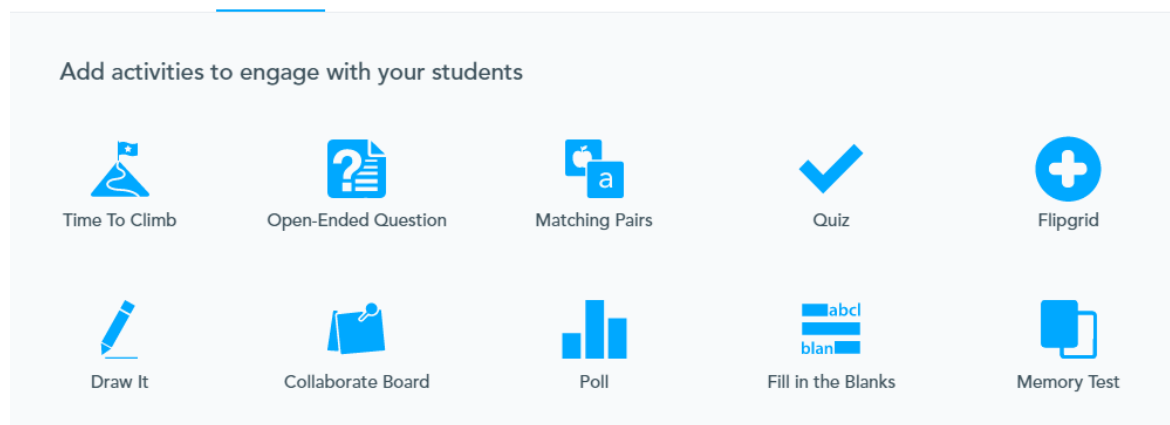
Nearpod step by step

1. Create an account.
2. Create a lesson (in Google Slides or choose one of their formats).
3. Create activities based on your lesson.

Nearpod's features

The trainer can choose from a variety of exercises, such as:

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[16] Nearpod. Retrieved from https://nearpod.com/

Source: Nearpod

- The trainer can gather data on student understanding by adding formative assessments, simulations, and dynamic media.
- The trainer can add Nearpod to their existing Power Points, Google Slides, worksheets, videos etc.
- The trainer can choose from thousands of ready-to-teach, customizable, standards-aligned lessons

What is more, even if there are a lot of free features, for some extra ones they must be paid.

Flipgrid

Why Flipgrid

Flipgrid is a dynamic platform where students can access content and then respond to prompts by creating short videos. The idea behind this education tool is to use video to create an open platform of discussion and learning that doesn't require a physical classroom to get everyone involved. That makes Flipgrid an ideal remote learning tool as well as a powerful homework-based application for students to use with each other.[17]

What to expect from your students

This tool has features that trainers in any subject can use to help students connect with each other and share their learning. Once a student creates a video, the rest of the class is able to view and respond to that video. What is more, Flipgrid can be a catch-up solution for students who are absent.

Flipgrid step by step

1. Create an account.
2. Create a classroom: Click on "Let's make a grid".
3. Create an assignment (give the title, select the time, give the instructions and add media resources).

Flip grid's features[18]

- Students can access Flipgrid from a computer, a tablet or a mobile device.
- The trainer can add a co-trainer (Click on "Add Copilot").
- The trainer can access pre-created assignments (Click on "Disco Library").

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[17] What is Flipgrid and How Does it Work for Teachers and Students?. Retrieved from https://www.techlearning.com/how-to/what-is-flipgrid-and-how-does-it-work-for-teachers-and-students

[18] Flipgrid Tutorial for Teachers. Retrieved from https://www.youtube.com/watch?v=aLzX13jw7bw

- The trainer can see the replies that other students posted to each other.
- The trainer can provide private feedback (video or written).
- When creating an assignment, the trainer can select the duration of the video.
- The video editor can be used as a board.
- The trainer has a section called "Topic Tip" where they can add tips to help his students in order to give the best answers.
- The trainer can see the hours engagement of his students.
- Each video consists of a thumbnail (it can be a selfie).
- The video can be edited (add filter, sticky notes, text, stickers).
- If a student doesn't feel comfortable recording themselves, they can pixilate their video.

Source: YouTube

Actively Learn

Why Actively Learn[19]

Actively Learn is an award-winning digital curriculum that drives student engagement and equity through deeper learning. Its flexible features and comprehensive, standards-aligned resources empower trainers to deepen students' comprehension. Actively Learn allows the trainers to make any video, webpage or text into an interactive learning experience. With Actively Learn, trainers everywhere can help every student achieve deeper learning, improve literacy, and grow.

What to expect from your students

The founders of the app focused on creating an academic program that would promote students' ability to think critically and to reason about complex questions, all in a learning environment where they would be happy and motivated to learn.

Actively Learn step by step

1. Create an account.
2. Set up classes: Click on the + sign next to the *Classes.*
3. Set up assignments (into ELA, Social Studies and Science).
4. Import (an Internet article, a video, a Doc, PDF, Slides).
5. Create quiz (click in *Insert questions* and choose: *short answer*, *multiple choice* or *poll*).
6. Assign: click *Assign.*

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[19] *About us*. Retrieved from https://www.activelylearn.com/about-us

Actively Learn's features

- When creating a class, the trainer can import it from Google Classroom or start a new one.
- Sync the class with other platform (Google Classroom, Canvas)
- The trainer has access to pre-created interactive content.
- The trainer can see how the platform looks from his students` perspective.
- The trainer can make any type of content an interactive text.
- Students can define word, translate sentences, and hear text spoken aloud.
- Students can see how their peers responded after submitting their own answer.
- The students can respond to their trainer's notes.
- Students can highlight any word from the text and add notes.
- There can be added a relevant link to some parts of the text.
- The students can't scroll past the question and must answer in order to continue reading.
- When the students choose an answer, they will immediately know if they got it correct or not.
- There are highlighted words and if someone clicks on them, then he can see a note that the trainer left for him.
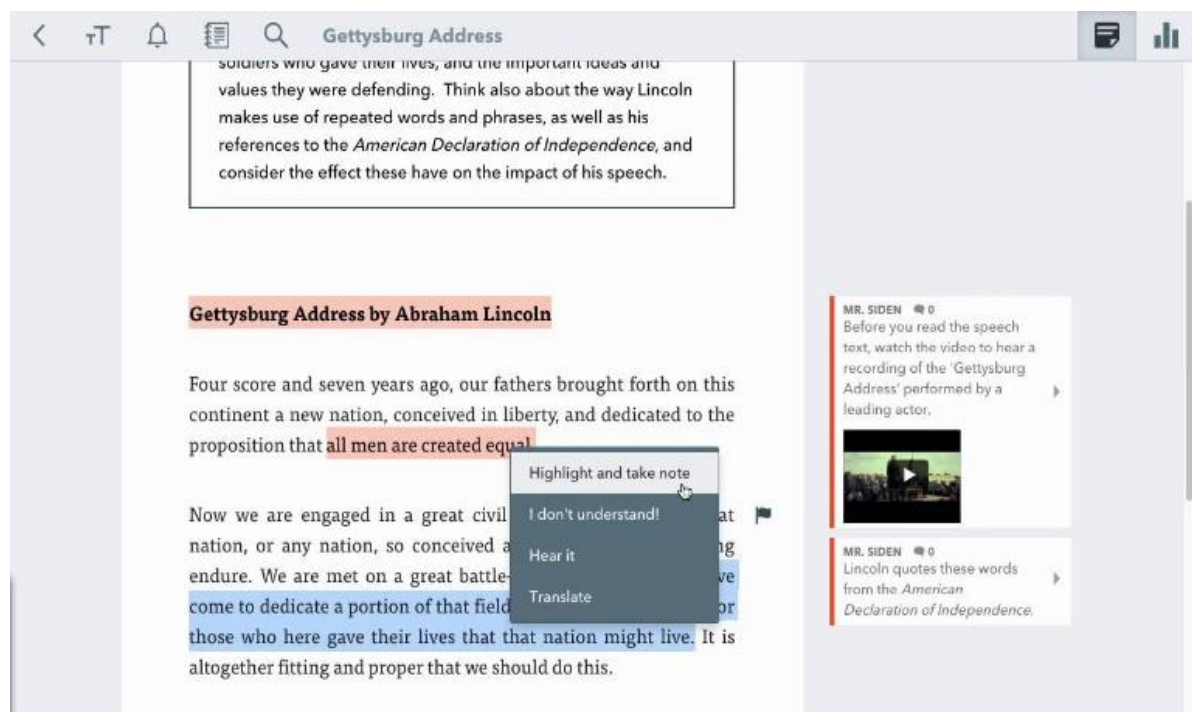

Source: YouTube

GoConqr

Why GoConqr

GoConqr provides a platform for students to develop, understand and learn key concepts, topics and subject matters. The trainer and the students can create visual study content to aid the learning process and help the students remember the notes better with GoConqr's online study tools: Mind Maps, Flashcards, Study Quizzes and more. The tools allow to easily develop ideas. Also, the students can even share their study notes with their classmates, easing trainer's workload and giving him different study perspectives, set up study goals to help him focus on his study plan.

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What to expect from your students

Students can create resources, share them among one another and work collaboratively. They can think about the key elements of a topic and build a Flowchart or Mind Map and get them to present it in a virtual classroom. The trainer can ask the students to create a Flash Card Deck about the topic. Also, the students can build a quiz with GoConqr Quizzes and share it with the other students.
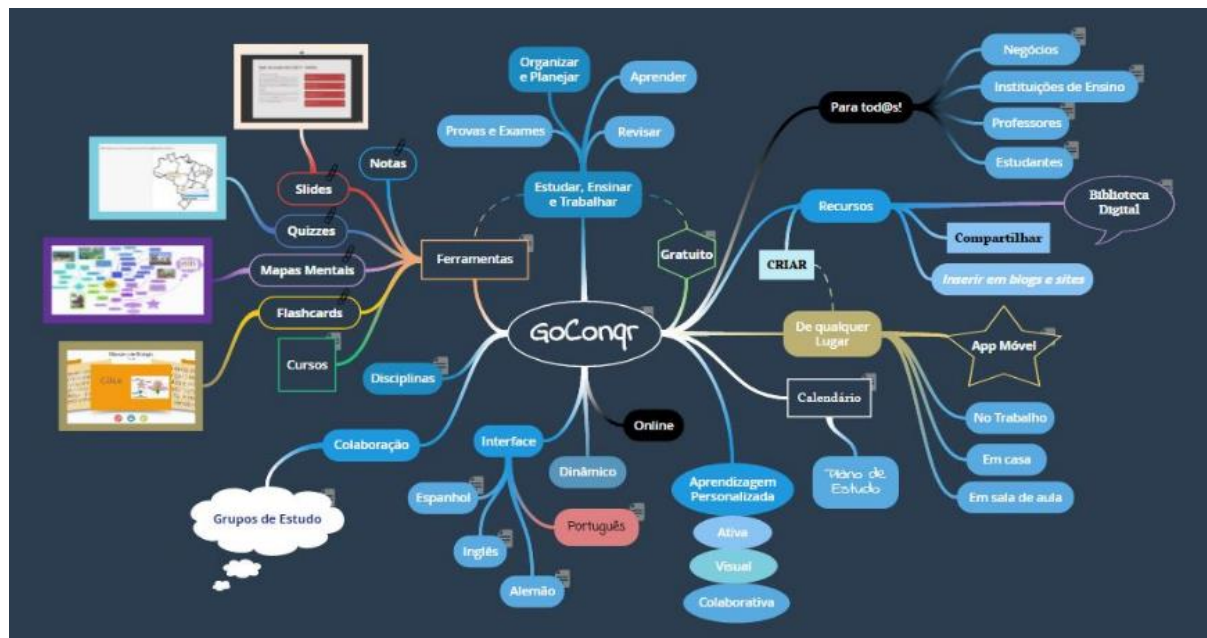
Source: Wikimedia Commons

GoConqr steps by steps

1. Create an account.
2. Create engaging content.
3. Let your student create engaging content.

GoConqr's features

- Test abilities.
- Track progress.
- Connect the Dots with a Mind Map.
- There is an app (on Google Play and App Store)
- Problem Solving with GoConqr's Flowchart Maker.
- All content created on GoConqr can be shared
- Students can work collaboratively.
- Improving learning by making connections and presenting ideas visually.
- YouTube tutorials specially made for trainers and students (GoConqr Video).
- GoConqr allows the trainer to try different approaches and get the students to build the content.
- Activity feeds on GoConqr have easy to create discussion and comment forums to allow for distance learning and communication.[20]

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[20] How to use GoConqr for distance learning and tools that can help you. Retrieved from https://www.goconqr.com/en/blog/how-to-use-goconqr-for-distance-learning-and-tools-that-can-help-you/

5. Evaluate

Purpose

The 5E Model enables both formal and informal evaluation. Trainers will observe their students during this process to see if they have a full mastery of the core concepts and give them feedback on the quality of their work and explanations. Formally, the teacher can also administer a summative evaluation at the end of the learning process. It is also helpful to note when students, based on what they studied, tackle problems in a particular way. Self-assessment, peer-assessment, writing assignments, and tests are some of the main types of evaluation that will take place in this phase.

It is important to consider that it is often necessary to implement evaluation activities during other "Es", meaning that evaluation is not simply something that happens at the end of the learning process, but rather during all its duration. For instance, numerous explore/explain rotations may be needed before students are ready to transition to the elaboration phase. The teacher may move back and forth several times within the Es or may include an additional engagement prior to starting an elaboration phase. The cycle is very flexible and dynamic. [21]

The evaluation activities are an opportunity to assess students and the knowledge that has been acquired, but this is not its only purpose. Evaluation is an opportunity to provide students with feedback on what they have learned so that they can use the information to improve their learning method or correct misconceptions. Evaluation activities during the learning process also allow teachers to evaluate individual student progress toward achieving learning goals and outcomes.

Evaluation is, at the same time, an important part of the learning journey of students. From a cognitive perspective, evaluation is not only useful for assessing learning and providing timely feedback, the act of retrieving information from long-term memory, that we performed when being tested, is one of the most effective actions for strengthening learning. Retrieving information from memory actually changes memory, increasing the probability of successful retrieval in the future.[22]

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[21] Duran, et al., 2011, p. 53

[22] Ruiz-Martín, et all, 2022.

In conclusion, there are multiple types of evaluations that need to take place during the learning process, both informal and formal. Ongoing formal and informal assessments provide opportunities for teachers to evaluate their instruction, for students to reflect upon their learning, and for students to utilise feedback from the teacher and their peers to evaluate and make improvements to their work. Whereas summative assessments are designed to consolidate students' knowledge and to provide insight into the achievement of the learning objectives related to course level and grade level expectations.[23]

Activities

Socrative[24]

Why Socrative?

Socrative is an application created with the aim of including smartphones into pedagogies. The main function of the app is to manage students' participation in classroom activities in real time. It allows the development of multiple types of evaluation activities such as tests, quizzes, and projects, and immediately provides feedback to students. Educators can monitor activities results in real-time or use the outcomes of the activity to evaluate students thanks to the reports that Socrative automatically provides.

Source: Socrative

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[23] University of Missouri, 2015, p.3-4.

[24] Bello Pintado, A., & Merino Diaz de Cerio, J. (2017). Socrative: A tool to dinamyze the classroom. *WPOM-Working Papers on Operations Management*, *8*, 72–75. https://doi.org/10.4995/wpom.v8i0.7167

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What to expect from your students?

Socrative provides the opportunity to create tailor assessment activities that students can easily respond from any devices and receive immediate feedback with the results obtained in each task by the app, as well as further feedback from the educator. The creative activities are not only useful to evaluate the knowledge gained by students, but they can also be used to motivate students, improve communication between classmates or encourage a spirit of self-learning and self-assessment. Through the test and quizzes of Socrative students can:

- Evaluate their progress or knowledge
- Check their progress and acquired core ideas and competencies against established criteria
- Assess progress by comparing current understanding with prior knowledge
- Answer open-ended questions by using observations, evidence, and previously accepted explanations.

Socrative step by step

1. Register and create a class (with an access code for students).
2. Create activities and tasks for students through the intuitive and easy to use app.
3. Set deadlines for students to complete the task and access their results to evaluate them.

Socrative's features

- Creation of 1 public room with a capacity of 50 students
- Possibility to create quizzes, rankings, multiple question types available (multiple choices, true/false and short answer).
- Space Race assessment: questionnaires with timer.
- Access to the online help centre.
- Real-time access to activities results by the educator.
- Visual sharing of assessment results through the app reports.
- Compatible with most devices and available in multiple languages
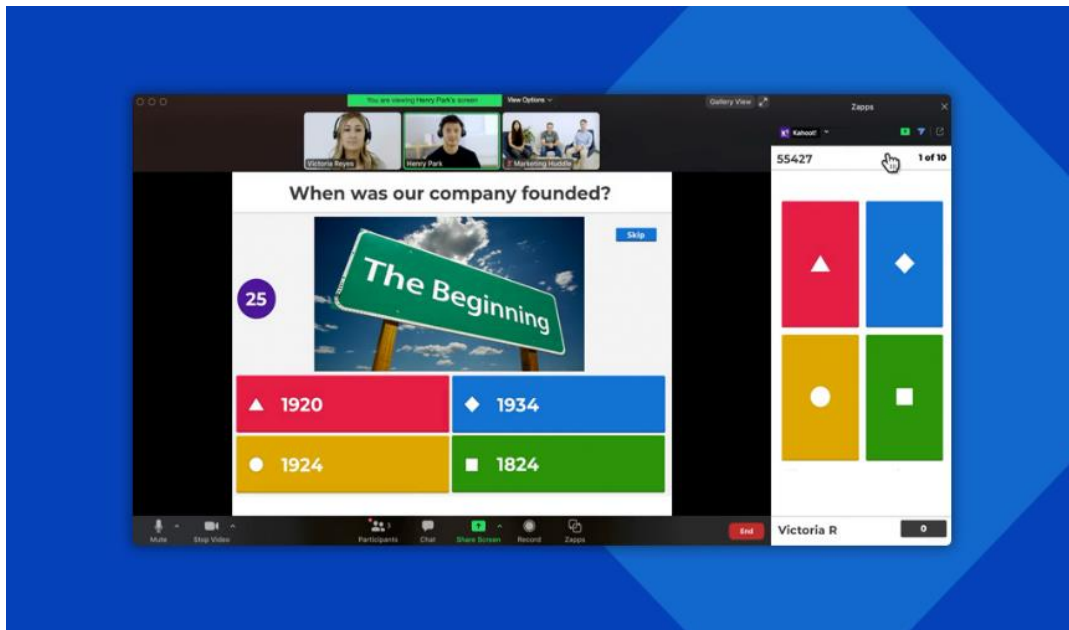
Kahoot![25]

Why Kahoot?

Kahoot is a widely popular game-based learning platform that allows users to easily create, share and undertake learning games or trivia quizzes in minutes. Kahoot offers more than 40 million games already created that anyone could access, making it quick and easy to get started.

What to expect from your students?

Students will be able to participate in fun and interactive game activities with the purpose of being evaluated, self-assess their progress regarding a specific subject, and consolidate their gained knowledge. Students can also foster their motivation, problem-solving and teamwork competencies through the games that are implemented by the teachers.

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[25] Kahoot! Retrieve from https: //kahoot.com/schools/how-it-works/

Co-funded by the
Erasmus+ Programme
of the European Union

Kahoot step by step

1. Create an account.
2. Create a game from scratch, using the question bank of the app, customising existing tests or using a template. A PIN code will be assigned to the activity to access it.
3. Develop the game with the students, synchronously in a virtual class by sharing a screen through a video conference tool or showing the questions in their devices, or asynchronously to be completed by students in distance learning.
4. Collect the results to evaluate students and provide them with feedback.

Kahoot's features

- Create a quiz in minutes. Possibility to choose from pre-designed templates as the basis, or duplicate and edit existing kahoots.
- Import questions from a spreadsheet or search from millions of questions in our question bank
- Combine multiple kahoots.
- Add slides with a classic layout, add drawings and images, or insert YouTube videos into questions.
- Host kahoots live in class or via video conferencing.
- Display questions and answers on students' devices in live kahoots.
- Assign student-paced challenges for review or homework.
- Get students to play individually or in teams.
- Add multiple types of questions such as multiple-choice or true/false.
- Adjust timer options depending on complexity of question.
- Toggle points between 0, 1000 and 2000.
- Show rankings as visual representations of students' results.

Quizlet[26]

Why Quizlet?

Quizlet is a global learning platform that offers engaging study tools to help people practise and master what they are learning. Teachers can sign up for a free account and enhance their study material and use the in-course assessment features to track students' progress. The app allows

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[26] Quizlet. Retrieved from: https://quizlet.com/es

students to create study units from scratch or use the existing ones in the app as a starting point, as well as create a classroom where students can access. Students can also use Quizlet on their own to assess their learning and customize the metrics available to monitor their progress, in a way that is more useful for them.

What to expect from your students?

Quizlet is a popular application with more that 2 million users. It allows to easily customise educators and students study material and adapt it to the characteristics and needs of students. The multiple types of evaluation activities that can be created foster students' motivation and engagement with the learning content and with their peers, through the sharing of study tools and the group activities.

Quizlet step by step

Register

1. Create study units with your own material and maintain them actualize.
2. Create a classroom (that students can access with a link or code) and add your units. This is online available in the Teacher mode pay version.
3. Implement the activities and provide feedback to students based on their responses.
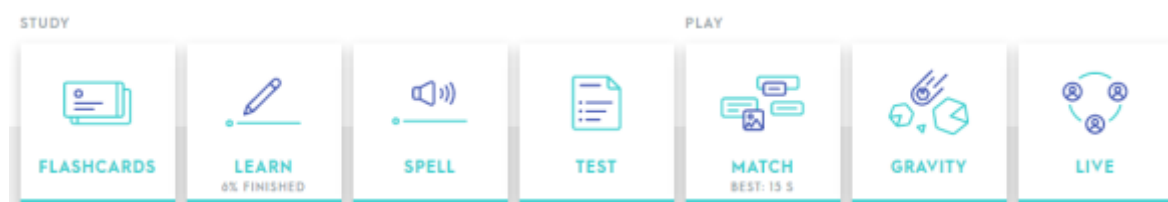
Source: Quizlet

Quizlet's features[27]

The evaluation activities that can be created are:

- Create flashcards that can be words + meanings or words + images. You could also make question and answer cards. Students could also make their own flashcards if they want.
    o Learn – Read the meaning/look at the image and type the correct word.
    o Spell – Type the target word you hear.
    o Test – An auto-generated mix of written, multiple choice, and true and false questions based on the vocabulary set.
    o Match/Gravity – a couple of games using the vocab set. Match works well on an interactive whiteboard.
    o Live – play a live game with multiple participants.
- Create learning units and classes that students can join.
- Track students' progress as well as actualize your study material and activities based on the feedback that provides their responses.

Eduflow – Peer Review

Why Eduflow?

Eduflow is a very easy to use platform with great accessibility from any type of device that allows to design and develop complete online courses with personalize features and activities. Between its

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[27] Exploring the Features of Quizlet. The Knowledge Network for Innovations in Learning and Teaching (KNILT), 2018, University at Albany's School of Education. Retrieved from:
https://knilt.arcc.albany.edu/Unit_3:_Exploring_the_Features_of_Quizlet

activities we find question and answer exercises, virtual debates, group tasks, self-assessment activities and more. It is especially relevant because it has a Peer review option that allows students to review each other works and share feedback and ideas.

What to expect from your students?

The Peer Review option of this application will encourage students to collaborate and help each other, give feedback to other students, as well as to reflect in their own learning by reading and assessing other students' work. The app will foster their motivation and engagement, support them to learn to work independently, help them understand the intention behind the work they do, and improve their critical thinking capabilities.

Eduflow Peer Review step by step

1. Creating an Eduflow Account and Course.
2. Adding Content and Submission Activities.
3. Creating a Peer Review Activity.
4. Creating Feedback Reflection and Scoring Activities.
5. Developing and Incorporating Feedback.

Eduflow Peer Review's features

- Space for students to submit their work, multiple types of assignments is possible.
- Stablish deadlines
- Allow students to review a defined number of other submissions using a rubric presented in a question format.
- Enable different options to review and score students work. Open or close ended multiple-choice questions can be introduced, as well as a grading option.
- Possibility to enable an additional academic review to be provided by the educator.
- Possibility to add the self-review to the peer review option.
- Use the Feedback Reflection option for students to read, reflect and incorporate the feedback received from their peers.
- Possibility to resubmit the work after the feedback from peers is incorporated.
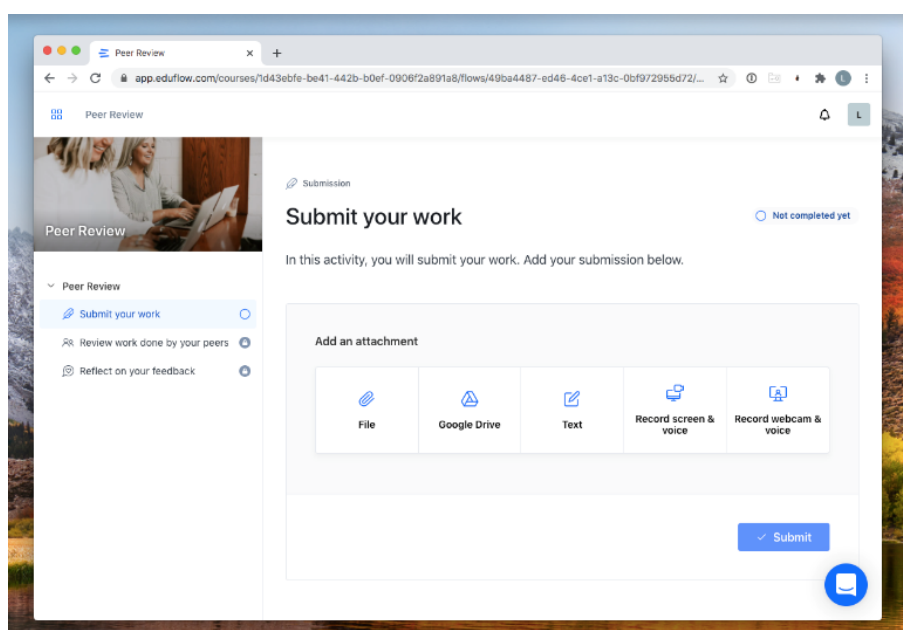
Source: Eduflow

Effective tools for digital facilitators

Gamification tools

Kahoot[28]

What is Kahoot?

Kahoot is a quiz-based learning platform that works for hybrid learning and flipped classroom situations by making learning fun and engaging. It's a question-based website that a teacher can use in the class. The main goal of Kahoot is to ask questions entertainingly. Kahoot! is a cloud-based quiz platform that is ideal for students and teachers. Since the game-based platform allows you to create new quizzes from scratch, it's possible to be creative and offer bespoke learning options for students. Kahoot! offers a question and then optional multiple-choice answers. This can be accompanied by rich media such as images and videos to add more interactivity.

Kahoot is an online game-based learning platform. It allows teachers, organizations, and parents to set up fun web-based learning for others. This could include your coaches, athletes, or parents. Kahoot can be used as a fun trivia activity to do with members of your organization or coaches to use with their sports players or it can be just a series of fun questions.

What can Kahoot do?

- Online quizzes which can be used in face-to-face, hybrid and online education
- Multiple choice questions
- Quizzes can be accompanied by rich media such as images and videos
- Live or self-paced quizzes
- Timer-based quiz mode switched on or off
- Contests with response analytics and winners

How is Kahoot working?

On the Kahoot website - www.kahoot.com, there are two main ways in which you can set up a game which are outlined as follows:

1. Classic Kahoot (host live) – the organizer of Kahoot, would set up a series of questions/trivia, each participant would need access to a device (laptop, iPad, phone, etc). Questions would be posted and participants have a set time to answer the questions. Everyone plays at the same time. The organizer of the Kahoot would need to be able to share their screen with the participants as the questions only appear on the organizer's screen. There are a variety of question types that can be used from multiple choice to puzzle to open-ended questions. The Classic Kahoot can be used as a fun social activity through an online meeting/chat module (i.e. – Zoom)

2. Student-paced challenge – organizers set up a series of questions/trivia for the participants to play at their own pace at home. Participants would see both the question and possible answers or a space to submit an answer on their screen. The student-paced challenge could be used as a way to challenge players on their knowledge of the game or just a fun activity for them to do at home with questions related to the sport they play. Kahoot can be used for free or premium packages can be purchased for a fee.

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[28] What is Kahoot! and How Does it Work for Teachers? https://www.techlearning.com/how-to/what-is-kahoot-and-how-does-it-work-for-teachers

While Kahoot can be used in the classroom, it's ideal for remote learning use. Teachers can set a quiz and wait to see the scores as students complete it. Or they can carry out a live hosted quiz using video – with third-party apps such as Zoom or Meet – to be there as students are working through the challenges.
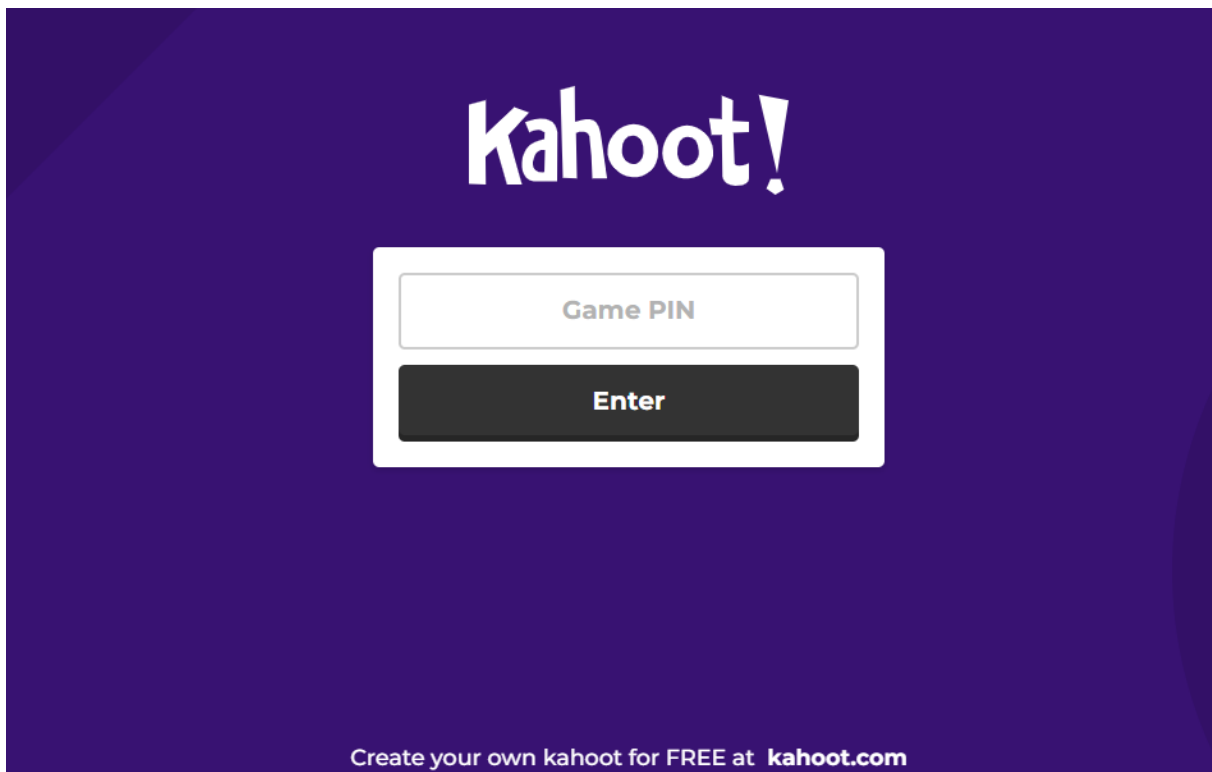
Source: Kahoot

While there is a timer-based quiz mode, you can also choose to turn that off. In that instance, it's possible to set more complex tasks that require research time.

Teachers can also review results and run analytics from game reports for formative assessments so as to better judge progress being made in the class.

To get started head to getkahoot.com and sign up for a free account. Select "Sign Up," then pick "Teacher" followed by your institution's level "school," "higher education," or "school administration." You are then able to register using your email and a password or with a Google or Microsoft account – ideal if your school already uses Google Classroom or Microsoft Teams.

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BookWidgets[29]
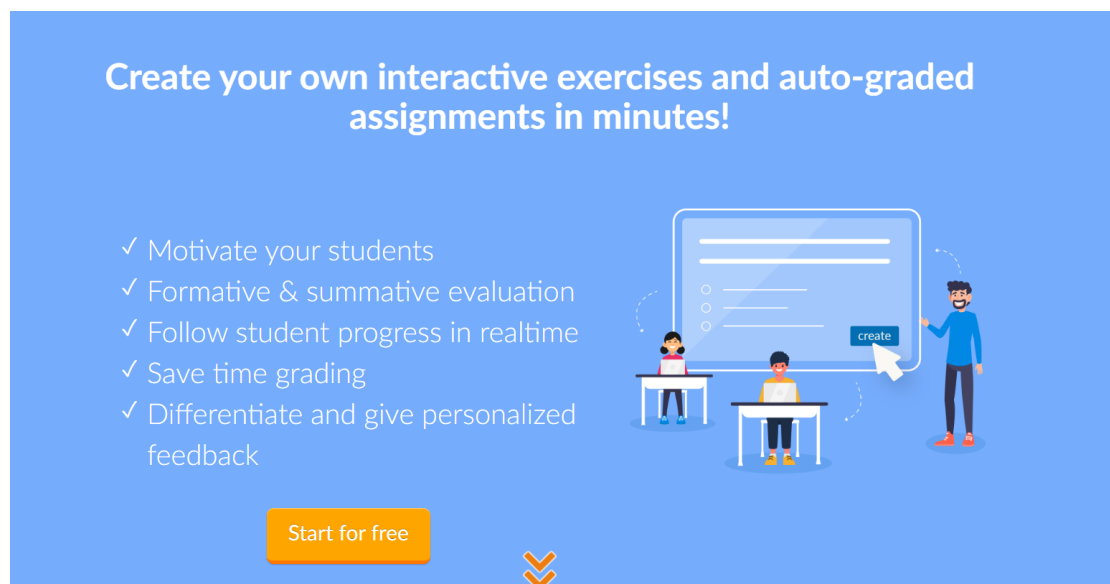
What is BookWidgets?

BookWidgets is an easy-to-use platform for creating interactive exercises like exit slips, games, timelines, photo- and video-based activities, and more. It integrates with other programs like Google Classroom, Canvas, and Moodle. A diverse library of widgets can be used to support all subject areas. Widgets are grouped by test and review (exit slips, flash cards, quizzes, timelines, and worksheets), games (bingo, memory, and crosswords), pictures and videos (hot-spot image, YouTube player, and image carousel), and math (active plot, charts, and arithmetic). Teachers can also embed PDFs, Google Maps, and Wikipedia articles.

What can BookWidgets do?

- Interactive exercises like exit slips, games, timelines, photo- and video-based activities
- Integrates with other programs like Google Classroom, Canvas, and Moodle
- Customise 40 different widgets
- Embed PDFs, Google Maps, and Wikipedia articles
- Share widgets as a link or embedded
- Simple assessments with flash cards, puzzles, or games such as hangman or bingo
- 30+ types of quiz questions suitable for students' self-grading

How is BookWidgets working?

Teachers can customize each of the widgets, and a wizard walks them through the building process. Teachers can share finished widgets as a link or embed them on any website or through Google Classroom. Analytics allows teachers to track and assess student activity. A weekly teacher blog suggests new approaches and practical applications.

Source: BookWidgets

BookWidgets allows teachers to create a ton of different types of interactive content. Examples of each type of widget are available to use as a template to start out, and a tutorial walks you through the steps. There are 40 different widgets you can create that can be shared through a link, a QR code,

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an email, and Google Classroom. Simple assessments you can integrate include exit slips, quizzes, and worksheets. Kids can practice and review skills with flash cards, puzzles, or games such as hangman or bingo.

Create a blended/flipped learning approach with personalized materials that can be easily assigned through your Google Classroom. When creating quizzes, select from over 30 types of questions for all content areas. Include answers in the setup so that quizzes can be self-grading and students can gain instant feedback. Differentiate digitally by creating versions of one worksheet and assigning it to groups of students in Google Classroom. The WebQuest widget is especially useful for a blended approach; within the widget, you can embed instructional videos, games, and quizzes.

Creating interactive classroom activities and engaging teaching materials is mostly a breeze with BookWidgets. Though the organization of widgets may be clunky and confusing, it's generally straightforward and easy to understand, saving teachers' valuable preparation time. The variety of 40+ widgets encourages teachers to try digital lessons with a step-by-step guide when starting out. Examples of all widgets are also available and can be copied for use. Since there's such a wide variety of widgets, teachers can create simple lessons and activities for all learning needs, though the activities themselves -- especially the games -- tend to prioritize memorization and recall.

Teachers can individualize lessons and activities to meet the needs of students and engage them with a digital approach. The assessment options are useful: exit slips, quizzes, and worksheets offer immediate feedback, especially since they can be created as self-checking. Teachers can also see what student work has been turned in to continually monitor progress.

PlayBrighter[30]

What is PlayBrighter?

In this technological age where kids have access to, and are able to immerse themselves in high-quality game environments that test their gathered knowledge, acquired skills and ingenuity in engaging and fast-action situations, it is a constant struggle for teachers to monitor and assess learning in engaging and stimulating ways that is relevant to students of the digital age – it's now a fact that the photocopied 20 question hand-out just doesn't cut it anymore as the students don't place any value on what they see as an out-dated method of assessment.

There is also the chore of having to mark countless, test papers that are sometimes scruffy, illegible and have the potential to get mislaid. Surely, in this day and age there must be a better way. Well, there is and it's called PlayBrighter!

What can PlayBrighter do?

- Set students 'missions'
- Assess learning in engaging and stimulating ways
- Provides analytics for students' progress and results

How is PlayBrighter working?

Playbrighter is a game-based learning environment, which contains over 20,000 curricula-based questions to get teachers started and which they can then add to if they want to, allowing them to test their students on any subject area they wish. The subjects that are covered include:

- English (Key stage 2, 3 and 4)
- Mathematics (Key stage 2, 3 and 4)
- Key stage 2 and 3 Science
- GCSE Biology, Chemistry and Physics
- Key Stage 3 and 4 Geography
- Key Stage 3 and 4 R.E
- Key Stage 3 and 4 PSHE and Citizenship

There are differentiated questions so that missions can be tailored to suit students of varying abilities, either from a group-wide point of view or on an individual student basis. On 'PlayBrighter', teachers set their students 'missions', which challenges them to play one of the games. They progress through the game by answering the questions that the teacher has set. So, as 'PlayBrighter' state on their website for instance, "In the French room, students might release a Number One single by mastering the passé composé, or defeat an international conspiracy by conjugating 'avoir'" or in the science area, students maybe successful by calculating the speed of an object or stating the formula for Carbon Dioxide.

When students are successful on their 'missions' they are rewarded by earning some of the game environment currency. They can use this to personalise different aspects for their avatar by purchasing new clothes or having a different hair colour etc.

Now for teachers, 'PlayBrighter' automatically marks the work of the students as they complete each mission saving teachers huge amounts of their valuable time that they would otherwise spend marking. The teacher area also offers a complete detailed breakdown of those assessments,

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[30] PlayBrighter – Educational games for your class https://www.whiteboardblog.co.uk/2012/09/playbrighter/

including informative charts that track individual student's progress. This applies to whether the teacher runs tests within the classroom or sets the 'missions' for homework.

The most fantastic aspect of 'PlayBrighter' is that it is completely free, all teachers have to do is sign up a group of students and set them a mission. Students will find the game enjoyable, engaging and immersive and will probably forget that they are actually learning, as they will find 'PlayBrighter'.

Artificial intelligence tools

Alexa Skill Blueprints

What is Alexa Skill Blueprints?

Alexa Skill Blueprints are a new way for you to customize your Alexa experience by adding personalized Alexa skills and responses. Personalized skills and responses make Alexa even more knowledgeable, delivering a delightful experience that is unique to you and your family or classroom. You can create your own Alexa skills and responses in minutes with easy-to-use templates – just fill in the blanks. Choose from the different blueprints to see what kind of skill you'd like to make. What is interesting is that there's no limit to the number of skills you can make, so create as many as you like.[31]

Featured Blueprints

School Schedule	Custom Q&A	Chore Chart	Whose Turn	How Many Days	Burns
Set up an at-home school schedule, including subjects, activities, and reminders.	Customize Alexa's response to your questions.	Schedule and track weekly chores for your entire household.	Figure out whose turn it is to do something by having Alexa choose for you.	Give Alexa an important date, and she'll count down the days to your event.	Roast your friends and family with lighthearted burns.

What can Alexa Skill Blueprints do?

- Receive reminders when a student's class period or activity begins / ends.
- To hear Alexa summarize the school schedule, say, "Alexa, open School Schedule."
- Request to hear a student's schedule for any day of the week - "Alexa, what's Jacob's school schedule this Friday?".
- Challenge your students with open-ended questions.
- Create a story and test your memory.
- Create and access a personal list of facts on any topic.
- Learn in "review mode" to hear terms and definitions.
- Switch to "test mode," where Alexa reads the term, then you say the definition.

How is Alexa Skill Blueprints working?

A speech recognition software is used to convert verbal language into text form using algorithms. Speech recognition has become one of the widely used technologies, as it offers great opportunity to interact and communicate with automated machines. Voice assistants, or virtual assistants, are more than just the cool, often-female voices that respond to verbal requests to play a song or check the weather. Speech recognition has become one of the widely used technologies, as it offers great opportunity to interact and communicate with automated machines. Precisely, it can be affirmed that speech recognition facilitates its users and helps them to perform their daily routine tasks, in a more convenient and effective manner.[32]

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[31] *Alexa Skills Blueprints.* https://blueprints.amazon.com/home

[32] Khaled M. Alhawti (2015). *Advances in Artificial Intelligence Using Speech Recognition.* doi.org/10.5281/zenodo.1106879

Common inventions that use voice assistant are the famous assistants from our phones that let people control their devices with spoken commands. People can easily open an app, navigate, and edit text hands-free using just their voice. Examples of voice assistant are: Amazon Alexa, Google Assistant, Apple Siri, Microsoft Cortana, and Samsung Bixby.

IBM SkillsBuild

What is IBM SkillsBuild?[33]

IBM SkillsBuild for organizations provides integrated learning opportunities for students (13-18) or job seekers with free digital training, project-based learning, and coaching to help them build the skills they'll need to be career-ready. SkillsBuild for Students is a digital learning platform where people can find, plan, manage, and track all their learning and badges they earn. SkillsBuild for Students offers a wealth of learning recommendations through channels, hot roles & skills, and programs & resources. And when you're ready to grow or switch your role, people will find job recommendations just for them.
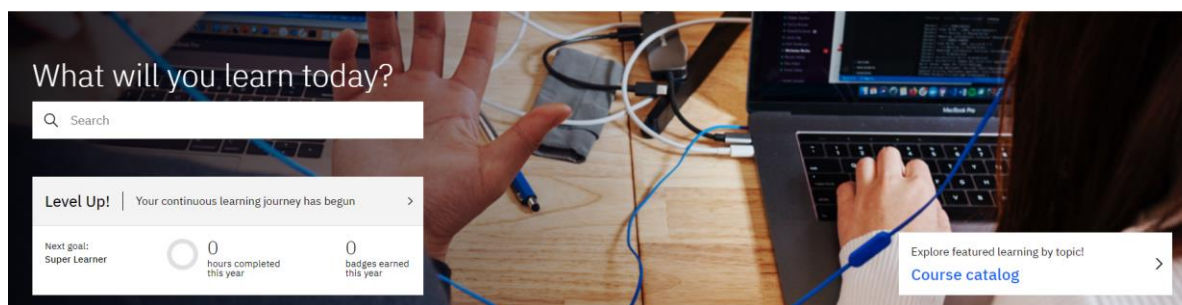
What can IBM SkillsBuild do?

- Promote continuous learning.
- Free resources.
- Curriculum maps.
- Fun, self-placed leaning for students.
- Track student progress and evaluate.
- Assign learning activities and establish due date.
- Digital badges.
- Learning activities.
- Offers a toolkit for trainers and students too.

What is more, IBM Skills for Students makes learning suitable for everyone because it has recommended learning. Their machine learning algorithms recommend channels to students based upon what they know from their profiles, their job role, and other users like them.

How is IBM SkillsBuild working?

Today there are many services suggesting in-the-moment recommendations, as they use artificial intelligence for analyzing interactions of the users and find visually proper products that will interest any individual customer. Due to AI, recommendation engines make quick and to-the-point recommendations tailored to each customer's needs and preferences. Classic recommender system processes data through these four steps: collecting, storing, analyzing and filtering.

Another good example of recommendation engine usage in Media is done by YouTube and Netflix. YouTube with its "Recommended Videos" and "Other Movies You May Enjoy" by Netflix are lived examples of AI recommendation engine usage.[34]

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[33] *IBM SkillsBuild.* Retrieved from http://www.skillsbuild.org/

[34] *How Does AI Work With Product Recommendation Systems?* Retrieved from https://www.smarthint.co/en/ai-product-recommendation-engine/

Chatfuel

What is Chatfuel?

Chatfuel is first and foremost a powerful chatbot builder that focuses on automation and versatility. Its main focus is building bots that can do it all, from answering questions to collecting emails.
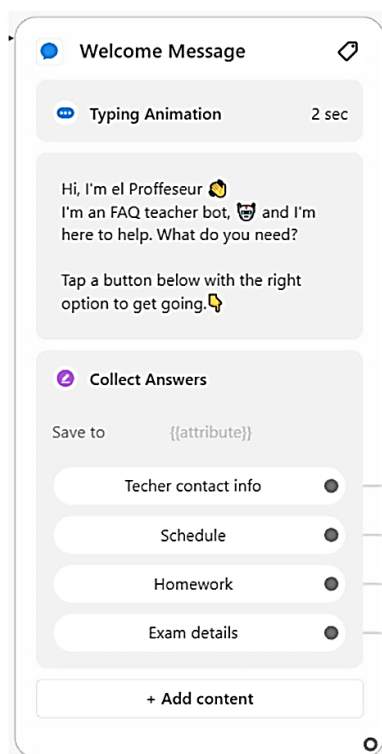
Example of a chatbot made by Chatfuel

Chatfuel can be used for just about anything related to Facebook Messenger chatbots. Many businesses use it to increase conversions or generate leads, but you can also use it to optimize your overall engagement with your audience. [35]

Conversational learning via bots represents an entirely new chapter in the evolution of how we educate young people. Education chatbots allow educators to populate lesson materials, answers to frequently asked questions and other engaging resources to assist your students in learning. [36]

What can Chatfuel do?

- Answer questions.
- Give clear answers.
- Extract and export useful data.
- Students don't wait in line to get an answer to their questions.
- Help students understand a subject better.
- Classroom sessions are more dynamic.
- Students enjoy their educational experience more with the bot.
- The customizable tags let the trainer provide the right content to students.

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[35] *Chatfuel review*. Retrieved from https://www.chatbots.org/chatfuel

[36] *Transform your teaching with a chatbot* (2021, June 13). Retrieved from https://www.cta.org/educator/posts/transform-teaching-with-chatbot

- Set up reminders (homework, class news, lesson details and other important messages). [8]

How is Chatfuel working?

Chatfuel also has an AI component where you can instruct the bot to respond to certain keywords. This is another common feature that most chatbots have, and Chatfuel takes a nice, straightforward approach to it. [8]

A chatbot is software that can talk with users automatically in a humanlike, conversational style.[37] Chatbot makers utilize artificial intelligence and the latest conversational design to create bots that can communicate with students on all subjects of elementary, secondary, high school and up to university levels.

Furthermore, another good example of chatbot that can be used in teaching is Botsify.

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[37] *Getting started.* Retrieved from https://docs.chatfuel.com/en/articles/2568024-getting-started

Data Analysis tools

Easyclass[38]

What is Easyclass?

Easyclass is a Learning Management System (LMS) that allows educators to create digital classes and store materials online; manage class discussions; create assignments, quizzes and exams; monitor due dates and results; and provide students with feedback, all in one place.

Easyclass is an easy-to-use tool, but at the same time it is a powerful open technology solution in education. Easyclass has announced that they believe that an LMS should not be a closed system but should be a platform that connects everyone in education and promotes learning anytime and anywhere.

What can Easyclass do?

The main features available in Easyclass are intended for:

- Creating assignments and other activities online and managing notes and corrections conveniently.
- Share and store resources, content or notes online and have 24-hour access.
- Create discussion groups among students in a given class.

One of the most useful functions that this platform provides is The Integrated Gradebook feature. This feature automatically adds on students' results when a new assignment is posted in a new column of the gradebook. The Gradebook stores every grade assigned by the teacher. Then, data analysis is used successfully to track students' progress, and to help the teacher manage assignments.

Source: Easyclass

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[38] Easyclass. Retrieved from: https://www.easyclass.com/about

Easyclass allows creating many types of activities, including debates, assignments, tests, and posts in a class wall. Through the platform educators can easily monitor students' participation and do a follow up on how these different activities are welcomed by students. This useful information can be then used to improve lessons to better achieve the learning objectives and to adapt to the characteristics of our students.

The platform has many channels to allow communication between teacher and students, making it easy and quick to provide feedback to students on their performance.

How Easyclass works?

- Digital classes are created and managed by teachers
- Teachers have administrative rights over students' participation in their class.
- Students need an access code to join the class.
- Teachers can delete messages and remove class members.
- Teachers can choose to receive automatic notification of student posts in the class before they are published.

One of the main benefits of this platform is its security. It comes with a secured cloud-based SaaS with no advertisements, keeping privacy and safety at foreground. All content created within the online classes' platform can be viewed by only the class members.
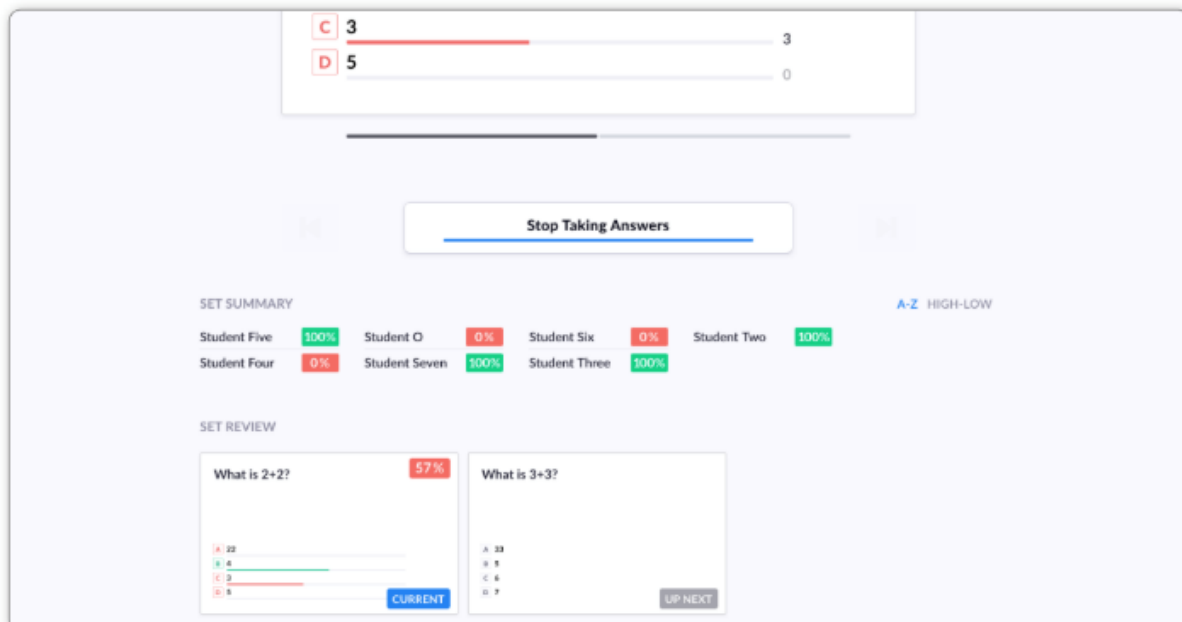
Plickers[39]

What is Plickers?

Plickers is an assessment tool that allows teachers to collect on-the-spot formative assessment data. Teachers can use this tool with previous planning or on the go as needed, and it is a useful tool both in face to face, in distance learning and in hybrid learning. It is a useful data collection tool that provides teachers with the information needed to inform their instruction.

What can Plickers do?

Plickers main function is to create fun and interactive activities for students to keep them engaged and motivated, and at the same time collect useful data that the educator can use to improve their lessons, identifying the questions or explanations that are not comprehend by students and need to be modified, to adapt them to students needs and personalise them to individuals if appropriate, to evaluate students learning process and provide them with feedback when necessary.

Plickers' features that allow implementing data collection in teachers' lessons are:

- Different question types available.
- Easy distribution in phases: ask phase, accept answers phase, and stop answers phase, review phase.
- Answers from students are received in real-time.
- Stats from students' answers are produced by the application immediately after all students have answers, allowing teachers to adapt their lessons on the go, based on students' understanding.
- Possibility to add the Timer option and a countdown option.
- The "Now Playing" page shows an overview of student's answers; it shows the percentage of right and wrong answers per question, as well as to which students the answer belongs.

Source: Plickers

How Plickers works?

The application is intuitive and user-friendly, teachers can choose to programme questions or to do them as they go during a lesson, and this collects useful information to improve the quality of their instruction.

- Teachers need to create and account and create links for each of their students to enter Plickers.
- Different subjects can be created, and they will appear to the students of that class.
- The screen for students will appear in the students' devices, and teachers have their private view.
- Privacy: The teacher only has to provide First, Last name, email, username and password. Student information is not required to use the tool. Privacy policy states how location, use and cookies are used. Students' answers are also private.
- Accessibility: The Plickers app is free for both iOS and Android. The app can be used on phones and tablets.

Lessons Plan - Symbaloo

What is Lesson Plan?[40]

The Lesson Plan editor of Symbaloo allows educators to create personalised digital learning paths for students that take them to the different activities of their learning itinerary. You can use a wide range of digital resources and build the pathway block by block so that your students can learn at their own pace.

You can include resources such as videos, articles, questions and even blocks created in your Symbaloo webmixes. You can redirect students to any type of resource or even assignments and exams, thus all the content of a lesson or course can be included in the Lesson Plan that can be customised for students individually if necessary.

What can Lessons Plan do?[41]

The itinerary elaborated with Lesson Plans allows including multiple elements to make the learning experience more fun and immersive for students. Teachers can add different game elements such as game graphics, awards, visual representations for students, include clues and additional explanations during assessment activities, and more.

Once elaborated the learning itineraries in the Lesson Plan, educators can access a data analytics page where data collected from students' actions is integrated in real-time, having always access to actualize information from students' performance.

By accessing the Statistics page educators have access to:

- What point of the itinerary students are.
- The number of questions answered correctly and incorrectly
- The time needed to complete each question
- Access to more detailed information from each individual student.
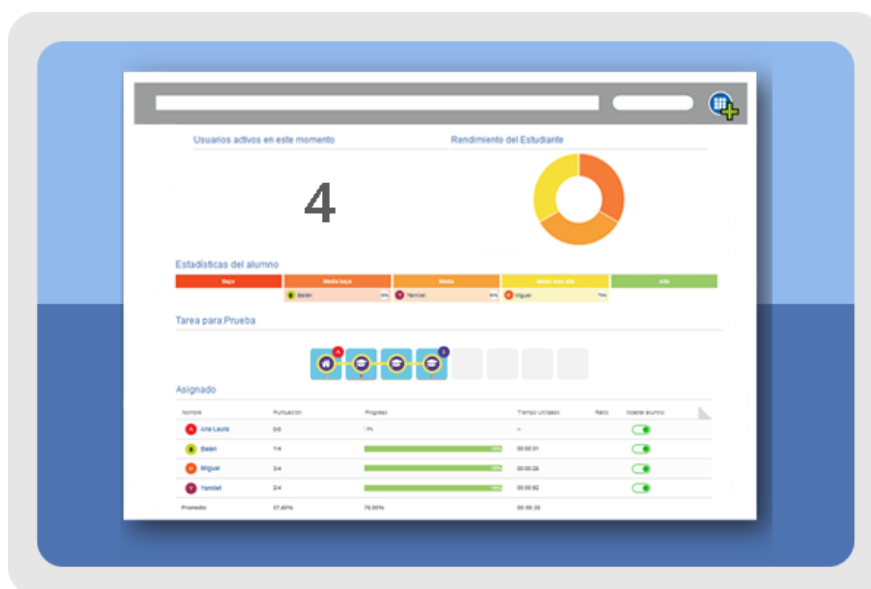
Source: Symbaloo

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[40] Lesson Plan. Retrieved from: http://lessonplans.symbaloo.com/?lang=es%20_blank

[41] Statistics in real time (Lesson Plans). Retrieved from:
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How Lessons Plan works?[42]

- Teachers need to register in Lessons Plan.
- Once the itinerary is created, access "Assign and start monitoring" and obtained a code for the itinerary.
- Share the access code with students through the different options available, such as google classroom, email, QR, or link.
- Start the lesson plan and monitor in real time your students' progress.
- Privacy: students do not need to register in Lessons Plan to access.

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[42] Statistics in real time (Lesson Plans).

Recommendations for instructional designers and facilitators

Plan: Think about what content, information or tasks you need to give to your students. You can create a plan of what you want to achieve in every lesson and at the end of a week. Challenge your students to create their own content and engage in self-directed learning. It is important that the plans allow students to be creative and engage in different tools to deliver what they have learned.

Students' needs: Remember students learn by "doing" and with distance learning your face to face time is limited, so the more "doing" tasks you can give them the better.

Be interactive: When working alone or at a distance the main challenge can be focus and boredom. The mind can easily wander if it is not challenged and engaged when students are working alone. We all know variety is the spice of life so change it up, use a multiple of different learning focused tools, it helps that a student can use different tools, even if they are covering the same topic, the more angles we can explain a concept or topic from the better a student will understand it.

Communicate: Feedback from students' peers and trainers encourages a student to keep going and keep trying, every effort should be encouraged and communicated in a positive and supportive way. Comments and discussions forms can be used in an online environment to support your students, in the same way you encourage and support them in the classroom.

Be prepared: When you are planning an online class, you will need to master effective class room management skills. Set clear expectations about the class start and end time, and as you deliver the class, keep it within the planned time. Ensure you have an appropriate number of concepts to cover within your allocated time. Usually, activities and discussions end up taking more time than initially planned. If your session spans longer than sixty minutes, consider including breaks in your session to ensure your learners can move away from the computer and return with increased attention. Take care of the timing of the small group activities and discussions to ensure they are progressing within the allocated timelines.

Remember: At the beginning of each session, remind the students of the expectations for classroom engagement. Encourage learners to participate in the classroom discussions using virtual chat options and questions and answers.

Get along with technology: Test your audio, video, and screen-sharing options at least 30 minutes before the start of class. During the class, if you run into a technical issue, do not panic. Turn off your video and audio and check the system. Fix the problem. Inform the learners there is a technical issue and ask them to wait online or reconnect at a set time. Once you resolve the issue and feel more relaxed, turn the audio and video on, and take control of the lesson calmly and confidently.

Reflect: After each session, reflect on the strengths and areas in need of improvement. Celebrate your strengths and continue to hone in on the areas you can improve.[43]

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[43] Sriharan, A. Teaching Online: Tips for Engaging Students in Virtual Classrooms. Med.Sci.Educ. 30, 1673–1675 (2020). https://doi.org/10.1007/s40670-020-01116-7

About the partner organisations

In 1999, Femxa Formación S.L.U started its business trajectory as a training company, setting as its main objective to provide innovative training solutions to growing market needs and to anticipate future training needs arising in society. Since then, it developed consulting work specialising in Value Added training solutions, whose focus is on the development of projects of tailored training, aimed to solve the specific needs of customers more efficiently, which has allowed us to reach a landmark in the field of training. Our reason for being is to build training solutions that provide job opportunities for people and improve the competitiveness of organisations. In the last 20 years, we have trained more than 64.000 unemployed, 40.000 people aged over 45, 15.800 unemployed young people under 30.

TEAM4Excellence (T4E) is a Romanian association aiming to improve the quality of life through education, research and consulting activities. To address societal challenges, T4E provide learning opportunities and career advice for social inclusion, development and employability of people, and equip trainers with key competences and skills to foster personal as well as professional development. Within 30+ EU funded projects; the association produces and transfers innovation, experience and know-how through cooperation with domestic and international partners. By hosting events, training courses and conferences, T4E strengthens collaboration between people, supports organisations and bridges gaps between generations. The wide expertise in management enables T4E staff to provide consultancy to large companies and SMEs using EFQM Model and Business Model Canvas.

Osmaniye Provincial Directorate of National Education is a regional governmental organisation. Osmaniye covers an area of 3,767 km² and its population is 538.759 inhabitants. Osmaniye province is divided into 7 districts. The organisation takes care of the planning and coordination of all kinds of educational and training activities from preschool to the end of secondary school, vocational high schools, technical schools, adult education and other institutions & centres in its region. Osmaniye MEM organised many courses since 2019 for teachers to renew themselves and over 5000 teachers benefited from these courses. The project experts in the Research and Development office in our Institution have carried out the training of teachers, local or regional authorities and NGOs on preparing and managing EU projects. With these training activities more than 600 students, teachers and managers actively took part in EU projects.

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