



VET4FOOD

VET Training for Food Sustainability

PR3 EDUTAINMENT TECHNIQUES AND DIGITAL TOOLS HANDBOOK FOR VET TEACHERS



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.

INDEX

	1
INTRODUCTION	3
THE 4 PILLARS OF OUR APPROACH	4
<i>Learner Centricity</i>	5
• The 4Mat Model	5
<i>Solid Methodologies</i>	7
• P21 Framework for 21st Century Learning.....	7
• Bloom’s Taxonomy for the Digital Age.....	8
<i>Digital Mindset</i>	10
• Resources for Making Presentations.....	10
• Resources for Facilitation.....	11
<i>Accessibility</i>	11
EDUTAINMENT TECHNIQUES AND DIGITAL TOOLS	12
<i>COLLABORATION</i>	13
• Cooperative Learning.....	13
• Peer to Peer Education	20
<i>COMMUNICATION</i>	22
• Experiential Learning and <i>Learning by Doing</i>	22
• Flipped Classroom or Flipped Teaching.....	26
<i>CREATIVITY</i>	31
• Design thinking.....	31
• Storytelling techniques.....	36
<i>CRITICAL THINKING</i>	41
• Debate.....	41
• Educational trips' dynamization and assessment	44
Conclusions: The Power of Innovative Teaching Methodologies and Digital Tools in Educating for Sustainability in the Food Sector	49

INTRODUCTION

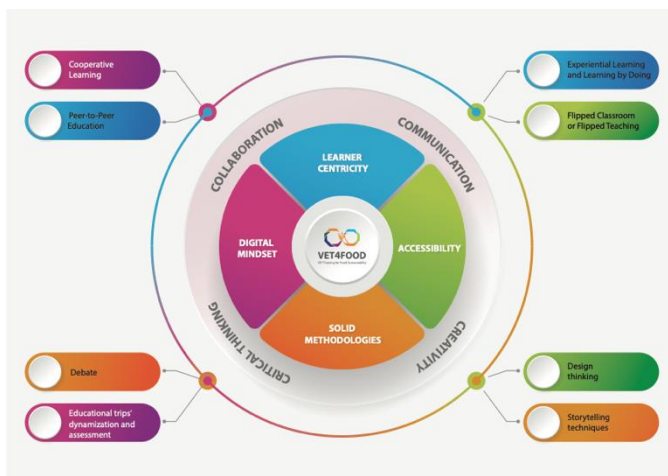
Digitalization, adaptability, and innovation are three keywords that effectively describe the needs of the education sector, which is grappling with global issues and challenges. Events such as the Covid-19 pandemic had a disruptive effect on education, forcing changes that have become necessary, but which many institutions had been putting aside for decades. The lockdown of schools to reduce contagions, for example, led to a race towards digitalization: teachers had to quickly equip themselves with the skills and tools to manage lessons remotely, and to organize materials and assignments; students, more experienced in using many technological devices, had to deal with a more detached way of participating in the lesson, but one that can also bring some important benefits.

In general, while institutions being at the forefront of technology, and already implementing innovative teaching projects before the pandemic, managed to thrive and train their students effectively, many schools found themselves lacking in the technology skills required for distance learning, and still partly anchored to outdated curricula that poorly match the interactivity required by online lessons.

But what do we take away from this experience into our classrooms? How can we turn an objectively complex, difficult, and sometimes even tragic period into a real opportunity for renewal and innovation?

The aim of this handbook is to respond to the needs of the educational sector in the post-Covid-19 pandemic by providing teachers with a practical support that touches on some innovative teaching methodologies, with some examples on how to directly apply such techniques during lessons, both in the classroom and online.

All materials deal with **sustainable food**, the main focus of the VET4FOOD project, and a very relevant topic for young students. In the “horeca” sector, as in many other domains, sustainability has become a key issue not only for moral, social and environmental reasons, but also as an interesting business opportunity for the new generations, due to the great demand for specialized profiles (*Green Jobs*).



This infographic summarizes the logical framework upon which this handbook is built.

Let's explain it below:

- Learner centricity, solid methodological background, digital mindset, and accessibility are the **4 Key Pillars** upon which we developed our approach. They

represent a sort of *fil rouge* that links all handbook contents.

- According to the The P21 Framework for 21st Century Learning we decided to focus on four crucial skills learners need to strengthen to keep the pace with the 4th Industrial Revolution: **collaboration, communication, creativity, and critical thinking**. Each skill will be reinforced through some activities mapped following Bloom's Taxonomy adapted for the Digital Age.
- **Edutainment techniques** have been chosen among the extremely wide variety of those developed by educators over time. We decided to concentrate only on those that we found more appropriate to our topics. Such choice was difficult, and it isn't in any way meant to exclude, but rather to enable a more focused and comprehensive approach. Each technique is connected to one of our four key skills, providing examples and **personal experiences** from the teachers belonging to participating schools.
- Since a digital mindset is more and more important both for teachers and for learners, we matched each methodology with a **Digital Tool**, either for presentation or for facilitation purposes. As already said above for edutainment techniques, in this case too we had to make some choices among the innumerable solutions available on the market. Once again, this was meant for focus's purpose only. It is also true that most digital tools may serve different methodologies and viceversa. Watch here the methodological testimony of **Gabriele Carli, from Wattajob S.r.l. Milano - Italy**



THE 4 PILLARS OF OUR APPROACH

Before starting deep diving into different edutainment techniques, digital tools and their practical applications, we would like to share with you the key pillars of the approach around which we built this handbook.

Learner Centricity

Any student, any learner attending our training sessions shall always be put at the center. Though this project is primarily aimed at teachers and young VET (*Vocational Education and Training*) students, it can also apply to other stakeholders in the food sector, such as companies that can benefit from staff trained in sustainable food issues.

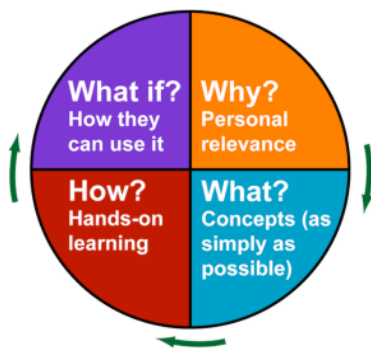
People should always be at the center of our learning activities, so we thought it could be useful to devote a short chapter to the different learning styles that enable children and young people, but also adults, to cope with new information: by analyzing learning styles with the help of the 4MAT model, we will discover the most suitable communication modes for each of these.

- **The 4Mat Model**

In 1979, the scholar Bernice McCarthy developed the 4MAT model¹, a scheme that systematizes within 4 categories the different methods with which individuals learn information. This theory assumes that each person, when interfacing with a multimedia content, attaches more importance to certain questions and key elements, often without realizing it.

What are these elements?

- **Motivation** - question "why?" (*Why*): the first category of the 4MAT model includes people interested in understanding the deeper meaning and motivations behind things. When learning something, these individuals tend to reflect on their own experience and compare it with different perspectives: this makes collaboration and sociability natural.



- **Facts** - question "what?" (*What*): the second type includes those who attach great importance to facts and details. They are typically analytical and organised people, who develop reasoning in a logical and structured way, benefiting from information in verbal or written form.

- **Functioning** - 'How?' question: the third category encompasses people who focus their attention on understanding how things work in the real world. For them, learning means putting ideas into practice immediately, without caring too much about theory.

¹ Teaching Around the 4mat Cycle, B. McCarthy D. McCarthy, Corwin Press CA

• **Experimentation** - "what if?" question (*What if*):
the last type of the 4MAT model consists of innovation-oriented individuals who learn by autonomously exploring concepts, transforming, and readjusting them according to what the situation requires.

Figure 1 The 4MAT model
Credits: <https://coachingleaders.co.uk/training-design-4mat-system/>

It should be stressed that the 4 quadrants are to be regarded as **preferences**, natural mechanisms that people rely on almost without thinking. These learning styles realistically define individuals but do not exhaust their complexity.

Learning to recognize the 4 profiles of the 4MAT model in your students can make all the difference in creating engaging and stimulating lessons. Let us now take a look at some tips on how best to interact with each type:

	Elements that facilitate learning	Aspects that improve involvement	Aspects that make involvement worse
Type 1	<ul style="list-style-type: none"> - Brainstorming - Listen - Interact - Understanding and appreciating others 	<ul style="list-style-type: none"> - People's interests are solicited - Time is set aside to discuss and listen to what you feel 	<ul style="list-style-type: none"> - Personal opinions are not valued - The group is too large for authentic interaction - Insufficient time for reflection
Type 2	<ul style="list-style-type: none"> - Observe - Analysing - Creating graphics - Theorising 	<ul style="list-style-type: none"> - The problems and tasks were precisely defined - The group remains focused on the task 	<ul style="list-style-type: none"> - Aspects of the activity are not clear and defined - Group members do not respect the opinions of others - The overall picture is not captured

Type 3	<ul style="list-style-type: none"> - Experiment - Test - Apply - Try 	<ul style="list-style-type: none"> - Ideas are brought to the ground, they are dealt with practically - The solutions do not deviate too far from common sense 	<ul style="list-style-type: none"> - Too many digressions on secondary issues, no attention is given to important issues - The group continues to discuss problems that cannot be solved
Type 4	<ul style="list-style-type: none"> - Modify - Innovate - Risk - Collaborate 	<ul style="list-style-type: none"> - Requests have a certain degree of flexibility, participants are invited to seek alternative routes - Actions and ideas based on intuition are recognised as valid 	<ul style="list-style-type: none"> - There are no possibilities for brainstorming, alternative ideas are discouraged - We only focus on the details and do not look at the big picture

Solid Methodologies

In developing this handbook, the VET4Food partnership referred particularly to two relevant frameworks widely spread through the educators' community in Europe and all over the world: P21Framework for 21st Century Learning and Bloom's Taxonomy. Let's rapidly review both drawing some first connections to the practical contents of our handbook.

- **P21 Framework for 21st Century Learning**

The P21 Framework for 21st Century Learning² was developed with input from educators, education experts, and business leaders to define and illustrate the skills, knowledge, expertise,

² https://en.wikipedia.org/wiki/21st_century_skills

and support systems that students need to succeed in work, life, and citizenship. The Framework is used by thousands of educators and hundreds of schools in the U.S. and abroad to put 21st century skills at the center of learning. All elements of the Framework are critical to ensure 21st century readiness for every student.

When a school, district, or state builds on this foundation, combining knowledge and skills with the necessary support systems of standards, assessments, curriculum and instruction, professional development, and learning environments - students are more engaged in the learning process and graduate better prepared to thrive in today's digitally and globally interconnected world.

Learning and Innovation skills are what separate students who are prepared for increasingly complex life and work environments in today's world and those who are not.

They include:

- Collaboration
- Communication
- Critical Thinking
- Creativity

The Edutainment techniques deep dived in this Handbook have been divided according the the skill they mainly help to develop. Of course, there is no one-to-one connection, but we made it to easy teachers' consultation and use.

• **Bloom's Taxonomy for the Digital Age**

During an informal meeting at the end of the American Psychological Association Convention in Boston (USA) in 1948 emerged the idea of establishing a system to rate the ability of students. Such theoretical framework could be used to facilitate communication between examiners, promoting the exchange of assessment materials and ideas on how to carry out assessment. The project was led by Benjamin Bloom, Doctor of Education at the University of Chicago (USA), who developed a Taxonomy of Learning Domains, since then known as Bloom's Taxonomy. According to it, after a learning process, the learner should have acquired new skills and knowledge following the different mapped levels.

In 2008 Andrew Churches updated and reviewed the Bloom's Taxonomy to adapt it to the digital age. And it is this latter version that our partnership chose to refer to in the development of the learning resources contained in this Handbook.

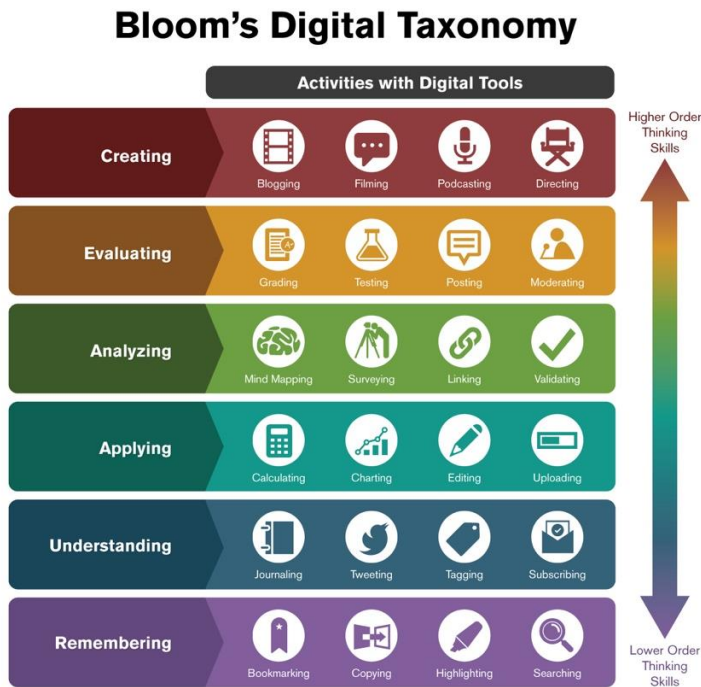


Figure 2 - Bloom's Digital Taxonomy
Credits: <https://www.harapnuik.org/?p=8505>

Let's examine in detail activities and contents starting bottom-up:

Remembering: recall facts, basic concepts, or any studied material. Tools: bookmarking, copying, googling, bullet-pointing, highlighting, group networking, searching.

Understanding: explain ideas, concepts, or build meaning from written material or graphics. Tools: advanced searching, annotating, blog journaling, tweeting, tagging, commenting, subscribing.

Applying: use information in new situations such as diagrams, or presentations. Tools: calculating, charting, editing, hacking, presenting, uploading, operating, sharing within a group.

Analyzing: draw connections among ideas, concepts, or determining how each part interrelate to an overall structure or purpose. Tools: mind mapping, surveying, linking, validating.

Evaluating: justify a stand or decision; make judgements based on criteria and standards through checking and criticizing. Tools: grading, networking, rating, testing, reflecting, reviewing, blog commenting, posting, moderating.

Creating: produce new or original work. Tools: animating, blogging, filming, podcasting, publishing, simulating, wiki building, video blogging, programming, directing.

Though this adapted version of Bloom's Taxonomy provides examples of digital tools to be used to support teaching and learning, we would like to stress that the focus shall never be on the tools themselves, but rather on how they can enable the transformation and progress of student thinking at the different levels.

Digital Mindset

For many years now, digital technologies have entered our lives both personally and professionally. The Covid-19 pandemic has certainly given them a further boost, and today a strong awareness is rooted in most educators that **digital resources might be an effective enabler of engaging and innovative teaching.**

As already pointed out in the introduction, linked to the methodologies are some digital resources that can be a useful support. We have sorted them out into two macro-categories: **resources for making presentations and resources to support the facilitation of relational processes.**

Most presented resources are available on the market in a *"freemium"* logic, whereby basic services are provided free of charge while more advanced features must be paid for. All of them are accessible with basic digital skills both for teachers and learners.

- **Resources for Making Presentations**

Presentation tools are useful to support teaching and learning with some visual examples and pre-made handouts. They can be used in class (with the help of a projector or digital board), in distance learning or as a resource for students' individual study.

There is a wide choice of presentation tools to use – even more now that distance learning activities have been adopted widely during and after the COVID-19 pandemic.

How to choose the tool that best fits your needs? *Some suggestions:*

- Look for softwares that makes **pre-built-templates** available.
- Check if they allow **sharing and collaboration options**. Several presentation tools are connected to remote collaboration platform (such as, for example, Google Classroom), to allow people to co-edit the document.
- Consider the importance of **media support**: most of the tools support a variety of media files (YouTube clips, images, audio...)
- Be aware of the importance of **presentation options**: presenter mode should be standard on Power Point, but you might also find presentation tools that allow you to insert surveys and to check analytics.

In this handbook we will present Canva and PowerPoint as preferred resources for presentations.

• Resources for Facilitation

Facilitate comes from the Latin *facilis*, i.e., easy. Facilitating means to make something easier or more likely to happen. Facilitation is therefore a process in which a trained and experienced facilitator, who is not himself or herself a stakeholder, plans, develops, and conducts a structured and effective session producing results that are commonly understood and supported by all participants.

Many of the presented resources cover this issue, providing schemes, surveys, canvas, digital whiteboards, and tools to brainstorm, collaborate, share contents, ideas, etc.

In this handbook we will present the following facilitation resources: Padlet, Microsoft To Do, PowerPoint, Quizlet, Mural, OBS, Canva, Mentimeter, Moodle.

Accessibility

Teaching considering the different learning styles of students is important but sometimes not enough. When working with students with disabilities, it is crucial to ensure that lessons are inclusive and accessible to all. In this respect, the [2006 UN Convention on the Rights of Persons with Disabilities](#) is enlightening. It introduces the concept of the [social model of disability](#): it is not the person with a disability who has to adapt to the environment, but the other way around. Society is often unprepared to deal with different types of disabilities, and fails to provide inclusive solutions that should touch every area of a person's life, from education and training to access to the world of work.

It is important to emphasise that inclusive education does not only address students with disabilities, but provides great benefits to the whole class, valuing the differences between pupils: it is a teaching style based on active, participative, constructive and affective methodologies.

Let us now look at some principles of *Universal Design for Learning* that can help to organise inclusive lessons. An inclusive design should:

1. **Promoting multiple means of representation**, so that students have the opportunity to acquire information in different ways.
2. **Using multiple means of action and expression**, to offer students alternatives to demonstrate their knowledge.
3. **Propose multiple means of engagement**, to harness the diverse interests of students and increase their motivation.

The first principle is respected in all those cases where the teacher uses an electronic whiteboard or projector to expand his or her lesson with images, videos and maps, but also in the case of distance learning, which allows teachers to record certain lessons and modify them with various multimedia elements, lessons that can be enjoyed asynchronously by students, at their own pace.

The second principle touches on the topic of digital, and hybrid teaching, which places many other assessment tools, such as quizzes, games and interactive activities, alongside the usual tests and questions.

The third principle requires interest and passion on the part of the teacher, who must experiment with innovative teaching methodologies, far removed from the classic frontal lecture but much more engaging for the students. Some of these techniques ([*Flipped Classroom*](#), [*Cooperative Learning*](#), [*Peer Education*](#), [*Roleplaying*](#)), which will be analysed in a moment, are very inclusive, and help to train students in an overall perspective, simultaneously developing emotionality, social skills and competences.

EDUTAINMENT TECHNIQUES AND DIGITAL TOOLS

The didactic approaches we decided to include in this guide all have a common denominator: they consider the student an active subject, who participates together with the teacher in the development of the lesson, in different ways depending on the chosen technique. This idea derives from the philosophical and psychological current known as **constructivism**³, which sees knowledge as something subjective, an interpretation of the world that is different for each person, because individual emotions, beliefs and experiences are different. To value this diversity, the most effective teaching methodologies are those based on experience, which do not rely on predefined, linear standards and rules.

Eduainment techniques are listed, in alphabetical order, following the four key skills we decided to focus on **collaboration, communication, creativity, and critical thinking**.

Since a digital mindset is crucial for teachers and learners, we matched each Methodology with a **Digital Tool**, either for presentation or for facilitation purposes. Please always remember that most digital tools may serve different methodologies and vice versa. In Annex 1 you find a synoptic table mapping the different resources provided in this Handbook.

Finally, some teachers belonging to the Vet4Food partner schools provided **Personal experiences** of real-life applications of these edutainment techniques, thus providing you with further suggestions and insights on possible ways to use them.

³ [https://en.wikipedia.org/wiki/Constructivism_\(philosophy_of_education\)](https://en.wikipedia.org/wiki/Constructivism_(philosophy_of_education))

COLLABORATION

- **Cooperative Learning**

"We become ourselves through others."

Lev S. Vygotsky

In any area of our lives and at any age, cooperation is a very important concept. What does it mean to cooperate? It means to work together with others, contributing with one's own work to the achievement of a common goal. Thus, it is not simply a matter of exchanging information, but rather of developing a relationship of deep connection and interdependence.

In an increasingly interconnected world, it is therefore very important to learn how to cooperate from an early age to increase one's personal resources and improve not only group, but also individual performance. It is precisely for this reason that considerable attention is given to Cooperative Learning as applied in the school setting and it is hoped that this method will become increasingly popular.

- **What is Cooperative Learning?**

Cooperative learning draws on the theory of socio-constructivism, according to which knowledge is the product of an active construction by the subject and is anchored in the context in which it takes place through forms of collaboration and social negotiation. It can be defined as a **learning-teaching method** in which the significant variable is the cooperation between students, and in which a set of classroom techniques are used to allow work in small groups, based on learning activities which are assessed in relation to the achievements of the students.

Co-operative education aims at improving learning and socialization processes through the mediation of the group (generally small groups are used in which students work together), whose members must act feeling **positively interdependent on each other**, so that the success of one is the success of all. It is a teaching methodology based on the belief of the importance of interaction and cooperation in school as a means of human and social advancement.

The early 1900s saw the development of research on group dynamics and cooperation conducted by leading scholars in the pedagogical-psychological field such as Kurt Lewin, John Dewey, Jean Piaget, and Lev Vygotsky. Later other researchers experimented with these studies, most notably Johnson and Johnson who initiated a major project at the University of Minnesota.

Here we refer mainly to the work of Lev S. Vygotsky, for whom every individual possesses latent cognitive potential that can only be expressed through interaction with others. This is what the author calls the **zone of proximal development**: Vygotsky considers every individual, and especially the child, to be endowed with a potential that allows him or her to acquire new knowledge as he or she encounters other individuals with greater cognitive maturity and culture.

In cooperative learning, the contact with more capable peers within the group allows for reciprocal working within each other's zones of proximal development, achieving better results than with normal individual activities. As an educating community, the school must develop a relational capacity, interwoven with affective and emotional languages, and promote the sharing of those values that make members feel part of a community. The aim is to value the uniqueness and singularity of each student's cultural identity and at the same time openness to deal and include diversity.

Experts distinguish between informal cooperative learning, short exercises assigned in class to non-fixed groups of two or more students, and formal cooperative learning, longer and more challenging exercises assigned to groups of students working together for a longer period.

- In **informal cooperative learning**, students are to be brought together in groups of 2 to 4 by the teacher, who proposes a question, a problem, assigning, for example, one to write and the other to expound. The exercise will be done in a few minutes. A variation to this method is **think-pair-share**: where the pair of learners must reason together on a question, synthesizing the two views into a single answer.
- In **formal cooperative learning**, students work in groups on more complex projects and the task can also be done outside the school walls; usually it is the teacher who assigns the roles and gives the tasks to the members, then dividing the final exposition among all the involved students.

In both cases **the teacher has a decisive role** because he or she must be the one to form the groups so that they are balanced, and to give the tasks: in addition, the figure of the teacher becomes that of a coach, of a guide, of a resource to ask for support, but external to the group. Finally, the work will be evaluated individually, thus going on to judge the individual's ability to learn and interact, and on aspects of the whole project, thus in an overall way.

- **Classroom setting**

In collaborative didactics, **the teacher is also a facilitator**: he or she encourages interaction between the students, stimulates discussion, facilitates learning by means of continuous prompting (questions, tests, etc.), uses the group in which the students work together to

reciprocally improve their learning, relying on social mediation, as opposed to teacher mediation.

Starting from American schools, Cooperative Learning has made it possible to challenge some traditional methods of learning. Particularly regarding the arrangement of desks in classrooms, going beyond the traditional setting. Instead of arranging the desks in the classic rows, placed one behind the other, different locations have been considered. **The most used are the circle and the horseshoe, using small groups of students.**

This arrangement has a special meaning. The teacher comes to be in the center, in a position that is more equidistant from all the participants, will be clearly visible and will be able to engage more with everyone. In addition, a kind of "hierarchy" is not created between desk positions, and all students have a good view of the rest of the class. Another important effect is to stimulate greater involvement by all students, not just by those sitting in the front rows. This type of arrangement also prompts and encourages interaction among learners. In some classes, the arrangement of desks may vary according to the needs required by the subject.

- Why is Cooperative Learning effective?

Positive features of cooperative work are:

- development of a concrete bond between students: the perception of working together on a common project facilitates the success of the enterprise. Students know that their success depends on the joint effort of all group members; each member takes responsibility for his or her own learning and that of his or her peers.
- face-to-face interaction: this is a mode that guarantees processes of mutual learning and encouragement (students, working together, exchange help, information, assistance).
- stimulating responsibility both towards oneself and towards others. The teacher in this case must evaluate and communicate his or her judgement on the quality and quantity of each person's contributions, in order to facilitate the creation of a sense of responsibility and self-esteem.
- importance of developing the so-called 'social skills': the group does not work effectively if its members do not possess certain skills such as being able to listen, being willing to share decisions, being able to build trust between members, communicating opinions, managing conflicts.

- Some critical issues about Cooperative Learning

Cooperative learning has various drawbacks that could make the process trickier than it seems at first. Since this technique is continually evolving, it's possible that teachers won't fully comprehend the approach and will grow confused. Cooperative learning cannot be applied successfully in many circumstances because it is such a dynamic practice. Additionally, teachers may develop a practice of using cooperative learning to keep pupils occupied. Even though it will take time, the most productive use of cooperative learning depends on an engaged educator.

The implementation of cooperative learning by teachers may also **encounter opposition and animosity from pupils** who believe they are being held back by slower teammates or pupils who lack confidence and think their team is mocking or ignoring them.

In assessments or reviews of the effectiveness of the teamwork they engaged in during cooperative learning activities, students frequently offer input. Due to perceived competition among peers, peer reviews and assessments might not accurately represent actual experiences. Bullying may cause students to feel under pressure to produce unreliable evaluations. Confidential evaluation procedures may help to improve evaluation quality and allay such worries.

Here are several drawbacks of collaborative learning that students cite:

- Different people require different speeds, and some people need to deep dive alone to get to understand some topics.
- Someone might attempt to seize control of the group, on the contrary quiet individuals might not feel at ease.
- People do not necessarily get along well, and someone might not do her/his part. Therefore, group dynamics must be closely supervised and managed.
- Last but not least, time might be spent by students on unimportant subjects and thus teachers need to provide effective scheduling and timing.

- CSCL Model (Computer-Supported Collaborative Learning)

CSCL model emerged as an evolution of the cooperative learning model. The central element of computer-supported cooperative learning models remains the **interaction within a context mediated by technology**. In this case, the network tutor plays a key role in the interaction with the students and in setting up and prepare the virtual environments in which they will operate.

The figure of the CSCL tutor, who may or may not be the same as the face-to-face tutor, is characterized not only by the high level of professional skills required in the IT and telematics field, but also by the empathetic approach that he or she must observe towards the group of learners. Alongside the classical tasks to which he or she is called, the network tutor could handle several special situations such as facilitating comprehension of the use of equipment and devices, solving cases of interactive 'silence' related to poorly participated discussions, or reducing the number of those disinterested in group projects.

The different technologies that can be used in the CSCL model include:

- communication systems (such as e-mail, audio, video, text, etc.)
- resource sharing systems, which allow, for example, the sharing of a screen, whiteboard, database, or file
- systems to support group processes (such as the creation of a common blog, forum, or chat for exchanging ideas and proposals).

- Conclusions

In conclusion, it can be seen that CL ensures better learning, facilitates the development of high-level cognitive skills and an aptitude for working with others, helping students to be confident in their abilities, and also preparing them for a future work environment.

- Personal Experience

Watch here the methodological testimony of **Bianca Fabbrocino, from Istituto F. De Gennaro Vico Equense (NA) – Italy**



- Digital Tool – Facilitation: Padlet

Padlet is a digital tool that can help teachers and students in the classroom and beyond by offering a unique place for a bulletin board.

When to use it?

- To present images, links, videos, and documents, all placed on a bulletin board that can be made public or private.
- To facilitate brainstorming, in the classroom or remotely
- As a tool for self-study

How does Padlet work?

Padlet is a basically a digital board that allows students to share content (text, images, video, audio) and collaborate in real time. The strength of Padlet is that it is very easy to set up, and because of this it can be used quickly to organize discussions and get feedback from students. Let's see how to get started.

1. Selecting a Template

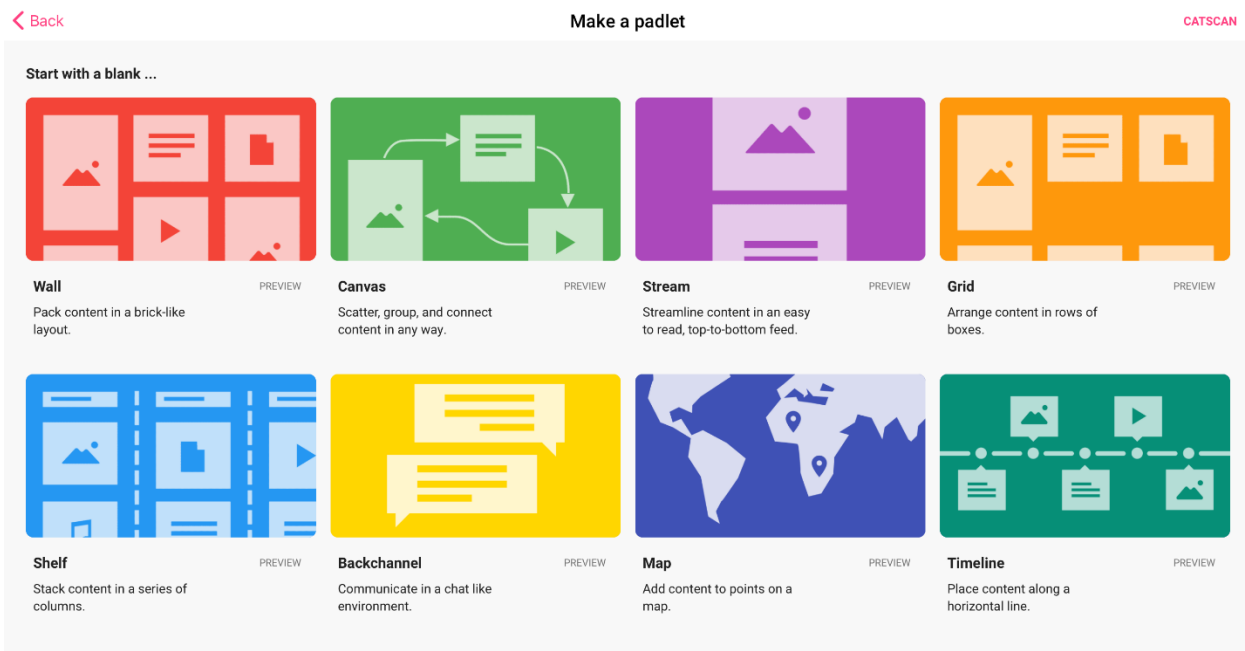


Figure 3 - Padlet Templates
Credits: <https://padlet.com/>

Padlet allows you to choose from several templates, which have different functionalities. It might be useful to test them out to see which one is right for us; we would recommend the "Wall," "Grid," and "Shelf" templates.

2. Adding Contents

Once the template is chosen, it is time to add content. To do this, you can:

- Double-click anywhere on the board
- Click on the "+" icon in the lower right corner

- Drag media in the board

It is possible to give the content a title and also write a brief description. These added contents will be the places where comments can be exchanged between students and teachers invited to the board.

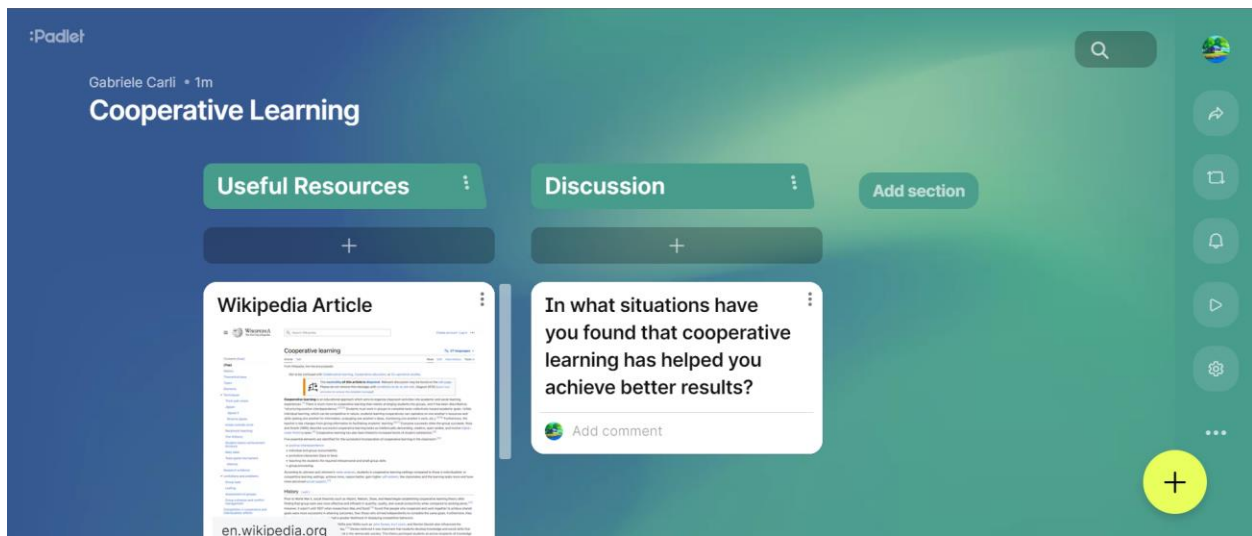


Figure 4 - Padlet Board
Credits: <https://padlet.com/>

3. Settings

Setting up Padlet according to your needs is very simple. To access the settings, click on the gear icon in the right bar.

Padlet settings are divided into six categories:

- **Heading:** It is used to set title, subtitle and icon of the board.
- **Appearance:** It is used to set the background image of the board.
- **Layout:** Allows you to organize the display of content.
- **Posting:** From this setting, you can decide whether to allow comments from other users under different posts, and choose whether the name of the commenting user should appear.
- **Content:** Allows you to set comment moderation. User comments will be visible only after approval of the board owner.
- **Advanced:** Provides the URL of the board.

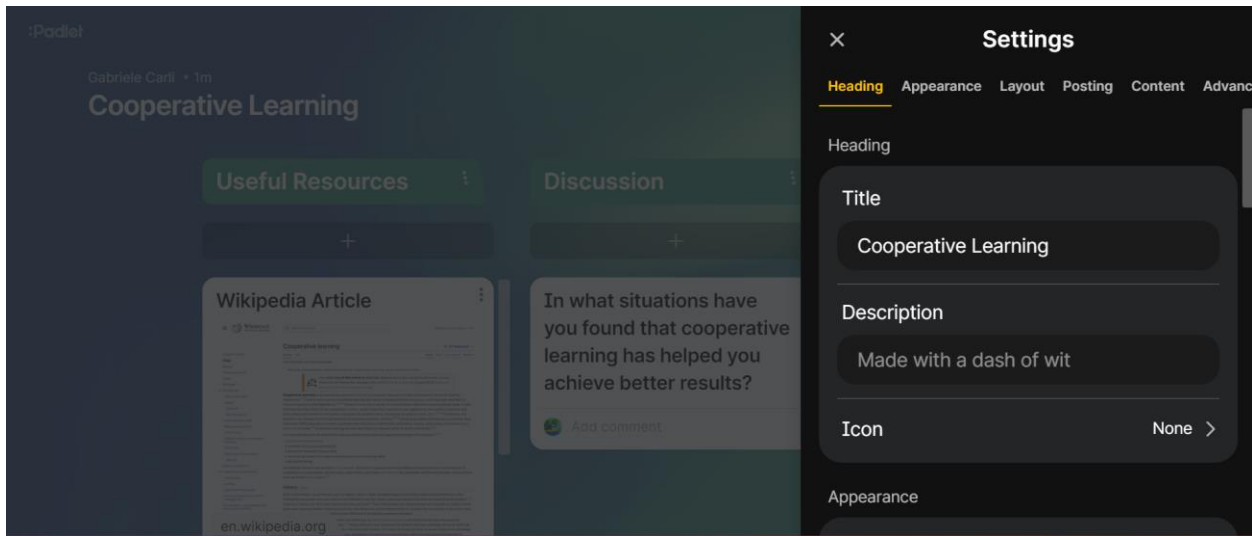


Figure 5 - Padlet Settings
Credits: <https://padlet.com/>

Pros and Cons

Pro: very simple to use

Cons: the free version only allows you to create a maximum of 3 cards

Link: <http://padlet.com>

Accessibility statement:

<https://legal.padlet.com/accessibility>

- **Peer to Peer Education**

One of the modes of relational education is peer education, a methodology designed to activate a natural transfer of knowledge, emotions, and experiences from some members of a group to other individuals in the same group, thus enacting global communication that becomes an opportunity for enrichment and exchange for each student. Within the same class, therefore, more prepared pupils (peer educator) teach those who need support and longer learning time.

This again enacts a disruption from traditional models that always put the experienced and competent adult in charge of the educational project at the center. In this case, the ability to understand the needs and motivations of others is transferred to a peer group, which shares the same lifestyle and mindset.

The teacher is left to supervise the process.

Peer education certainly offers multiple benefits:

1. It makes the peer educator more mature and aware, who through explaining to peers consolidates and deepens his or her knowledge.

2. transfers the idea that the relationship between peers can go beyond that of mere playmates;
3. enables learning through the use of language closer to that of the learners;
4. helps the teachers focus on the needs and relational dynamics of their students.
5. This methodology is particularly suitable for groups of adolescents, working together to strengthen their self-esteem and collaborative skills at crucial time in their development.

- Digital Tool – Facilitation: Microsoft To-Do

Microsoft To-Do is a popular task management application designed to help individuals and teams stay organized, manage their tasks, and increase productivity. The app is available on multiple platforms, including web browsers, Windows, macOS, iOS, and Android, ensuring that users can access and sync their tasks across devices.

The user-friendly interface of Microsoft To Do makes it simple to create, manage, and prioritize tasks. Users can add due dates, reminders, and notes to each task as well as create multiple lists to categorize their tasks. To improve organization and filtering, tasks can also be divided into various folders and given particular tags.

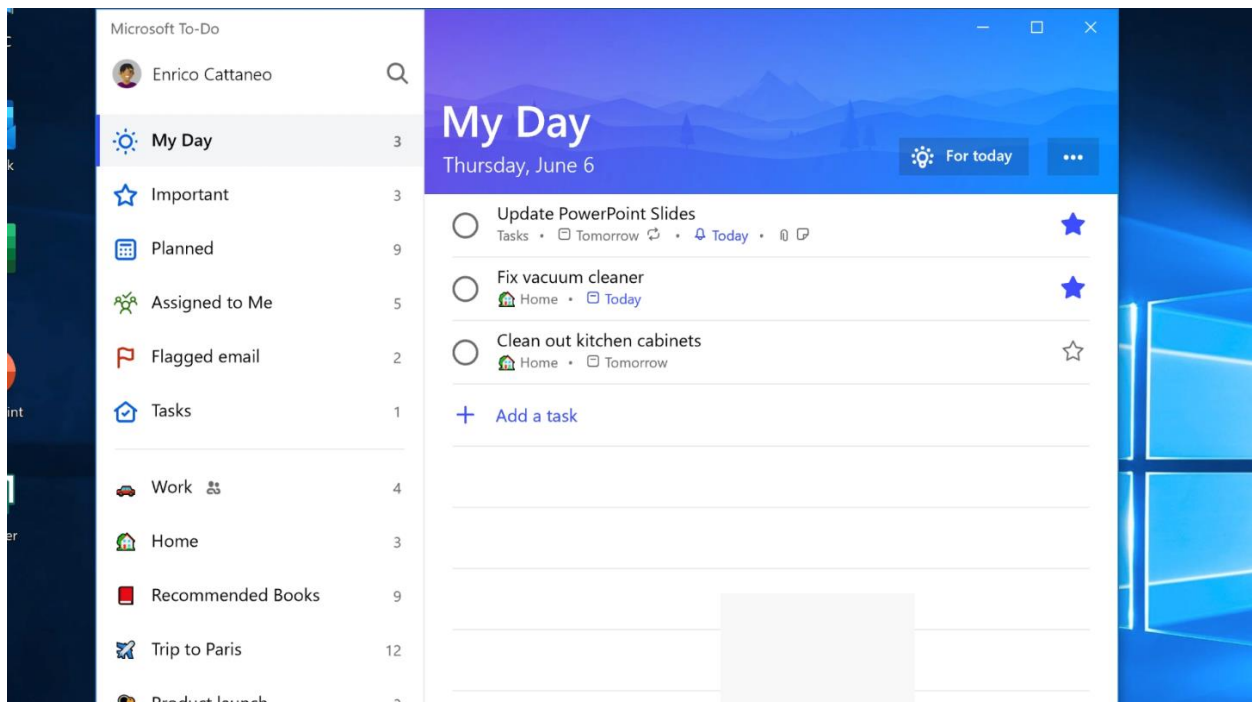


Figure 6 - Microsoft To-Do Main Page
Credits: <https://todo.microsoft.com/tasks/>

When to use it?

- Personal Task Management: Microsoft To Do is ideal for managing personal tasks and to-do lists.
- Collaboration and Teamwork: Microsoft To Do supports collaboration features, making it a valuable tool for teams.
- Goal Setting and Planning: Microsoft To Do can be used for setting goals and planning activities.

Pros and Cons

Pro: Microsoft To Do offers a clean and intuitive interface that is easy to navigate, making it simple for users to create, manage, and prioritize tasks. The app is available on multiple platforms, including web browsers, Windows, macOS, iOS, and Android.

Cons: While Microsoft To Do excels at basic task management, it may lack some advanced features found in other dedicated task management applications.

Link: <https://todo.microsoft.com/tasks/>

Accessibility statement:

<https://support.microsoft.com/en-au/office/screen-reader-support-for-microsoft-to-do-61cc610b-00b2-4cd4-be75-afd1a2d8231f>

COMMUNICATION

- **Experiential Learning and *Learning by Doing***

Learning is a process, in which knowledge is created through the transformation of experience.

David A. Kolb

Learning by Doing methodology is part of the *experiential* learning theory (*Experiential Learning*), developed since the early 1970s by David A. Kolb, who systematized many of the insights of important philosophers and psychologists who preceded him, such as John Dewey, Kurt Lewin and Jean Piaget, into an articulated educational approach.

The most important aspect of *Learning by Doing*, which differentiates it from traditional teaching methods, is the recognition that is given to the direct experiences experienced by the students: they become active participants in the lessons, participate with their own skills and abilities in the challenges proposed and reflect on the lessons learned. An example of experiential

learning is teaching the differences between animals by taking pupils to a zoo, where they can observe and interact directly with the environment, rather than passing on 'second-hand' knowledge through a textbook.

Learning by Doing methodology has numerous benefits, ranging from increasing class involvement during the lesson to developing creativity and confidence in students. Before delving into these benefits, let's take a closer look at what experiential learning consists of and how it can be exploited in the classroom.

- How Learning by Doing works

Learning by Doing engages learners holistically, considering the cognitive, emotional and relational aspects that make up their personalities. Precisely because of this, it is an ambitious approach that can bring great developments in learners' *problem solving* and emotional management skills, provided it is set up with a few fundamental elements in mind.

For greater success in consolidating skills and notions, we recommend following the steps outlined by David Kolb in his *Experiential Learning Model*.



Figure 7 Experiential Learning Model by David Kolb
Credits: <https://it.freepik.com/foto-vettori-gratuito/frecce-direzionali-cerchio>

This pattern, called Kolb's cycle, begins with the **concrete experience** phase and then continues clockwise with the phases of **reflective observation**, **abstract conceptualisation** and **active experimentation**. Let us look at them in detail:

1. **Concrete experience**: in the first phase, a stimulating situation is addressed, characterized by unpredictable elements and challenges that can test the students' skills within a safe context.

2. **Reflective observation**: in this phase, one returns to the starting point of the activity and reviews the actions performed. The skills of listening to others, distinguishing differences and paying attention help to understand the experience more deeply.
3. **Abstract conceptualisation**: in the conceptualisation phase, logical models and ideas are used to develop a theoretical interpretation of experiences and to link them together.
4. **Active experimentation**: in the last phase, one starts from the theoretical hypotheses generated and looks for contexts and situations in which to put them into practice.

- The benefits of Learning by Doing

Some advantages of the *Learning by Doing* methodology:

- It engages students through realistic experiences, helping them to achieve a deeper understanding of the subject matter.
- It fosters collaboration within the group, the exchange of different opinions and cohesion towards the achievement of a common goal.
- It encourages risk-taking because it places students in a safe environment in which they are invited to share opinions, evaluate the ideas of others and construct solutions without being afraid of the judgement of others.
- It offers students a **personal** learning experience, which is valuable because it reflects their values and individuality.

- Digital Tool – Presentation: PowerPoint

Power Point is a widely-known presentation tool to produce slideshows which may contain text, graphics, sound, movies, hyperlinks, and other objects. It also enables users to add animation and effects to slideshow elements. PowerPoint offers a range of features and tools to help users design, organize, and deliver their content effectively.

With PowerPoint, users can create individual slides that act as visual aids to support their presentation. Slides can include text, images, charts, graphs, tables, multimedia elements (such as audio and video), and animations. The software provides a user-friendly interface and a wide variety of pre-designed templates, themes, and layouts, enabling users to easily customize the look and feel of their slides.

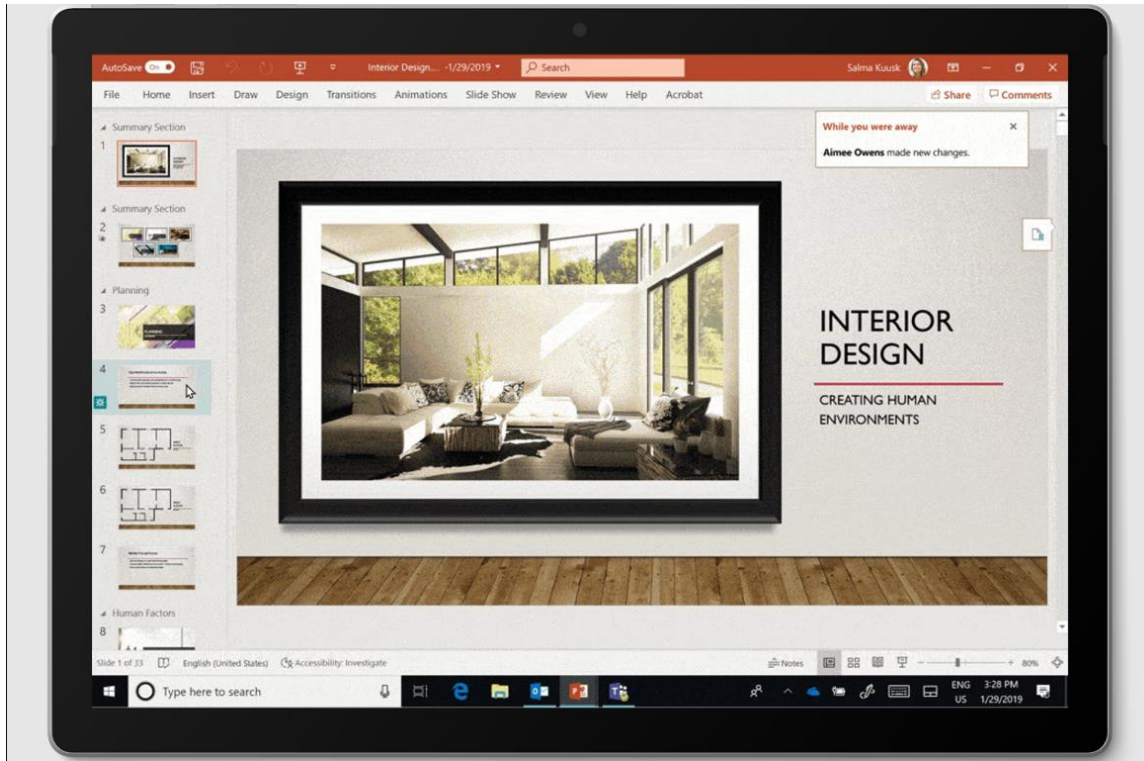


Figure 8 - An example of a PowerPoint slide
Credits: <https://www.microsoft.com/en-us/microsoft-365/powerpoint>

Pros and Cons

Pro: it is a suitable tool both for students' individual study and for teacher to engage the class with gamified experience

Cons: the free version does not allow you to experience a lot of functions

Link: <https://quizlet.com/en-gb>

Accessibility statement:

<https://quizlet.com/blog/the-quizlet-app-now-with-voiceover-for-users-with-impaired-vision>

Link: <https://www.microsoft.com/en-us/microsoft-365/powerpoint>

Microsoft Office 2016 PowerPoint has built-in accessibility tools that can ensure accessibility of a saved PDF version of slides (e.g. allowing functional links, descriptions of images and readable text).

- **Flipped Classroom or Flipped Teaching**

Flipped teaching or flipped teaching is a teaching methodology, a pedagogical model as well as a new learning scenario. In flipped classrooms, a reversal of traditional teaching methods takes place: normally the teacher teaches, and the pupil listens and then studies and repeats at home. The term flip (flipping) refers to the way in which content is proposed and the timing of learning. The flipped classroom, in fact, overturns the logic of studying in class with the teacher and passively repeating at home what has been heard/read in class.

Traditional Lesson	Flipped Lesson
<p>The teacher transmits the information to the students in a frontal way.</p> <p>At home there is appropriation, the moment in which the student develops learning from the teacher's explanation.</p>	<p>At home the students research for the information.</p> <p>At school there is appropriation, the time when the student develops learning. In the moment of learning the student is not alone, and the teacher is most significant now when the student needs it most, that is, at the moment of reflection on the information.</p>

This teaching methodology originated in the Anglo-Saxon world - which has always paid more attention to laboratory and 'experience-based' teaching - and has spread particularly in the United States, where classrooms have already been digitally set-up for years and use e-learning systems based on virtual classrooms.

In a flipped classroom, **the responsibility for the teaching process is in a sense 'transferred' to the students**, who can control access to the content directly and have the necessary time for learning and evaluation. The teacher has a 'guiding' role that encourages students to conduct personal research and to collaborate and share the knowledge they have learnt.

The activities take place in ways like those used in vocational training courses, thus making extensive use of new technologies to provide learners with appropriate resources outside the classroom context. In fact, learners have at their disposal a wealth of online learning materials, which they can share, annotate, modify, or even create collaboratively.

The first step for a flip teaching activity is to identify an e-learning platform as an environment where to collect, organize, and share resources and learning paths that, structured and implemented by the teachers themselves, can satisfy learning styles and rhythms verified in the classroom. This makes it possible to extend teaching time beyond classroom spaces and the time limits of the end-of-class bell.

- **The process**

The process follows several steps:

- The teacher very carefully selects or prepares video resources, multimedia resources, books or e-books that must be stored into an online learning platform.
- The teacher assigns home videos or resources to students on a topic that will be later on covered in class.
- Students at home connect to the virtual space in which they have at their disposal the teaching materials that the teacher has selected and/or created just for them and can use them at any time of the day, using them several times until the concepts are sufficiently clear.
- Subsequently, the teacher at school provides clarifications, carries out exercises and any other activities functional to better understanding (homework, problem solving, case studies, in-depth activities, etc.).
- The pupils in class report their acquired knowledge, respond to questions posed by the teacher, produce texts demonstrating that they have understood the subject matter.
- The teacher tests the level achieved through online quizzes, which also allow students to learn from their mistakes.

Students become responsible for and organizers of their own learning. Outside the classroom, they use online materials according to their own learning speed. In the classroom, they collaborate with classmates, compare, and deepen the concepts learned. The role of teachers is crucial in selecting and preparing home study material, as well as in explaining more difficult and complex concepts in class.

In this methodology, **technology plays a key role** because on the one hand it allows students to access materials from home (videos, documents, links, etc.), take notes and exchange information with peers (chat rooms, forums). On the other, it allows teachers to facilitate collaboration among their students by keeping track of progress and giving constant feedback.

- Disadvantages of the "Flipped Classroom" model

Technical problems

No Internet access means no homework. Also, if students forget their password or have problems with their computer, they can quickly lose connection. For students who do not have access to a reliable computer or a stable internet connection, this model will cause inconvenience and they will not be able to complete their assignments at all. Today, however, technology is becoming more and more integral to education and many schools are even providing their students with access to computers/laptops. Given these trends, we are confident that this problem will become less and less relevant.

Lack of motivation

Students need to take initiative and have the motivation to complete their homework and prepare for class without being closely monitored. Those who are not focused can easily become distracted and lose touch. Also, if they haven't mastered the basics, it will be difficult to go deeper into a subject without the help of a teacher.

Not for every student

"Metacognitive skills" sounds complicated, but it's simple to explain. It's about knowing how you learn and what learning style suits you best. Flipped Classroom requires a lot of self-discipline. Students need to know how they learn best - but it's all a matter of practice.

Change takes time

Although the flipped classroom model will ultimately save teachers time, setting up your first "flipped course" will take more time and energy than continuing with the status quo. Instructors will need to introduce an entirely new concept to students. This change may take some time as they must learn to transition from a passive learning style to an active learning style.

- Personal Experience

Watch here the methodological testimony of **NAME+SURNAME** from **Turismo de Portugal Lisbon – Portugal**



- Digital Tool – Facilitation: Quizlet

Quizlet provides a platform for students and teachers to create and share their own learning materials, including flashcards and diagrams.

When to use it?

- **In class**, to create gamified learning experiences for your students
- **At home**, as a tool to support and enable students to study together with flashcards

Quizlet modes

- **Flashcards:** Quizlet allows you to create flashcards that students can use to review concepts covered in depth in class.

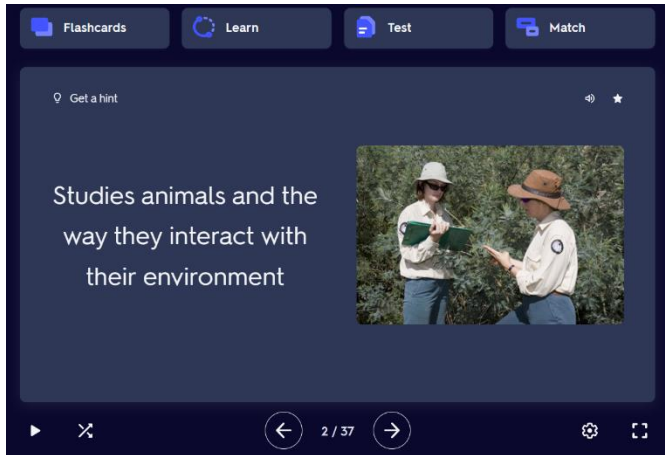


Figure 9 - Quizlet Flashcard
Credits: <https://quizlet.com/latest>

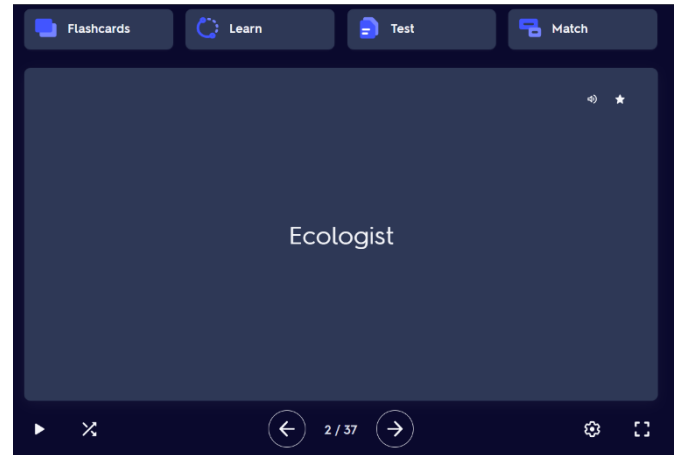


Figure 10 - Quizlet Flashcard
Credits: <https://quizlet.com/latest>

- **Learn:** With this mode, students can take short tests independently where they can challenge their knowledge.

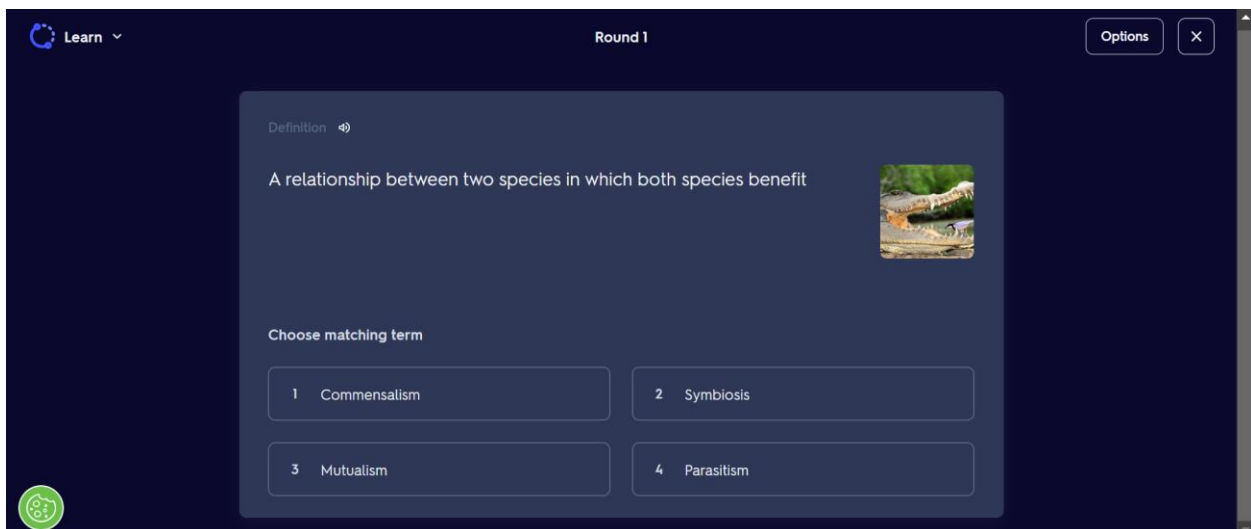


Figure 11 - Quizlet Learn Mode
Credits: <https://quizlet.com/latest>

- **Test:** In the “Test” mode, you can set challenges for your class by going to customize the settings in a more defined way.

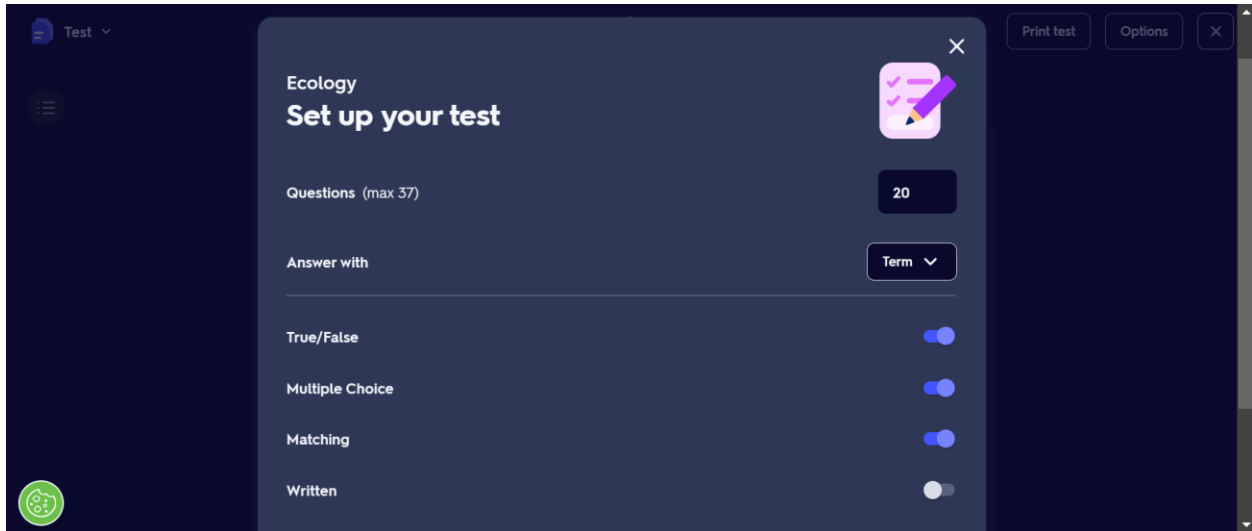


Figure 12 - Quizlet Test Mode
Credits: <https://quizlet.com/latest>

- **Match:** In this last mode, students will need to link pictures or descriptions to the correct definitions.

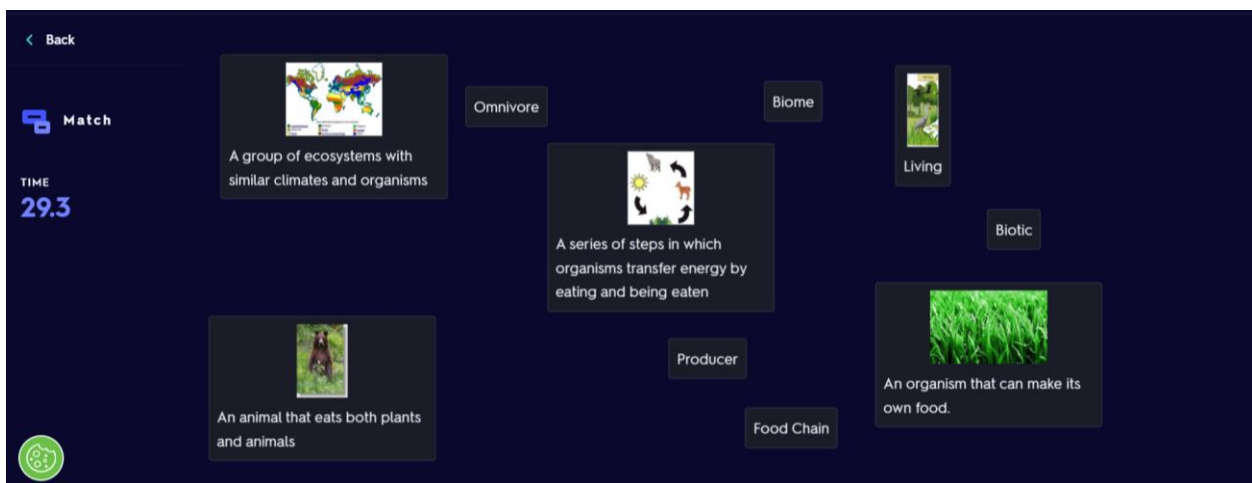


Figure 13 - Quizlet Match Mode
Credits: <https://quizlet.com/latest>

Pros and Cons

Pro: it is a suitable tool both for students' individual study and for teacher to engage the class with gamified experience

Cons: the free version does not allow you to experience a lot of functions

Link: <https://quizlet.com/en-gb>

Accessibility statement:

<https://quizlet.com/blog/the-quizlet-app-now-with-voiceover-for-users-with-impaired-vision>

CREATIVITY

- **Design thinking**

“Fail faster, to succeed sooner.”

David Kelley

Design thinking is above all a mindset, the deeply rooted belief and confidence that everyone can help creating a more desirable future, and a process to take action when faced with a difficult challenge. That kind of optimism is well needed in education.

Classrooms and schools across the world are facing design challenges every single day, from teacher feedback systems to daily schedules. Wherever they fall on the spectrum of scale – the challenges educators are confronted with are real, complex, and varied. And as such, they require new perspectives, new tools, and new approaches. Design thinking is one of them. Ideo, an American consulting firm, recently developed a new resource —[The Co-Designing Schools Toolkit](#), which supports educators to collaboratively create equitable change in schools through a community-led, equity-centered, and design-driven process. For a more in depth analysis of the methodology please refer to it, we will cover here a brief introduction of design thinking as a collaborative methodology particularly useful to tackle complex or ambiguous issues.

Design thinking is a methodology used to address and solve problems.

It was developed by David Kelley and Tim Brown at Stanford University in the early 2000s. In particular, it is useful for solving complex and difficult problems; understanding user/customer needs and reformulating problems by placing the user/customer at the center.

- **Some Key Principles of Design Thinking**

Put people first.

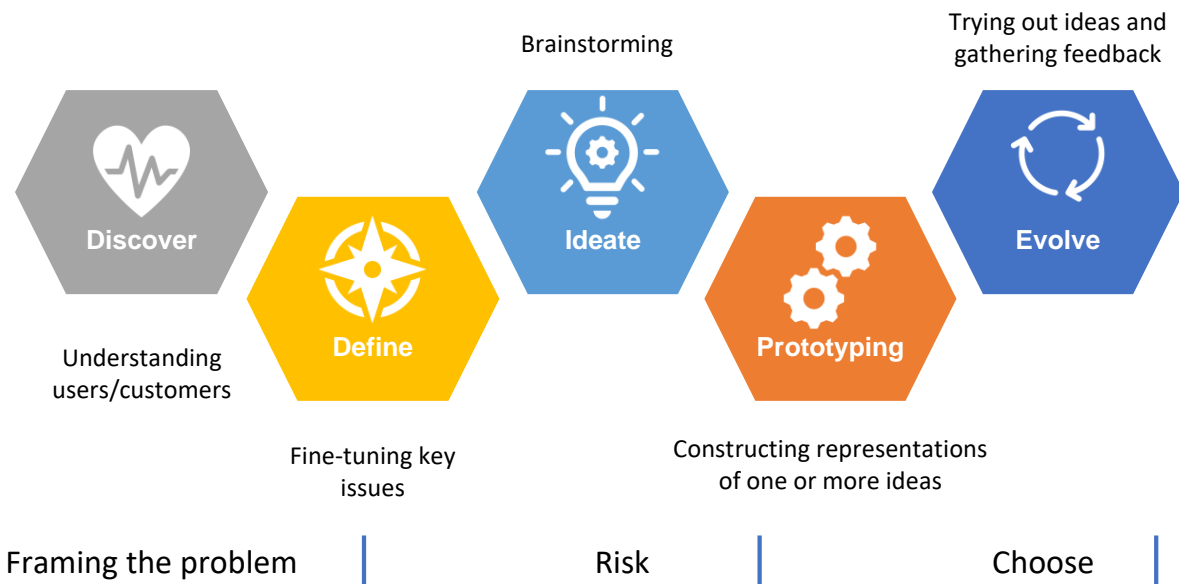
Start by trying to get a good understanding of who the people who use your services, products, or solutions are: what their needs, strengths, and aspirations are.

Communicate visually and in an inclusive way.
Help people gain a shared understanding of the problem and ideas.

Collaborate and co-create.
Work together with others and be mutually inspired by what you do (build ideas on the ideas of others).

Iterate, iterate, iterate.
Prototype and test quickly to catch mistakes early and build confidence in innovative ideas.

- Design Thinking: the Process



Step 1- Discover

The process begins with the discovery phase, which seeks to find insights into the problem. In this phase, the task is to ask precise, but open-ended questions that require several iterations to delve deeper into the challenge at hand and reformulate the questions posed at the initial stage.

This step focuses primarily on analyzing the user's needs, behavior, attitude, weaknesses, and potential for improvement over current solutions.

The DISCOVERY phase can be conducted in various ways and approaches, but it is preferable to focus on gathering useful and meaningful information only with a well-designed set of questions. Avoiding closed questions, especially yes-no questions is the first step to doing it well.

Always pay attention, observe, and seek to understand:

- Everything that influences behaviors.
- What adaptations are put in place by people (they are revealing of underlying needs).
- Body language, which makes us understand people's emotions during our interviews.
- Patterns, habits and recurring patterns (they let us know what is really important to people).
- Look for unexpected elements-anything that seems out of place can be a conversation starter

Step 2 - Define

This phase narrows the findings into a specific key objective (or some of them) that might be worth working on.

In other words, this phase groups and synthesizes the findings and concludes the key insights from the Discovery phase to help the team direct its attention to the main issues.

Based on the consensus within the team, the future direction and main goal become clear.

Although there is a clear objective, this can shift to define the next question of "How Might We ... (How Might We)."

A good HMW question can make life easier; it condenses the work of the first two steps into a simple, clear statement that everyone can easily understand.

- The "How might we" Question

Characteristics of an effective question:

INFORMED: Gather information from the previous phase, "connect the dots" by making connections among the collected elements, focus well on the needs and expectations of our target audience.

INSPIRING: Motivate to action, make us believe that we can really solve the problem highlighted by the people we met.

MEMORABLE: Be remembered because it makes us "feel" the needs, be "social" in the sense of easily shared and understood by many people.

Step 3 - Ideate

The ideation stage refers to a creative process of generating ideas and gathering thoughts, no matter how crazy they may seem initially.

It is basically a brainstorming process in which many potential solutions emerge to solve the question "How could we". Not too many constraints should be placed during ideation.

Being open to immediate and unlimited possibilities is beneficial and that is how, in the right balance with practicality and feasibility, innovation ends up coming. However, one must remain down-to-earth to be practical and move forward. It is necessary to identify feasible ideas that seem addressable through hypothesis questions.

Creative Problem Solving

Turn the problem into a challenge! Try to turn, even verbatim, the problem into a question. This will help us perceive it as less critical, as a challenge instead of an obstacle.

Try to suspend judgment, especially if it is negative: when brainstorming try to adopt a positive attitude, it will help you see the solution as more feasible.

Gather data and ideas and develop a plan of action. It will help you proceed gradually, By turning the action plan into a list, you will have a clear timeline of actions to take

Give yourself a time limit. Having a time limit stimulates creativity and helps you achieve the goal.

Step 4 - Prototyping and Testing

The solution delivery phase is interpreted in progressive implementation logic.

In this phase, prototyping and testing is the key to improving the project final outcome.

The testing phase is aimed at testing how well the implemented product can solve the users' problem. This is the time to submit our idea to the target people to see whether the problem identified in the early stages has been solved and whether the solution meets the needs that have emerged.

A prototype makes it easier to discuss ideas with other people and get feedback on them so that you are not going in blind on the day the service/solution is launched.

Although it might seem like this slows down the process, it saves time and money in the long run by getting to the right idea faster.

Ideas and hypotheses cannot be realized unless they are tried and tested first.

Some useful techniques:

Interview

A direct interview with the people who are going to use our proposed solution.

The questions asked will be open-ended, the conversation more conversational.

Questionnaire

Faster method of collecting feedback because it immediately collects responses from multiple people. Questions asked will be mostly closed-ended, multiple-choice questions or evaluations of the proposal implemented.

Focus Group

A focus group is a way to bring several people together to gather ideas about a solution or suggestions for solving a problem. You will ask stimulus questions or use key words to gather ideas and judgments.

Step 5 - Evolve

The last phase is aimed at reflection at all levels (procedures, teamwork, etc.) and is an integral part of Design Thinking. It is primarily the phase in which we reflect on the content of the project and its continued development.

Share results and insights with the team at the end of an interaction and at regular intervals with as many stakeholders as possible.

Creating a pitch/presentation helps share with the team the results and insights developed during stakeholder interactions and project activities. The canvas on the next page helps to structure it in timing and its key components.

- Personal Experience

Watch here the methodological testimony of **Monica Boni, from Wattajob S.r.l. Milano – Italy**



- Digital Tool – Facilitation: Mural

Mural is an online tool for collaboration and sharing ideas.

When to use it?

To enable brainstorming. You can use the canvas proposed on Mural directly in the app or you can download them to use them in presence brainstorming activities.

With Mural you can add sticky notes, text, gifs and images and quickly link them together to create brainstorms or mind maps. The application can be used online, which allows multiple users to work simultaneously, adding and editing content on the board in real time.

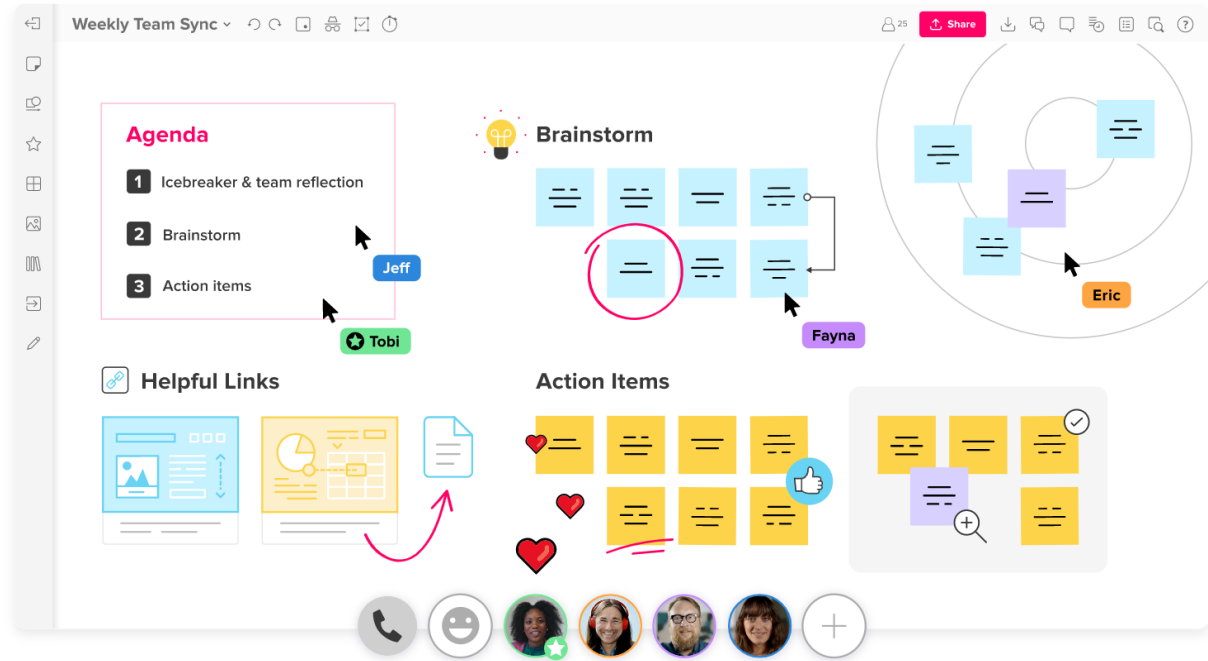


Figure 14 - Mural Board
Credits: <https://www.mural.co/>

Pros and Cons

Pro: It allows you to facilitate brainstorming and give you practical suggestions and ideas

Cons: the free version does not include many features

Link: <https://www.mural.co/>

Mural accessibility statement

<https://support.mural.co/en/articles/4831483-accessibility-statement>

- **Storytelling techniques**

“Storytelling is the oldest form of Education.”

Terry Tempest Williams

Storytelling might be considered an inclusive learning method. Of course, stories are innate to human beings, and telling them enabled humankind to build relationships, deliver knowledge and understanding, and thus develop itself. Today storytelling is more and more applied as an innovative and inclusive learning method in school settings.

The art of storytelling

Storytelling is discovered, in fact, as a communicative tool capable of capturing the attentions of individuals through story, plot, and narrative tension, thus retaining listeners by the means of narrative gears. The sensational discovery was this: the human brain can synthesize information on a multisensory level, but especially when it is presented in a narrative form.

Storytelling has high pedagogical and educational potential, especially for digital natives. Today more than ever, knowing how to tell stories can enable students, from the earliest stages of their development, to discern what is real from what is virtual.

Stories can be used to address all disciplines in addition to literature, math, science, art, technology, geography, history, music, and physical education. Through storytelling, the learner's potential can be developed into an autonomous learner, enabling him or her to gain awareness of his or her own learning process, and employing strategies such as planning, hypothesis-making, and self-assessment.

Storytelling for an inclusive school.

Storytelling involves discussion and collaboration of all students in the class group and thus allows for recognition of other persons, their value and role within the narrative construct but also in real life.

Storytelling in school fosters identification with the characters created and greater awareness of one's own emotions, which means personal growth, strengthening of individual but also group identity.

Conflict in the classroom often leads to extreme levels of bullying and cyberbullying, therefore, the introduction of such a method of peer confrontation can help overcome the forms of discrimination and verbal violence that are widespread in the school environment.

How is the classroom activity conducted?

A storytelling unit usually includes three teaching phases:

The Pre-Telling Activities: In this phase, the students' curiosity about the story is aroused and tension is built. In addition, central vocabulary is pre-released.

The While-Telling Activities: In this phase, the story is told in a sitting or chair circle and is accompanied by the students' (speech) actions during the repeated telling.

The Post-Telling Activities: In this phase, contextual and linguistic content is further processed and deepened.

Storytelling can particularly be useful when learning a foreign language or studying a different culture. Let's see some examples of possible activities.

- Pre-Telling Activities

Vocabulary introduction

The teacher shows a picture card with a new vocabulary word, names the word and has the students pantomime it, later the teacher only names the word.

The teacher recites the words with variation in tempo, pitch, or volume and has the students repeat them, later the teacher has the students lip read the word.

"Kim" game: the teacher hangs different picture cards on the board. One student covers or swaps several cards, which then have to be named by the other students. Finally, all picture cards are turned over, one student points to a face-down picture card, and the other students name it.

Introducing the main character

The teacher introduces the main character(s) of the story to the students using a stuffed animal, a toy figure, or a figure painted on cardboard.

Introduction to the topic

Fantasy journey: The students make themselves comfortable and close their eyes. The teacher "takes" the students on an imaginary journey into the world of history. After the imaginary journey, the students name what they saw and experienced on their journey.

Picture or object as a silent stimulus: The teacher places a picture or an object that fits the story in the center of the circle of chairs. Students speak freely about the picture/object, then the teacher leads into the story.

- While-Telling Activities

Choral Speaking

During the storytelling, the teacher invites the students to chant along with recurring phrases by inserting small pauses at these points and encouraging the children to chant along based on their facial expressions.

Speech-accompanying actions

The teacher distributes pictures of individual scenes to the students, who post them on the board one by one as they narrate. Alternatively, students can be given all the pictures on a worksheet and then arrange or number them in the correct order.

Students accompany the telling of the story in pantomime with appropriate movements.

Students act out the story in their seats with hand puppets/cardboard figures/etc. that they have made themselves.

Content work

The teacher stops the storytelling at a suitable point and lets the students speculate about the further course of the story.

The teacher stops at a suitable point and the students tell how they feel in the place of the main character and how they would act in this situation.

- Post-Telling Activities

Activities that accompany repeated storytelling

Students accompany the story with previously discussed sounds appropriate to the story (bsw. wind, birds chirping, car rattling).

The story becomes an action story as students' pantomime what the teacher is telling.

Students put pictures to the story in the correct order.

Students are instructed to perform a certain movement (bsw. stand up and sit back down or clap their hands) when a certain word is mentioned. This can be a certain color, a number, an animal or a person, but it can also be all words that belong to a generic term (such as bsw. vehicles, animals, colors, weather) or the students' favorite words of their own choice.

The teacher replaces individual words and phrases with whistles, a beep or a short pause during storytelling and has the students name them.

The teacher builds in content errors and funny changes during storytelling that students must identify and correct.

Digital Storytelling actions in the classroom are to be included in learning programs. Thus, the student is put at the forefront of his or her learning process and can build on his or her knowledge and skills in such a way as to be able to materialize particular products through videos, multimedia-type activities, digital storytelling, and books.

Digital Storytelling can facilitate knowledge of disciplinary information that is not easy to fully comprehend through an engaging and enjoyable method, which is precisely why it is often used as a facilitative method.

The use of a digital medium in school facilities not only helps to increase opportunities related to learning and active participation by BES and DVA students, but also succeeds in opening up access to the outside world that is often too far from school.

Nowadays, almost the entire youth sphere uses the Internet as research and as a means of communication, or for sharing photos and videos. So surely young people will be more inclined to use modern tools in the area of education as well.

- Digital Tool – Facilitation: OBS

OBS (Open Broadcaster Software) is a popular free and open-source software program for live streaming and video recording. Users can record, mix, and broadcast content from their computer screens, cameras, microphones, and other sources using the extensive set of tools and features it offers. It functions by recording data from a variety of sources, including your computer screen, app windows, webcams, and audio input devices.

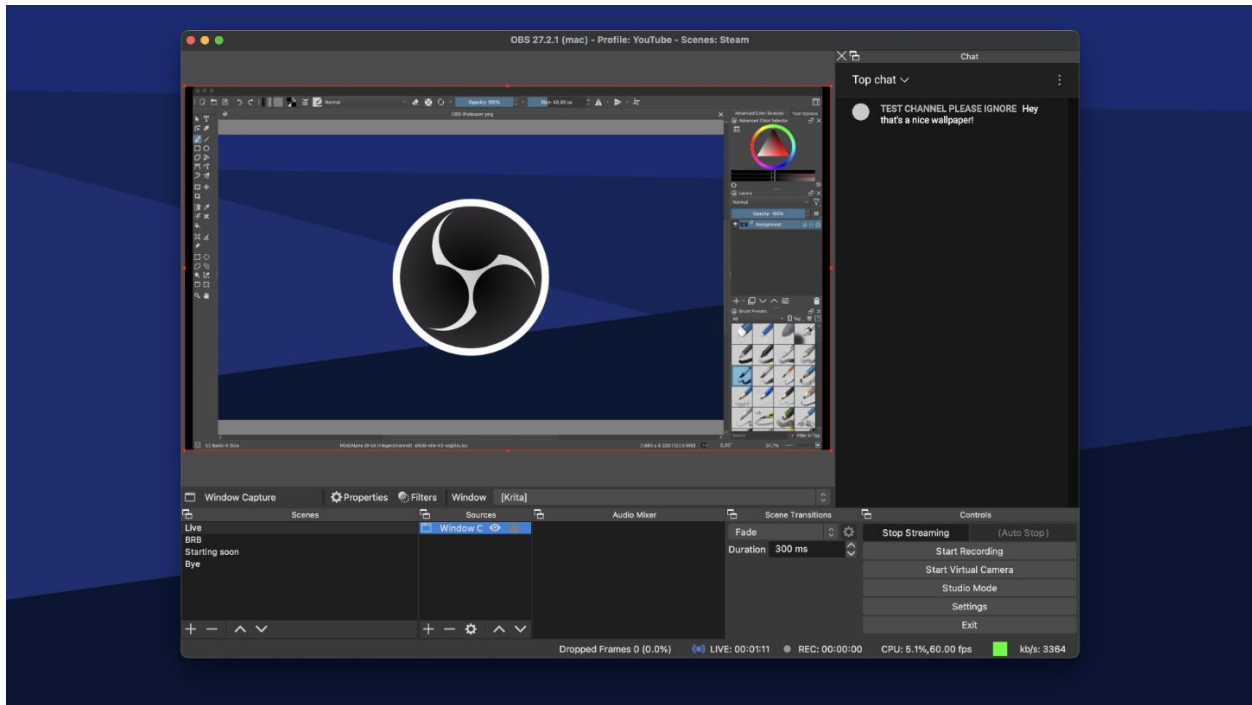


Figure 15 - OBS Main Screen
Credits: <https://obsproject.com/>

To download, install and set up OBS, follow these official guides:

- <https://obsproject.com/kb/quick-start-guide>
- <https://obsproject.com/wiki/OBS-Studio-Quickstart>

Pros and Cons

Pro: OBS is free and open-source software, making it accessible to users of all budgets. It supports a wide range of platforms, including Windows, macOS, and Linux, providing flexibility for different operating systems.

Cons: OBS has a relatively steep learning curve, especially for users who are new to live streaming or video production. It may require some time and effort to understand and master all the features and settings.

Link: <https://obsproject.com/>

Accessibility statement: /

CRITICAL THINKING

- **Debate**

“Talk in order that I may see you.”

Socrates

According to Socrates, thought arises from dialogue, from opposition, from arguing to support one's opinions and ideas. Knowing how to debate is therefore a fundamental tool for improving one's expository and reasoning skills.

What does it mean to debate? It is not about forcibly imposing one's ideas by verbally assaulting one's interlocutors, shouting louder and prevaricating. Although these approaches can be experienced in many public and private situations, debating is something profoundly different. Articulating a real discussion is something more complex and challenging, requiring **clear rules** for it to really be possible to confront different ideas.

Using the debate methodology enables the following objectives to be achieved:

- strengthen interpersonal and communication skills.
- manage emotions.
- learning to research and select information.
- organize the information gathered in a coherent way.
- develop critical thinking.
- learning to accept and respect ideas different from one's own.

Debate is a methodology that originated and developed in the Anglo-Saxon world too, where it is a full-fledged curricular discipline. But its roots go back to classical times, where rhetoric represented the art of speaking effectively and persuasively. In ancient Rome, oratory was studied as a fundamental component of rhetoric and was considered a very important skill in people's public and private lives.

The debate consists of the performance of a formal dialectical confrontation where students divided into two groups support and discuss an argument proposed by the teacher or chosen by themselves.

Before the actual debate starts, research activities can be carried out to help students support the discussion.

The methodology involves carrying out the following steps:

Step 1: Identification of the topic on which the discussion will take place

Pupils engage in research and selection of information related to this topic, list the arguments that support the texts and those that contradict it. The order of exposition is defined, which may be ascending (from the weakest to the strongest arguments) or descending (in this case starting

with the strongest arguments and ending with the least convincing ones). It is also possible to place the strongest arguments at the beginning and the end.

Step 2: Organizing the speech

Members of each team organize the information gathered, usually using the rules of classical rhetoric:

- Premise (exordium): presentation of the subject matter.
- Summary introduction (propositio): listing of the topics in the order in which they will be treated.
- Development of the themes (narratio): exposition of the topics citing the different sources.
- Evidence and confirmation (argumentatio): demonstration of one's thesis through empirical evidence and refutation of the antithesis.
- Conclusion (conclusio): final overall evaluation.

Step 3: Synthesis

you fix on a summary map the main concepts of the topic under discussion

Step 4: Evaluation

The teacher and the class evaluate through evaluation rubrics the performance from different perspectives, for example: mastery of verbal and nonverbal language, logical reasoning skills, compliance with rules, constructive interaction with the antagonistic team.

- Personal Experience

Watch here the methodological testimony of **NAME+SURNAME** from **ESHOB Barcelona – Spain**



- Digital Tool – Presentation: Canva

Canva is a well-known online graphic design tool that enables users to produce stunning visual content, such as infographics, posters, presentations, and social media graphics. It offers a user-friendly interface and a large selection of editable templates, making it available to people with different levels of design expertise. Users can easily position and resize elements using the platform's drag-and-drop functionality, eliminating the need for complex design software.

One of Canva's notable strengths is its collaboration capabilities. It allows users to invite team members or collaborators to work together on a design project, making it ideal for group projects, team brainstorming, and feedback gathering. Users can comment on specific elements, share design links, and even set permissions to control editing access.

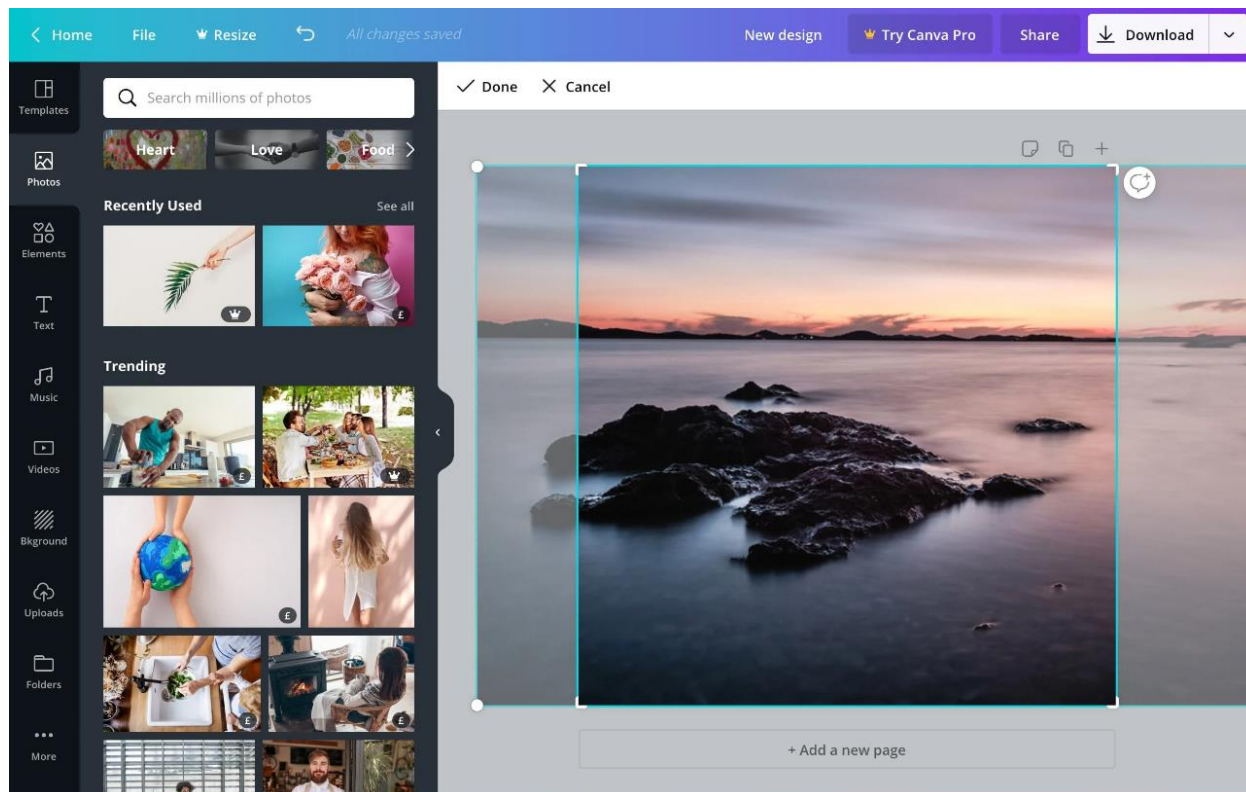


Figure 16 - A photo edited on Canva
Credits: <https://www.canva.com/>

Pros and Cons

Pro: Canva provides a user-friendly and intuitive interface, making it accessible to users of all design skill levels. Moreover, it offers an extensive library of professionally designed templates, fonts, images, illustrations, icons, and shapes.

Cons: Canva is a web-based platform, which means it requires an internet connection to access and use.

Link: https://www.canva.com/en_gb/

Accessibility statement: <https://www.canva.com/policies/accessibility/>

- **Educational trips' dynamization and assessment**

“Some men are born great.
Others have greatness thrust upon them.”
A Night at the Museum

Educational trips, often known as field trips or experiential learning journeys, play a significant role in enriching the educational experience for students. These excursions take students out of the traditional classroom setting and into real-world contexts, offering unique opportunities for active learning. However, to ensure the effectiveness of educational trips, it is essential to focus on both dynamization and assessment.

Dynamization

Dynamization of educational trips involves careful planning and execution. This planning process should begin with a clear alignment of the trip's objectives with the curriculum. Educators must identify specific learning outcomes they aim to achieve through the trip, ensuring a seamless connection with classroom instruction.

Preparation is another vital aspect of dynamization. Students should receive adequate information and guidance before embarking on the trip. This can include pre-trip readings, discussions, or assignments that help them understand the purpose of the trip and its relevance to their studies. During the trip, engagement is crucial. Students should be actively involved in the learning process, whether through guided tours, hands-on activities, interactions with experts, or independent exploration. The goal is to stimulate their curiosity and critical thinking while reinforcing the concepts taught in class.

Post-trip reflection is equally important. Students should have opportunities to process and internalize their experiences. This can be achieved through discussions, journaling, essays, or presentations, allowing them to connect what they learned during the trip with their prior knowledge.

But how to dynamize an educational trip engaging and empowering your students in an effective way? Here are some suggestions coming from our experience:

Dynamization activities:

Quiz: A fun way of getting students more involved during a trip, is to do a quiz where students are given 10 - 15 questions that they need to find the answer to throughout the visit. They might find some answers by reading information, other might be answered by the tour guide of the sites visited, while other answers they might need to actively find by asking others. Make sure to check answers at the very end and award a prize to the winners.

Hands-On Workshops: Offer workshops where students actively participate in activities related to the trip's focus. For example, a trip to an art gallery can include a painting or sculpture workshop.

Reflective Journals: Encourage students to keep reflective journals during the trip. They can jot down their observations, questions, and personal reflections to deepen their understanding.

Assessment

It is essential to measure the impact and effectiveness of educational trips. Assessment methods should align with the trip's objectives and gauge students' understanding and growth resulting from the experience.

Formative assessment, which occurs during the trip, helps educators gauge students' engagement and comprehension in real-time. Observations, discussions, or quick quizzes can provide valuable insights.

Summative assessment, conducted after the trip, evaluates the extent to which students met the learning objectives. Traditional assessment methods like tests can be employed, but more creative approaches, such as project-based assessments or presentations, may be more suitable, depending on the trip's goals.

Encouraging students to engage in self-assessment allows them to reflect on their own learning. They can evaluate their progress, set personal learning goals, and identify areas for improvement. Furthermore, feedback from students about their trip experience is invaluable. It offers insights into what worked well and what could be improved in future educational trips, helping to inform future planning and dynamization efforts.

Assessment activities

Post-Trip Essays: Ask students to write essays reflecting on their trip experiences. They should explain what they learned, how it relates to their coursework, and its broader significance.

Group Discussions: Conduct post-trip discussions where students share their insights, questions, and key takeaways. These discussions can help students consolidate their learning.

Creation of Multimedia Projects: Have students create multimedia presentations or videos summarizing their trip experiences. This allows for creativity and presentation skills assessment.

- Personal Experience

Watch here the methodological testimony of **NAME+SURNAME** from **Turismo de Portugal Lisbon – Portugal**



- Digital Tool - Facilitation: Mentimeter

Mentimeter is an interactive presentation software that enables presenters to engage and interact with their audience in real-time. It offers a variety of interactive tools and features that enhance participant engagement and promote active participation during presentations, meetings, workshops, and events.

When to use it?

- **In class**, to check students' progress and test their knowledge by creating engaging and participative quiz
- **While performing group work activities**: you can create quiz and test on the platform, divide the students in teams and have them compete together, in real time
- **To enable brainstorming**. When markers and post it are not an option, you can use the “**Tag Cloud**” or “**Open Question**” function to collect students' opinions and ideas.

The real-time nature of Mentimeter allows presenters to receive instant feedback and gather audience responses as they are submitted. The results can be displayed and visualized in various formats, such as charts, graphs, or word clouds, making it easy for presenters to analyze and share the insights with the audience.



Figure 17 - Example of a Wordcloud
Credits: <https://www.mentimeter.com/>

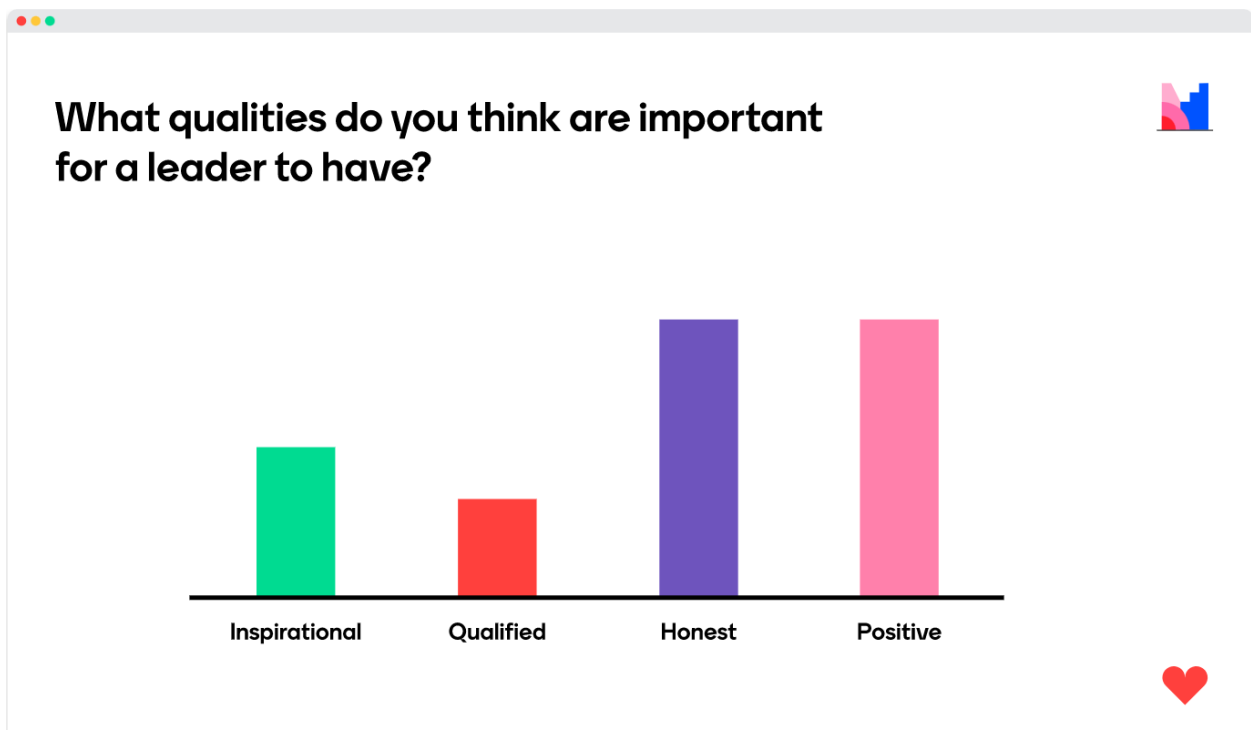


Figure 18 - Example of a Bar Chart
Credits: <https://www.mentimeter.com/>

Which skill do you think is most important for leaders?

Mentimeter

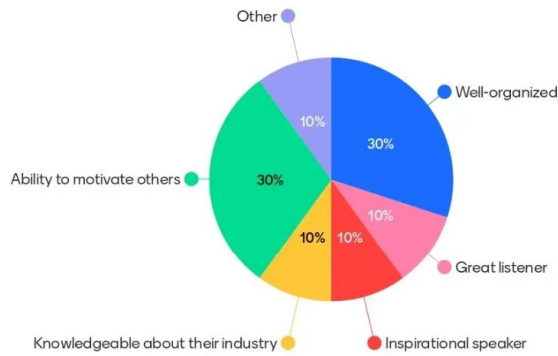


Figure 19 - Example of a Pie Chart
Credits: <https://www.mentimeter.com/>

Pros and Cons

Pro: It allows you to have real time feedback and foster an engaging environment. Also, several functions are available in the free version

Cons: There is only an English version

Link: <https://www.mentimeter.com>

Mentimeter accessibility statement: <https://www.mentimeter.com/accessibility>

Conclusions: The Power of Innovative Teaching Methodologies and Digital Tools in Educating for Sustainability in the Food Sector.

In today's rapidly changing world, the importance of sustainability in the food sector cannot be overstated. As we face complex environmental, social, and economic challenges, it is essential that we equip our students and future generations with the knowledge and skills necessary to address these issues effectively. The "Edutainment Techniques and Digital Tools Handbook for VET Teachers" broadens the discussion about the power of innovative teaching methodologies and digital tools in achieving this goal.

Throughout this handbook, we have explored a wide range of innovative teaching methodologies, each with its unique strengths in promoting sustainability education in vocational training. From cooperative learning to storytelling techniques, from experiential learning to educational trips dynamization and assessment, these methodologies provide educators with versatile approaches to engage students actively in the learning process.

Complementing these teaching methodologies, we have introduced a suite of digital tools that can enhance and facilitate the implementation of these approaches. Tools like Padlet, Microsoft To-Do, PowerPoint, Quizlet, Mural, OBS, Canva, and Mentimeter offer teachers the means to create interactive, immersive, and collaborative learning experiences. They enable the seamless integration of technology into the classroom, transforming traditional teaching spaces into dynamic hubs of creativity and engagement.

As we reflect on the significance of these methodologies and digital tools, it becomes evident that they play a vital role in reshaping education for sustainability. By leveraging cooperative learning and peer to peer learning, students can collaborate to find innovative solutions to sustainability challenges in the food sector. Experiential learning and learning by doing allow them to gain practical skills and a deep understanding of sustainability concepts. The flipped classroom model empowers students to take charge of their learning, while design thinking fosters creative confidence and problem-solving. Storytelling techniques, debates, and educational trips add depth and context to their understanding.

In the context of our evolving educational landscape, the fusion of innovative teaching methodologies and digital tools is essential. They enable educators to create inclusive, engaging, and effective learning experiences, preparing students to become active contributors to sustainable practices in the food sector and beyond.

In closing, the "Edutainment Techniques and Digital Tools Handbook for Vet Teachers" serves as a guide and a source of inspiration for educators committed to the cause of sustainability education. By embracing these methodologies and digital tools, we not only empower students

to become informed and responsible global citizens but also contribute to a more sustainable future for all.