

# PLATO'S EU

PHILOSOPHICAL LEARNING APPLIED TO ONLINE SURROUNDINGS IN EU

## MANUAL

### **CULTIVATING RESILIENT AND RESPONSIVE PERSONS:**

A Teacher's Manual for Utilizing  
Philosophical Methods for and in  
Digital World

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## Introduction

This Manual was developed as part of the project *Philosophical Learning Applied To Online Surroundings in EU* (Plato's EU). The project's main objective is to promote an open society by using innovative practices and drawing on the rich philosophical, cultural, and social heritage that underpins the EU. By tapping into the roots of philosophical thinking and democracy, the project seeks to revise the basis of deliberative processes and help people learn how to think critically. Additionally, the project addresses the challenges of the digital age by promoting responsible use of online resources. The project also combines philosophical heritage with contemporary needs through a reciprocal union – using digital resources to teach philosophy and using philosophy to cope with the challenges of the digital era.

The manual is intended for teachers and other educators. Its focus is on the methodology of teaching and learning, specifically, it aims to present several approaches that enable one to teach philosophical thinking and philosophical stance. What is also emphasised is the relevance of these methodologies for navigating the online environment.

Besides this introduction, the manual consists of seven chapters listed below.

1. Learning for and learning from the digital world
2. Low-tech learning and hi-tech learning as two ways of learning
3. Experiential learning
4. Collaborative learning
5. Inquiry-Based Learning
6. Game-Based Learning
7. Discussion

In the end, there is a list of references and further resources that you can consult and use. Each chapter on the specific methodological approach consists of four sections. The chapters open with a brief introduction to the topic, which includes an explanation of the main concepts and a basic description of the methodological approach. Next, key methods and tools of a particular methodological approach are presented, which is then followed by examples and practical tips on how the methodology can be used in the classroom using concrete problems and contents. At the end of each chapter, the relevance of a particular methodological approach for digital literacy, online ethics, and navigating the digital world is highlighted.

By implementing the project Plato's EU, we hope to instil new learning and teaching methods, reinforce critical thinking and deliberative dialogue in education, develop digital readiness and resilience, enhance digital skills and competencies, promote media literacy and tackle disinformation, strengthen the professional capacity of teachers and educators, encourage

civic engagement and promote active citizenship and mitigate some of the extraordinary circumstances, which impact or have impacted school environment (e.g. Covid-19). We hope that this manual is a step towards these goals.

This manual is accompanied by a second manual titled *Philosophical Cookbook: Recipes that Help You Remain Safe and Sane in Digital World*. It includes a repository of philosophical methods, tools, and concepts, which are presented as possible means for addressing the challenges of the online environment. It is written in a way that is accessible to students and the general public, and you are encouraged to use both manuals in union when dealing with the challenges of the digital world.

## ***Authors***



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# LEARNING FOR AND LEARNING FROM THE DIGITAL WORLD



# 1. Introducing the topic

If digitisation was still in its infancy four decades ago, today, we cannot imagine life without it. Digitalisation is projecting itself onto all levels of human life and is playing an increasingly important role in the educational process. George Couros (2015, 20) said: "Technology will not replace great teachers but technology in the hands of the great teachers can be transformational."

The digital age is a challenge for the teaching profession. The use of digital tools in the learning process is a challenge for many older teachers, with some visibly resisting or using digital tools only to meet the minimum requirements of school leadership. On the other hand, generations are entering schools that are increasingly proficient in the use of various digital tools. Most students are more comfortable in the digital world than teachers, and digitization is more a part of their lives. However, as the younger generations are less familiar with the digital world, there is a greater risk that they will make the wrong decisions.

Digital learning is a process of web-based learning in which knowledge is imparted to the students with the help of (a) information technology and (b) technology-enhanced educational strategies.

Digital learning faces various challenges and tasks. The main advantage of digital learning is the availability of materials in databases or online classrooms that allow learners to learn in different places, in any time frame, and at a pace that suits them. Learners can view specific content repeatedly and reinforce the material in different ways. Digital learning is also typically less expensive, more transparent, and more inclusive. It is also very helpful for teachers to analyse students' progress and facilitate ongoing revision.

On the other hand, digital learning also faces several challenges. One of them is to ensure that digital learning is equitable, safe, and accessible to all learners. Specifically, this means making sure it works on poorer digital devices and in areas with poorer Internet connectivity. Digital learning must also be made user-friendly for learners with disabilities, taking into account cultural context and local language.

This chapter will attempt to highlight two important issues in digital learning. First, it will talk about how to learn in a digital environment. Second, it will shed light on the knowledge, skills, and competencies we need to use the digital world in the first place, and, ultimately, how to pass them on to younger generations.



## 2. Key methods and tools

### a) Learning from the digital world

The digital age offers us a range of useful learning tools that can be integrated into the teaching process in a variety of ways. For teachers, the use of the digital world is twofold. Teachers can use digital tools to deliver content and disseminate knowledge to their students, and they can also use the digital environment for their own professional development, while also developing their own digital competencies.

The most well-known digital learning methods are online classrooms, which allow uploading of materials, assignments, online revision, assessment, etc. Teachers can also use video content found on YouTube or other online educational tools to support their teaching. The use of podcasts is also becoming increasingly important. These are recorded conversations, with or without pictures, where two or more people talk about a specific topic. The use of selected podcasts is suitable for further education. On the other hand, interlocutors often share their opinions, experiences and experiences in podcasts. In the learning process, they can serve as an excellent tool for the development of critical thinking.

Digital learning tools include e-books and audiobooks. It is recommended that the teacher chooses books for learning materials from so-called open access, where students do not have to pay for articles and books. This is the only way to ensure that all students have the same opportunities.

Although social networks in the learning system are often criticized, and young people are often warned against using them, it is also important to mention their positive aspects. The fact is that pupils spend a lot of time on social networks. Research shows that the average adolescent in the developed world is connected to social networks for 2-3 hours a day. We have to recognize that it is also possible to find educational profiles on social networks, which can serve as an excellent tool for learning facts (e.g. profiles of statistics, museums, publishers, spelling profiles, etc.).

Teachers can introduce students to learning through online courses, but they are also called upon to take part in them themselves. As an example, the Coursera platform offers courses in a wide range of fields. More than 275 leading universities and companies work with the platform, which provides flexible, affordable and work-appropriate online learning to individuals and organisations around the world. They offer a range of learning options

- from hands-on projects and courses to certificates and degree programmes suitable for jobs and promotions.

Teachers can also receive further training through online mentoring, which in most cases is one-on-one. They are particularly useful for acquiring competencies that teachers have not acquired during their regular training and need in their teaching process. Teachers can also join online communities, which bring together teachers from all over the world. Online communities allow teachers to develop international experiences, and in this way, they can also be more effectively integrated into an interdisciplinary teaching system.

One of the most engaging digital approaches to learning is virtual reality learning, a technology that simulates a computer-generated environment that mimics the real world (Schmidt and Kruger-Ross 2022). The person becomes one with the virtual world and his or her senses receive signals that trigger the feeling that he or she is part of the virtual environment. With virtual reality, users can interact with the environment, move around and experience a sense of presence in the simulated world. It can be used for entertainment, education, simulation, and training.

The image below indicates the very future of learning through digitization.



Source: Insight

## b) Learning for the digital world

The world is full of dangers that lurk both in the real world and in the digital world. Psychology teaches us to be afraid of the unknown. The more familiar certain content is to us, the more confident we are, and the less afraid we are of it. This is only partly true in the digital world. It seems that it is very difficult for an individual to keep up with digital developments, and every user of digital content is called to be humbly aware that, even online, it is necessary to develop a certain degree of flexibility and, above all, a great deal of caution.

Teachers who keep up to date with the latest technological developments and trends can better equip their pupils to use the digital world and thus provide them with a comprehensive education. School is not, and should not be, just a place for delivering curriculum material (Lythcott-Haims 2015). There are various criticisms in society that modern schools are not equipping children for life, and that too little emphasis is being placed on 'life-relevant' content and on the application of the skills inherent in the digital world.

Below we will list some of the skills that a teacher in a digital environment should have and should also be able to pass on. These skills are:

- basic online literacy;
- use of software;
- the ability to think critically and to stimulate it;
- creativity;
- awareness of cybersecurity;
- analysing data;
- communication skills;
- resourcefulness.

In the image below, you'll find some of the other skills needed to be a modern teacher.



Source: Insight

### 3. Examples and practical tips

The tools that serve as learning aids in the digital world are either familiar to younger generations, or they quickly acquire them through the various tasks set for them by the teacher. Among the more challenging tasks is training for using the digital world, to which young people must pay special attention.

Probably every modern teacher agrees that young people need to be taught critical thinking and encouraged to apply it in their daily lives. Critical thinking can be encouraged in the classroom through various types of activities. It is important that students work independently, at least initially. If they work in groups, there is a risk that only certain students will develop critical thinking skills.

Example of a workshop: upload an article to the online classroom that covers any topic but is related to the topics covered in class. It's even better if it's the results of a recent poll or a media article on a topic that all students are well aware of and current (e.g., the war in Ukraine, the election, etc.).

Then give students the task of reading the survey or article and using online tools to find other articles that confirm or refute the thesis of the original article. Based on what they read, students are asked to provide their opinion (commentary) in the online classroom and give reasons for their opinion.

The advantage of teaching in and for the digital world is that students can learn multiple skills at once. For example, you can give them the task of uploading their comments to an online classroom or another platform. If you want to foster their creativity, you can encourage them to create thinking patterns using digital platforms (see Cenva).

After students have formed their opinions and tested their critical thinking, you, as a teacher, can continue to remind them of the importance of safe behaviour online. Therefore, they should be taught about cybersecurity. If you do not feel confident in this area yourself, you could organise a cross-curricular lesson and invite a teacher from ITC to your class. This would allow you to give students insight into the systems the school uses to keep online platforms safe. It will also provide students with guidance on how to use the internet platforms safely and tips on how to protect their own data by learning about cybersecurity.

To reinforce the lesson (before or after the activity), the teacher can show the students a video clip about the use of technology in one of the secondary schools in Singapore. It is advisable to spend some time discussing the topic of the video after the video. You can ask the following questions:

- a) What do you think of the teaching model shown in the video?
- b) Would you find such teaching more interesting?
- c) What kind of school would you like to see? Do you have ideas about what we could change already in our teaching system?
- d) What do you think education will look like in five, ten, or twenty years?

## 4. Relevance for digital literacy, online ethics, and navigating the digital world

Digital behaviour teaching plays an important role in the modern world. Students from developed countries are very comfortable with the various networks. They often acquire certain skills on their own. Teachers often do not spend a lot of time teaching about the digital world because the first goal - successful use of digital resources in assignments - has already been achieved. However, not paying enough attention to these topics can have consequences.

The first issue is the selection of digital tools that students will use in their learning. Once a learner masters a tool, he or she is satisfied with it and does not explore it further. Since the digital world is rapidly evolving and not all tools are updated at the same rate, the learner may lag behind in his or her knowledge of digital tools or may not be able to apply the software offered fully. This not only affects their digital literacy but also the quality of their work compared to learners who use many other tools.

Students are also often unfamiliar with the ethical aspects of the digital world, which in the case of digital learning is mainly related to knowledge about the dangers of the digital environment and the correct use of various online tools. It is important that teachers who require students to use digital tools (which is, of course, a positive thing) also teach students how to behave properly online. It would also be useful to involve parents in this process, as students do most of their digital learning at home.



# LOW-TECH LEARNING AND HI-TECH LEARNING AS TWO WAYS OF LEARNING

## 1. Introducing the topic

Technics and technology are becoming a virtually ubiquitous part of human life, both at the individual and societal institutional level. From the first morning ring of the ubiquitous mobile phone to the employer's requirement to be constantly available online, to virtual money lightening our pockets, to smart homes thinking for us, it is not so surprising that this technological development is making a major inroads into the field of education.

The result of effective education is ultimately a deepening of students' interest in the topic, active knowledge of it, improvement of soft skills, including collaboration and communication skills and, last but not least, a deepening of critical thinking skills (Koppi, Lublin, Chaloupka 2016). It is undeniable that the knowledge of technology and its use by our students has been steadily increasing over the last decades, and educational institutions are faced with the challenge of how to adequately respond to this, as demonstrated by the COVID-19 pandemic, which in many ways has accelerated the process of integrating technology into teaching. However, the aim of this process should not be simply to use technological advances in teaching, but to innovatively convey knowledge of the subject matter, while at the same time better understanding what technology is and what implications its use brings, both in terms of benefits and risks. As we have already mentioned, technology, science, and technology have become an everyday part of our lives. However, their transformative impact and potential remain largely unrecognised by us. This is a consequence of the fact that traditional educational strategies tend to lead to the acquisition of certain digital and technical skills in the sense of a predominantly computational mindset. However, a systemic view leading to understanding is absent, and it is this that can lead us to build a conscious and 'healthier relationship' with technology.



The hi-tech approach in education seeks to capitalize on the possibility of using various technological aids as effective tools for the teacher and students in the actual process of learning both inside and outside the classroom. This can include the use of computers or tablets in classrooms across grade levels as well as in the assignment and assessment of homework. The internet is becoming an effective and widely used tool in this regard, allowing students to search for sources of information, etc. However, the hi-tech approach does not stop at these possibilities, and probably its biggest innovation is the use of AI or VR as a learning tool. Due to the financial difficulty of integrating VR into teaching, it is not a very widespread type of innovation of the educational process, but we can see its effective use in the process of higher education in disciplines such as fire defense or training of paramedics, etc. (Boros, Sventekova, Cidlinova, Bardy, Batrlova 2022).

The low-tech approach, on the other hand, tries to stick to the tradition of proven didactic methods and not to be influenced by technology in matters of teaching as such. This approach refers to studies showing that a low-tech approach is ultimately more effective in education than an approach based on a preference for technological aids, in which the learner ad 1 is not so much focused on the learning itself as on the way it is "processed" and ad 2 post-conflict research shows that both students and teachers prefer the traditional "face to face" approach (Agraz, Austin 2018).





## 2. Key methods and tools

In general, we distinguish between teacher-centred and student-centred teaching methods. While the first approach emphasizes the authority of the teacher, the second approach prefers to see the teacher as a facilitator and coach whose role is to teach students new things through dialogue in order to understand and master the material. In each of these two groups of methods, we can apply both low-tech and hi-tech approaches to teaching. Our choice depends on several factors, such as our individual preferences also in the area of educational philosophy, classroom demographics, specifics of the topic to be covered, type of educational institution, adult facilities, etc.

### Hi-tech teaching and learning methods and tools

The integration of hi-tech elements into the teaching process has been an issue of the last few decades and can be seen as a consequence of technological development and the ambition to use its results effectively also in the field of education. The aim of this approach is to adapt and use different technologies in the teaching process for better learning and understanding of the material covered by the students (Koller, Harvey, Magnotta 2006). Within this approach, we can identify several levels of integration of technology into teaching, ranging from the relatively common use of tablets and computers with internet access to the use of the aforementioned AI or VR.

**In general, we can distinguish at least 5 basic teaching strategies based on the use of technology:**

1. The use of multimedia (incorporating images, videos, memes, etc. into teaching. Incorporating these elements into teaching increases the level of student engagement in the learning process and also holds their attention longer).
2. Use of social networking sites (networks like Facebook or Twitter. Most students use these networks routinely, so engaging them in the learning process is very much natural for them, and, on the other hand, we open up the possibility of creating our own content, to which students respond very well.)
3. Using a variety of resources (We don't have to depend on books alone in teaching, we can incorporate podcast platforms, OERs, blogs, etc. into teaching. By using different resources we can reach more students with more learning needs.)
4. Game-based learning and gamification (Learning through play in simple terms, integrating game elements into teaching. Among other things, this increases the likelihood that students will remain engaged after the lesson if we use, for example, a mobile app.)

5. Using technology to empower students and reach them more effectively (technology can help students better express themselves, their opinions, attitudes or concerns even in the language of art e.g. Let's not forget that different students have different needs and not everything is suitable for everyone.) (Gupta 2016).

There are also several hi-tech teaching tools that we can use:

**Google Classroom** (offers teachers and students comprehensive curriculum guidance. Instructors can create a class, add students, build assignments, distribute materials, provide feedback, and hold discussion forums.)

**Dreambox** (This interactive platform helps students think differently about math, giving them a deeper understanding of math logic. Using games, visual diagrams, and interactivity, Dreambox prevents students who aren't responding to traditional teaching methods from falling behind.)

**Kahoot** (Teachers simply sign up for a free account, and they can create games or choose from a game database. Game-making on Kahoot incorporates videos, images, diagrams, and more to help teachers create something eye-catching for students. These quizzes, discussions, and surveys are called Kahoots, and teachers can use them to encourage interaction between students in the classroom.)

**Clickshare** (Clickshare allows students to present work to the class without having to connect and disconnect pesky wires. Students are already flustered when presenting work to the class, so Clickshare makes things a little easier for them. Likewise, it makes things easier for the teacher.)

**Educreations** (When teachers use Educreations, they have a plethora of tools at their disposal to explain complex concepts to students like they would if they were using a whiteboard in the classroom. Videos can be made using a combination of text and images. Plus, teachers can include voice-overs for their videos. Educreations videos can be shared via social media so that students can use familiar platforms for education instead of entertainment.)

**Texthelp** (It has created a few different software tools to help teachers reach students who struggle with learning reading or writing from traditional teaching methods. Their Read & Write software supports literacy, and their Fluency Tutor software helps non-native speakers develop skills necessary for academic progress. Both of these award-winning software tools have helped teachers with full schedules and classroom provide one-on-one instruction to struggling students.)

**Tricaster** (It is a simplistic news broadcasting software that students can use to create their own news show) (Valentine 2016).

You could also use other options:

G Suite

Tablets/laptops

Gamification software

Education-focused social media platforms (such as Schoology)

Technology accessibility

### **Low-tech teaching methods and tools:**

The level of technological equipment in students' households varies from household to household, as do their technological skills or experience per se. Thus, incorporating hi-tech technologies into instruction can be much more challenging for some students, which can negatively affect both - their knowledge and the classroom atmosphere. However, Low-tech teaching and learning is inherently accessible to all, as it aims to be as simple a way of teaching as possible.



This approach does not have to be reduced to a lecture or other methods that minimize active participation of students, quite the opposite. These approaches can increase students' creativity, enhance their ability to collaborate and discuss, and overall can increase the level of cohesion in the group. In some ways, this is a traditional approach to education, based on practices that do not require the use of new technological aids in the classroom. At the same time, however, a low-tech approach allows for the incorporation of "outdated" technologies into the classroom.

Low-tech teaching is also often the preferred choice of a significant number of parents who do not want their children to come into contact with technology prematurely, etc. Some research even suggests that this approach to education has multiple benefits. For example, students who take handwritten notes remember them better than students who take notes digitally, etc. (Agraz, Austin 2018).

Examples of this approach to teaching may include:

- printing assignments in larger fonts too, pencil grips, adapted pencils, colored highlighters
- bulletin boards, flip charts, using resources like textbook, chalkboard, chart, map, globe, models
- dioramas, puppets, terrarium

Combination of hi-tech and low-tech teaching



We have stressed in several places that the choice of educational strategy depends on the teacher and the students and the topic and its specificities. Not all topics will be fully exhausted by a low-tech approach, and at the same time, sometimes, we need a low-tech approach to support other aspects of student collaboration. An interesting possibility is to combine both approaches, which according to some authors (Brown 2009), leads to a deepening of critical thinking skills. For example, we can combine low-tech teaching methods with hi-tech e-learning. Moreover, it is the low-tech approach that often becomes a source of innovation for the hi-tech approach, both in general and in the field of education. Both approaches have their strengths and weaknesses, knowing them, we know when one approach is more appropriate than the other. If we as educators want to engage our students, not just in the sense of entertaining them, but with the goal of them acquiring active knowledge, we should work with both approaches in our teaching.

### 3. Examples and practical tips

In this section, we will give some practical tips on how to work effectively with hi-tech and low-tech teaching methods.

#### Hi-tech approach to learning

##### **Inquiry-based Learning**

Based on student investigation and hands-on projects. It is a teaching method that casts a teacher as a supportive figure who provides guidance and support for students throughout their learning process. Inquiry-based learning can use technology through online research sites, social media etc. In this method of instruction, the teacher might play one or all of the following roles: Facilitator, Personal Model, or Delegator (Teaching Methods).

##### **Expeditionary Learning**

Expeditionary learning is a form of project-based learning in which students go on expeditions and engage in an in-depth study of topics that impact their schools and communities. Students can see how problem-solving can happen in the real world—ideally, their own worlds. A student in a big city, for example, might study statistics about pollution, read information about its effects, and travel to sites in their city that have been impacted by the problem. Then students and teachers can work together to find a solution they can actively implement (Teaching Methods).

##### **Personalized Learning**

Personalized learning is extremely student-centred, but teachers are required to teach lessons, look at frequent assessment data, and meet with students to make any necessary changes to their learning plans. They'll also need to have a certain comfort level with technology: the differentiated and personalized instruction that students receive often comes in the form of online lessons and programs, so teachers must be able to navigate virtual platforms with ease (Teaching Methods).

##### **Flipped Learning**

In short, the information is retrieved at home instead of being taught in the classroom, and the application of the information learned becomes the task in school the next day (Teaching Methods).

## How to make the use of technology in learning more interesting and effective?

1. Problem-based learning and Competency-based education (Let's not focus predominantly on teaching facts, but try to focus on developing students' skills and competencies. This means problem-solving, conceptual understanding, communication, creative and critical thinking. At the same time, thanks to modern technology, we can manage our time more efficiently and responsively to the needs and preferences of students.)
2. Student creates their own content so they are more engaged.
3. Let's learn together (we don't have to learn only in the classroom, thanks to different technologies, the learning process is not limited by space and so different people in different environments can participate.)
4. Let's not just sit in the classroom, let's bring activity into the learning process (we learn best from experience.)
5. Let's combine a hi-tech approach with a low-tech approach.
6. Let's also involve students in the preparation of teaching materials, thanks to technology, they can prepare e.g. different videos that map the topic being discussed across the curriculum of different subjects.



## Low-tech approach to teaching

### 1. Differentiated Instruction

Teachers can differentiate in a number of ways: how students access content, the types of activities students do to master a concept, what the end product of learning looks like, how the classroom is set up, etc. Some examples: having students read books at their own reading levels, meeting in small groups to reteach topics, and processing the topic in the way they prefer (Teaching Methods).

### 2. Skeleton Notes

The Skeleton activity can be an individual or collaborative task. It is a great go-to activity to summarize a topic (Agraz, Austin 2018). For example, students in a Philosophy class will delve into the various impacts of events over the course of each unit. They will need to note the impacts of the philosophy of Karl Marx, for instance. A skeleton note template, such as the Historical, Societal, Political, Economic impact of his ideas, provides them with a consistent structure across units, for example.

### 3. Group Roles

Groups are one of our favourite learning activities for developing students' fluency with the requisite skills of a given course (Agraz, Austin 2018). For example, we can use this approach to teach Plato by analysing one of his dialogues. Of course, we adapt the choice to the difficulty and also the length of the group of students. After familiarising students with the text and identifying the key characters, we can give some students a specific 'role' to 'play', but they will also try to explain its attitudes and interpret its role in the whole dialogue. In addition to deepening their ability to work with the text with understanding, we will also bring students to an understanding of the role of dialogue in Plato's philosophical thought.



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We can use this approach simply yet effectively across a variety of methods. We just need to remember:

1. Allowing students to move and gesture can help them learn. Many of the students are so-called kinesthetic learners, for whom physical activity innately aids the learning process
2. Encourage active collaboration among students.
3. Let's take learning outside the classroom into the real world. Experiences gained in this way are easier for students to remember, are more interesting, show them the context and circumstances of problem-solving in the real world, and increase the likelihood of building a deeper interest in the subject matter by teaching in this way.
4. Let's create class projects.
5. Invite guest speakers.
6. Create space for student speakers.
7. Let's also encourage student collaboration through collaborative writing for example.



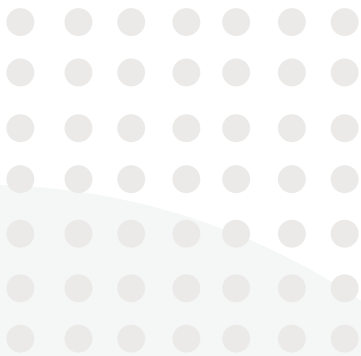
## 4. Relevance for digital literacy, online ethics, and navigating the digital world

One of the objectives of the PLATO'S EU project is to develop digital readiness and resilience; enhance digital skills and competencies; promote media literacy and tackle disinformation. In view of this, it is evident that hi-tech teaching and low-tech teaching approaches are important for the adequate fulfilment of the project's objectives.

The challenges of the digital age are intrinsically directed towards how to use resources properly, rather than what resources to use, which is one of the fundamental ideas behind the philosophy. Our goal is not simply to incorporate technology into the teaching of philosophy, but to convey an understanding of what the use of technology entails, how it shapes our view of the world, and how we can use it meaningfully and responsibly to our advantage. One effective way to do this is to incorporate the advances of modern technology into the teaching process. Of course, even in this respect, there are a number of circumstances to be taken into account, the consideration of which will give us an indication of what level and what method is best suited to our needs.

As we mentioned, we also work with technology in a sense in a low-tech approach to teaching, which means that both these approaches can help students to navigate the issues tied to the digital environment, to acquire and deepen key skills that will help them beyond the school gates, which is a crucial thing in terms of our project.

Understanding that we can use technology for purposes other than entertainment or 'killing' time can be a major discovery for students, encouraging them to find new ways to use it consciously. At the same time, for them, school becomes a space that 'keeps up' with them and in which they feel more comfortable, and more confident. However, this is not only beneficial for the students; but for the teachers too (Ferolino 1990). The teacher also discovers new ways to make the material more interesting, to point out its various contexts and connections, and in no small measure can work with the reflection of students' value attitudes towards issues typical of the digital environment.



# EXPERIENTIAL LEARNING



# 1. Introducing the topic

In the most simple way, experiential learning can be defined as a learning process that tries to activate as many It is sometimes referred to as “learning through experience”, “action-based learning”, or “learning by doing”. It is thus understood as an umbrella term it encompasses a wide variety of methods, tools and approaches.

“Experiential education is a broad term referring to educational approaches that emphasize first-hand participation by learners in a diverse range of activities typically occurring outside of a classroom, but usually under pedagogical supervision. Experiential education generally espouses a constructivist epistemology focusing on interactions between the individual, the task(s), and the learning environment. Constructivist models of experiential education emphasize the learning process and promote reflection on that process, with a view to abstraction and future experiences. Experiential education differs from vocational training and community organizing in its prioritization of subject area mastery, social-emotional growth, communication and teamwork skills, and self-awareness as key outcomes of interest.” (Allison and Seaman 2017)

Experiential learning is the opposite of learning that involves only the mind (learning or memorizing facts), and experiential learning is, in this sense, more significant and meaningful since it impacts the person’s attitudes and behaviour by infusion with a wide portion of a person’s experience (Rogers 1961). The key steps in experiential learning form a spiral of

- experiencing,
- reflecting,
- thinking,
- and acting.

Rogers (1983, 20) also highlights several other key elements or characteristics of experiential learning. The first one is that experiential learning includes the whole person, that is, both cognitive and feeling (emotive) aspects of a person get activated in a learning step. Next, experiential learning builds upon its being at least partially self-initiated, meaning that even when the initial push or motivation comes from a prompt by a teacher, the student continues embarking on learning (discovering, grasping, reaching out, experimenting, etc.) from “within”. Third, the impact of experiential learning is all-pervasive, that is, it affects behaviour, attitudes, and even the whole personality of the student. Fourth, as part of experiential learning, the learning progress is mainly evaluated by the learner herself, given that the learner is in the best position to really assess or gauge the value and scope of the learning experience (e.g. did the learning really eliminate the confusion or ignorance that the learning felt before the start of the learning process).

And finally, experiential learning aims to achieve meaning and a sort of unity of experiences with the meaning; “significant learning combines the logical and the intuitive, the intellect and the feelings, the concept and the experience, the idea and the meaning. When we learn in that way, we are whole.” (Rogers 1983, 20).

As noted before, experiential learning in the wide sense of the word includes a variety of learning methodologies and approaches, that extend beyond the above-described one, although all in a way preserve the central tenets that were described. These wider approaches can include biographical learning, holistic learning, community-based or service learning, learning-by-doing or action-based learning, interactive learning, problem-based learning, etc.

## 2. Key methods and tools

Experiential learning approach utilizes several methods and tools to attain the desired learning outcomes. The focal point is the student’s experience (within the already mentioned sequence of experiencing, reflecting, thinking, and acting that must enable this attainment, e.g. as in the attainment of knowledge on the basis of one’s own experience or reflections on the experiences).

What is key according to this approach is that the learning process forms an ongoing spiral (not a circle, since with each turn, the students build upon the experience, and the new experience thus becomes richer, broader, and deeper) consisting of (i) undergoing a concrete experience (new experience or situation, a reinterpretation of existing experience); (ii) reflective observation and engagement with this experience; (iii) abstract conceptualization and formulation of new ideas, concepts, models, patterns, etc., and (iv) active experimentation, application of new knowledge and strengthening of the experience. Experiential learning is thus learning through reflection on doing and encompasses a broad spectrum of different experiences (intellectual, creative, emotional, social, physical, etc.).

Holistic learning method is part of a broader concept of holistic education. As a form of learning, this approach principally focuses on the development of a whole person (rational, emotional, physical, social, aesthetic, and spiritual aspects of a person), both from the perspective of the learner as well as the educator (Miller 2000). It emphasizes the interconnectedness between different learning situations, experiences, topics, and school subjects, and further proposes that one must understand a learning situation as a unity. The learning process should be inclusive, integrative, and creative. It encourages learners to take responsibility for their own learning (intrinsic motivation; learning as naturally inviting; establishing a sense of wonder) and envisions the learning process as nurturing the development of the whole person (Miller et al. 2005). Holistic learning helps the person to

feel whole and as a part of the general wholeness. This kind of learning is naturally inviting and encourages a sense of wonder. One way of doing this is by fostering collaboration rather than competition in classrooms. Another is teachers helping students to feel connected and engaged by using real-life stories or experiences, focusing on current events or issues, dramatic arts and other interesting sources of knowledge.

The wholeness mentioned above refers to aspects of the relationship between an individual and a given unity that is important for holistic education. These aspects include personal views and connections with self, others and community. The aspect of the community where people can relate to one another, can foster a sense of care and can build communities based on common values. This wholeness also includes even broader aspects, as, for example, the society, where people unite and call for more humane approaches to existing social structures. Another possible aspect is the planet, where the planet is understood in terms of ecological interdependence (Miller 2005). In designing the learning process, one must be mindful to include these aspects of different wholes. In short, holistic learning stresses three basic principles. The first one is connectedness, which refers to moving toward an approach that attempts to facilitate connections at every level of learning. This means integrating analytic and intuitive thinking, linking body and mind, connecting to the community, providing links to the living environment, and connecting to more internal parts of a person. The second one is inclusion, which refers to an inclusive classroom, providing a broad range of learning approaches. Another term often associated with this point here is a cross-curricular approach to learning. And the third one is balance, which suggests that in every situation, there are complementary viewpoints, forces, aspects etc., that need to be recognized and nurtured (Christensen 2012). As part of the learning situation, try to employ a wide range of experiences (staring, e.g. with different senses) and make room for reflection on them. Do not exclude diverging interpretations and always stimulate students to go beyond their immediate experiences (methods of imagining contrasting experiences, contrast cases, role-playing, case studies, field trips, cooperative learning and projects, flipped classrooms, etc.).

Another method that falls within the broader scope of experiential learning is the method of biographical learning, defined as an autopoietic accomplishment, an accomplishment of active participants who reflexively organize their own experience. Alheit and Dausien further state how the experience gathered through biographical learning, "generates personal coherence, identity, a meaning for participant's life history and a communicable, socially viable lifeworld perspective for guiding their actions" (Alheit and Dausien 2002, 17). Biographical learning can be defined as a form of learning that essentially appeals to one's experiences as forming a part of one's life, one's life story, and one's position within it, and in a broader way can also include references and allusions to the lives of others. Biographical learning as a pedagogical method can be applied in a way that the teacher may encourage learners to develop a personal,

sensuous language about their experiences, support learners' involvement in dialogues and narrative activities, and form the basis for personal narratives surrounding concrete meaningful experiences from everyday life.

It consists of learning from our own life experiences and the experiences of others. It can be carried out in different contexts, with different target groups, individually or in groups, and with the intention of achieving various objectives. The basic methods employed are reflection, discussion, narrative method, autobiographical writing, artistic expression through drawings, role-playing, associative techniques, project work etc. The main goal of all these methods is to encourage reflection about own experiences and encourage a desire to engage in a (genuine) dialogue with others. Biographical learning is important for broader educational goals since it enables us to address students' experiences, especially when they ask themselves questions connected to their identity, their purpose, values and the meaning of life. Online environments are often such that they target these aspects in particular. Learning based on an introspective basis, recognizing participant's own mental states, life choices and actions, and discussing them in the group, biographical learning can be used in teaching empathy as well as responsibility and respect.

One of the elaborations of the mentioned "experiential learning sequence" is the model of experiential learning spaces, which allows for an adjustment of the learning situation to the student's learning style (Kolb and Kolb 2012). This approach stresses that "learning is not one universal process but a map of learning territories, a frame of reference within which many different ways of learning can flourish and interrelate. It is a holistic framework that orients the many different ways of learning to one another. ... An experiential learning space is defined by the attracting and repelling forces (positive and negative valences) of the two poles of the dual dialectics of action/reflection and experiencing/conceptualizing, creating a two-dimensional map of the regions of the learning space. An individual's learning style positions them in one of these regions depending on the equilibrium of forces among action, reflection, experiencing, and conceptualizing." (Kolb and Kolb 2012, 1212) The framework can be seen in the image below, which uses the compass and sides of the sky as a tool for presenting the spaces.

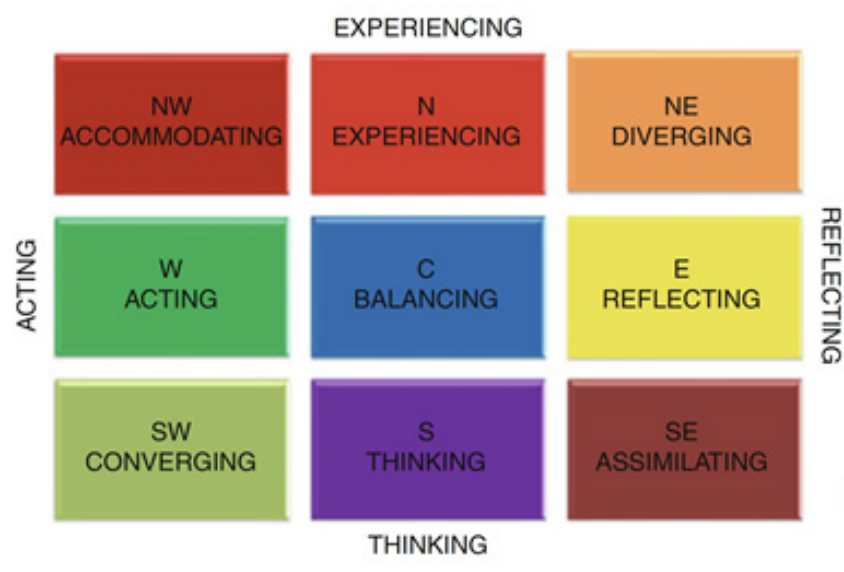


Image: Experiential learning spaces (source: Kolb and Kolb 2012)

One can see that there are fairly specialized learning spaces (NW, NE, SE, SW), e.g. students in NW region primarily learn through action and experiencing, while students in SE space prioritize learning on the basis of thinking and reflection, etc. What this gives us is a way to think about each learning situation in order to structure it in a way that encompasses as many different regions and that the learning process as a whole allows for ample time for each of these regions.

### 3. Examples and practical tips

The first practical tip for experiential learning design is that it must include having fun, the ability to improvise and play, while on the one hand, there must be clear expectations about the learning process as a whole. The role of the teacher is to set up suitable experiences, pose problems, set boundaries, support students, ensure physical and emotional safety, and facilitate the learning process as a whole.

There are several other tenets that enable experiential learning, namely, the absence of excessive judgment, encouraging the big picture perspective, creating emotional investment (students must be immersed in the experience, not merely doing what they are told), and there must be an open space for re-examination of existing knowledge and values (cf. Schwartz 2023). It is beneficial if the teacher centres the learning around a major project since that could help to keep the motivation levels high. You can also use a combination of projects, classroom activities, and external experiences, but make sure that everything ties together nicely. The teacher must ensure that the learning activities are challenging yet manageable. And students must have enough time to identify the problem, design and test the solutions as well as to

experience the proposed solution to be implemented (Wurdinger 2005). What is also crucial is to keep your radar up for interesting and authentic problems or dilemmas that could serve as starting points, e.g. in the context of the digital world, the problem of deep fakes, computer-generated music or artwork, bias, the possibility of robots that would do all the work, the issue of privacy and the right to not be remembered. Use these and similar problems to design learning opportunities.

One crucial step in experiential learning is focusing the experience on a particular problem or project. The easiest way to do this is to combine experiential learning with project-based or project-focused learning. The latter concerns complex tasks based on stimulating questions, problems and challenges, involving students to solve them in a collaborative way. This also allows students to learn by actively engaging in real-world and personally meaningful projects, and students are thus expected to develop a meaningful or deep knowledge of the particular content, as well as acquire skills in critical thinking, collaboration, creativity, and communication. What is also crucial is that the content of learning is not set or revealed in advance; some elements are given to the learners in the classroom, asking them to solve a real problem, the resolution of which leads to learning other concepts that are not initially known. All this also includes an interdisciplinary approach because the challenges of the real world are rarely solved using information or skills from a single thematic area. In this way, students are requested to engage in research, problem-solving and development of specific products to address the real problem or challenge presented. While students do the work, they often use the knowledge and skills acquired from multiple academic domains to complete the project successfully. Example: in one of the workshops for this project (title "How do we know stuff", one learning activity concerns distinguishing the genuine person that authors a short text from an AI-based system (such as ChatGPT or similar). One of the projects that you could design for students would be to find the most effective way to predict who the author is correctly. They are completely free in how they design the solution to this problem.



## 4. Relevance for digital literacy, online ethics, and navigating the digital world

Experiential learning is particularly relevant when related to topics such as online environments or the digital world.

The first reason is that the latter are usually experientially impoverished and do not offer opportunities for a comprehensive unity of a broad range and types of experience. Even in the case of virtual reality and employing the state of the art technology, such experience cannot meet the level of offline experiences. This is not to say that the latter cannot be flawed or blocked in many cases of classical learning environments. That is why it is important to employ an experiential approach to learning.

The second reason is the lack of genuine social bonds or a limited establishment of such social bonds as funded by physical, in-person relations in the online context. In consequence, there is also less camaraderie and motivation as arising out of mutual support in attaining common goals. In education for and about the digital world, it is easy to focus on technological aspects, while the social aspects are left unaddressed. One advantage of experiential learning is that it gives students a broader view of the world and an appreciation of the community.

The third reason is connected with agency. Experiential learning invites the students to make their own steps into the learning experience and thus builds their own agency, which is, in turn, crucial for active citizenship. In the online environment, it is easy to overlook the importance and relevance of one's own agency, together with the responsibility that it brings with it. Also, experiential learning furthers students' insight into their skills, interests, passions, and values.

Fourth, the online environment is characterized by abundant distractions, and if we combine this with the lack of basic discipline, one can get lost easily or simply not take advantage of learning in and about the digital world. Experiential learning stimulates motivation, and experiences themselves are usually directing the focus to a particular problem, issue, or question.

Lastly, it is easy to overemphasize the technical or technological dimensions of digital literacy since they are, in a sense, easy to teach and learn. But the digital world goes beyond the technical aspects and includes shared spaces, communication and, in particular, genuine ethical concerns and issues that must be addressed.



# COLLABORATIVE LEARNING



## 1. Introducing the topic

Collaborative or cooperative learning is learning in tandem (pairs) or small groups (3-6 students) with the aim of solving joint tasks, studying and researching a common topic or upgrading mutual knowledge in order to create and develop a new idea, new combination or unique innovation (Kadum-Bošnjak 2011, 182).

Collaborative learning is based on the idea that students will more easily discover, learn and understand complex concepts if they talk to each other about what is being studied (Kadum-Bošnjak 2011, 182). In that way, students can learn way faster and easier, and their knowledge lasts longer. It is an answer to the competitive learning that dominates traditional teaching and fosters active and modern teaching. Johnson and others (1994) define cooperative learning as teaching in small groups that allow students to work together to achieve maximum success for each individual member of the group (Terzić 2012, 49). That way of learning also strengthens individual motivation and responsibility towards others, which increases group efficiency. It also helps students develop the ability to solve problem tasks and articulate problems and solutions. Students of different levels of knowledge and different talents learn together in small groups, and they complement each other to create a bigger picture and for solving problems they face. Shared learning gives students the opportunity to participate in the discussion, take responsibility for their own learning and actions as well as exchange ideas, which is useful for increasing interest among the participants (Terzić 2012, 49). That kind of group interaction is useful because students develop higher levels of cognition, they are more involved in the subject, and they develop better reasoning. Students with bigger knowledge and a better understanding of some specific subject can explain something to their peers with lower levels of knowledge in a better way than a teacher because they are on a similar level of cognition and understanding. They use their own vocabulary, and with deep and detailed analysis, they can also develop a better understanding of the subject themselves. Barg and Schull (1980) argue that providing explanations to low-achieving partners by high-achieving students results in creating richer constructions due to cognitive restructuring (Cigdemoglu and others 2014, 1001). That's why heterogeneous groups of students are more beneficial for both low and high-ability students, whereas average-ability individuals perform better in homogenous groups. Meaningful and well-organized cooperation between students can result in the development of different processes like social, cognitive and even emotional.

In order to make classroom conditions for collaborative learning, a teacher needs to encourage students to develop social skills such as communicativeness, reciprocity, empathy, cooperation and adaptation (Kadum-Bošnjak 2011, 181). If students don't feel safe and encouraged to discuss and explore new ways of thinking, cooperation in the classroom won't be successful. Students need to be taught some specific skills, such as active listening, reasoning, being

tolerant and willing to participate in group work. Also, in order for the exchange of information and active learning to be effective, a positive and motivating atmosphere is needed, and the classroom needs to be welcoming to innovative solutions and every kind of student initiative.

## 2. Key methods and tools

In order to develop more collaborative learning in classrooms, teachers need to explore different approaches and methods in teaching. Firstly, they need to explain to children what to expect from tasks they are facing, and they need to be familiar with group work and have some experience in discussing problems with their peers. Secondly, teachers need to design tasks for collaboration. The tasks shouldn't be designed in a way that can be done by a single student. It means that one individual task should be interdependent with all of the other individual tasks inside a group. Every type of work should be interconnected. Thirdly, teachers need to constantly encourage students to interact with each other and to communicate the problems and solutions to them. And last but not least, teachers should organize the structure of the collaborative tasks students face and develop some rules to follow. The rules should be simple and clear.

Eric Jensen (2003) gives a simple plan for the success of cooperative learning, which has ten steps, but it can be summarized in three phases and that is:

- 1. Introducing the task:** Give students the content (explanation) of the task and set clear goals as well as an atmosphere of expectation. Give them specific instructions and let them think about the task so it can be challenging and exciting.
- 2. Focusing on collaboration and encouragement:** Describe the social skills to learn or to substantiate the lesson and try not to intervene that much. A teacher should be a mentor who positively encourages the student to go further and to communicate with each other everything that is on their mind. The teacher shouldn't give them solutions to problems they are facing.
- 3. Observation and conclusion:** The teacher shares academic and cooperative learning observations with students to indicate what was seen, heard and felt. He also asks students about some of the thoughts and responds in the group process and examines individual responsibility in groups. Everything should finish with final thoughts from a teacher or some student on how to make better results in solving problems in the future.

## Models of collaborative learning

There are a lot of ways to structure collaborative tasks (Peer Review, Case Study, Jigsaw, Role Play, Pyramid and Debate), but the following two models are most common to use:

**1. The Jigsaw model:** In this type of collaborative group, the task is divided into as many parts as there are members in the group. Each student works on one part of the task, and the task cannot be solved until all students have successfully solved their individual tasks to join the parts into a "jigsaw" (Kadum-Bošnjak 2011, 192).

**2. Group research:** In this type of group, students must cooperate with each other in order to solve the task and their actions must be coordinated. If a teacher uses this model in lower grades, he can assign students roles such as chairman, secretary, supervisor, reporter, timekeeper, observer, etc., while in higher grades, when students are more experienced, they can be given greater responsibilities and roles (Kadum-Bošnjak 2011, 192).

## Strategies of collaborative learning

There are a lot of strategies for collaborative learning (brainstorming, debate or Venn's diagram) that can be useful in the classroom but we will explain a few that are the most interesting and can be applied in various educational contexts:

**1. Mind maps** are one of the strategies that encourage students to think freely and openly about a topic, and they can be a good device for students to track their research or to summarize their work for presentation. Mind maps represent an important contribution to improving the quality of the organization and the effectiveness of learning. (Kadum-Bošnjak 2011, 193)

**2. Reciprocal teaching** allows all students to be in the role of teacher and, at the same time, guide the other students from the group through the text (Kadum-Bošnjak 2011, 194). It can be done in groups of 4 to 7 students, and all of them have the same bigger text, which is divided into parts by which they take turns as teachers.

**3. Concentric circles** is a teaching strategy in which the class is divided into two equally numerous groups that form two concentric circles (inner and outer) and they face each other so every student has their own partner for the discussion. After a few minutes, the outer circle rotates to the left (or to the right) so that each student is now facing another student. It is similar to Socratic circles developed by Oscar Brenifier, and it can be really helpful for students because they learn to be tolerant in accepting other opinions, and they develop communicational skills and reasoning.

ERR framework system is a process that includes evocation (E), the realization of meaning (Rz) and reflection @, and it is the conceptual basis for teaching that is systematically implemented in teaching all grades and subjects. (Terzić 2012, 48). We can see below (image Table 1) a lot of possibilities for cooperative learning within the ERR framework system.

Evocation (E)	Realisation of meaning (RZ)	Reflection (R)
BRAINSTORMING	INSERT-TABLE	BINGO
CONTRACT AND EXCHANGE	T-TABLE	INSERT-TABLE
BINGO	MINI LESSON	CONTRACT AND EXCHANGE
T-TABLE	VENN'S DIAGRAM	T-TABLE
TOUR GALLERY	DOUBLE NEWS	TOUR GALLERY
GRAPE	RIGID CLASSES	GRAPE
FREE WRITING	RECIPROCAL TEACH	CUBE GAME
CUBE GAME	PUZZLE I	JOINT DISCUSSION
PREDICTION OF THE PAIR	PUZZLE II	DEBATE
TANK DISCUSSION	READING AND SUMMARIZING IN PAIRS	THE CIRCLE WITHIN
KWL-TABLE	SECURITY AXIS	KWL-TABLE
DEBATE	TANK READING	FREE WRITING
THE CIRCLE WITHIN	LITERARY CORNER	VENN'S DIAGRAM

Image: Strategies of cooperative learning (source: Terzić 2012)

### 3. Examples and practical tips

The first practical tip is to enjoy the process and encourage students to find this way of learning fun and enjoyable so it can be easier to develop all the goals you set. Of course, it won't be easy every time you do it, and not all students will be thrilled with this educational method. Mostly because some students are not so open to others, they may have anxiety issues, or they are not as cooperative as others. Teachers should keep in mind that this approach is not perfect, but it is very flexible regarding this situation, and teachers can be creative and give those students different tasks that are designed better for noncooperative students. Collaborative learning is really good to use when introducing complex skills that have more than one correct answer. That way, the students can both learn how to express themselves and listen to other perspectives on some subject. It results in better classroom cohesion and more motivation for learning new things, which is important to develop within teaching.

#### Classroom pointers when developing more collaborative learning

1. Task that promotes collaboration. Check that:
  - could this task be completed by one student?
  - does this task require something different from the usual tasks?
  - is this task requiring higher-order thinking?

2. Interaction between students should be collaborative. Ask yourself:
- were students supported through prompts for how to be cooperative?
  - were learners invited to review their collaboration – and when it went best?
3. The structures of student participation in tasks. Is there:
- a foundation of paired talk ('talk partners', 'chatterboxes', 'study buddies'...)?
  - a progression to reciprocal teaching and collaborative groups?
  - a culmination in the whole class, a learning community? (Watkins 2008)

It is better to introduce collaborative learning when the tasks are more complex and not so simple, like some research, synthesis or small projects, as well as situations where you want your students to actualize what they have learned and to approach more holistically.

## 4. Relevance for digital literacy, online ethics, and navigating the digital world

Certain methods of collaborative learning can be easily transferred to the e-environment. It is Moodle that has proven to be an effective tool in the implementation of collaborative learning in various case studies (Kovačić 2022, 10). Also, from a political and economic perspective, it has been argued that collaborative work helps to prepare students for group-based scenarios that may occur in the workplace (Ashley et al. 2012, 55). Contemporary working environments are often digital or require skills to deal with online communication. If the students are well prepared for a cooperative way of dealing with problems they face and they develop social skills as well as critical thinking and good reasoning so they will be more prepared for their future jobs and the challenges they will face. Collaborative learning is particularly relevant when related to topics such as online environments or the digital world.

The first reason is that students can develop a lot of social learning skills to use in the digital world. The digital environment can be a place of communication and collaboration and not only a place for individual research and actions. Through the cooperation style of learning, students learn to be more insightful and develop critical and creative thinking, which is crucial for analyzing information that is available in the digital environment. Students are challenged to accept good arguments from their peers or to explain why their opinions are not relevant or not powerful enough through collaborating on the same task and by depending on each other.

That brings us to another good reason why collaborative learning can be relevant for navigating the digital world. Since students are constantly bombarded by a lot of information on the internet, it is necessary to learn how to distinguish fake sources and real and trustworthy information as well as always to seek the other side of the information or theory. With a lot of cooperative experience with their peers, students can easily learn to be tolerant of other opinions and to seek arguments and truth. They can develop critical thinking and a sensor for fake news or some manipulative praxis they face online and focus more on relevant things to research.

Collaborative learning also promotes an active role in studying, it motivates students to make their own steps in exploring different solutions and different paths to correct answers they are asking themselves. It all can result in active citizenship and taking more control over their future.

It is more common for teachers to use collaborative techniques within face-to-face teaching (Pozzi et al. 2023, 12) but those techniques can be easily implemented through online services if it is necessary (situations like Covid-19 and similar), especially Role-play, Brainstorming, or Jigsaw model. Any kind of good cooperation between students is welcome in the classroom because the skills they learn in that collaborative environment are skills they will use both in their professional and personal life.





# INQUIRY-BASED LEARNING



## 1. Introducing the topic

Inquiry-based learning is an engaging and student-centred approach to education that emphasises active exploration and investigation. It encourages students to take responsibility for their own learning by asking questions, gathering information and drawing conclusions from their findings. The learning process is guided by students' curiosity and questions, which help them develop a deeper understanding of the subject.



*(Image source: Creative Commons)*

In inquiry-based learning, learners actively participate in the learning process rather than passively receiving information. (Colburn 2000) They are encouraged to be curious, to ask questions and to explore topics that interest them. This educational approach is based on the idea that knowledge is constructed through individual experiences and interactions with the environment. By engaging in inquiry, students build their understanding of the world around them.

In this learning model, the role of the teacher changes from an information provider to a guide who supports students in their learning process. Teachers provide resources, guidance and feedback while encouraging students to take responsibility for their own learning and to learn to learn. Inquiry-based learning promotes teamwork and communication among learners as they explore topics together, share ideas and discuss their findings (Banchi and Bell 2008).

The process of inquiry-based learning generally takes place in stages (Kuhlthau et al. 2007). The process can be divided into fewer or more stages, but more often than not four of them are listed (they can be adapted to the specific needs of your classroom):

1. Engaging
2. Exploring
3. Thinking
4. Communicating

The main characteristics of this model are that it is a question-driven and process-oriented model. The learning process is driven by learners' curiosity and questions, and the focus is on the learning process itself (learning how to learn). This model thus promotes skills in critical thinking and problem-solving, rather than on memorising facts. (Krajcik et al. 2000) Open-ended inquiry, exploration and reflection are also key features. Students are encouraged to explore different perspectives, possibilities, and resources, which fosters creativity and innovation in learning. They are also required to apply the knowledge they have acquired to new situations and real-life scenarios.

By using inquiry-based learning, students build a deeper understanding of the subject matter, make connections between ideas, develop important skills, become independent learners and foster creativity. (Spronken-Smith et al. 2011) By experiencing the excitement and satisfaction of learning through inquiry, students are more likely to become lifelong learners who will explore and grow throughout their lives.

## 2. Key methods and tools

Inquiry-based learning uses a variety of methods and tools. We have already mentioned the four phases of this model of learning: engaging, exploring, reflecting and communicating.

In the **engaging phase**, the facilitator starts by introducing the students to a problem, question or topic that arouses their curiosity. He or she encourages them to brainstorm questions or ideas related to the topic. This phase serves to stimulate their interest and prepare them for deeper exploration. **Exploring** refers to guiding students in gathering information and carrying out research to answer their questions. This may include reading articles, conducting experiments, case studies or analysing data. Once learners have gathered enough information, the facilitator encourages them to analyse their findings and draw conclusions. In the **reflection phase**, learners are asked to consider alternative explanations or solutions and to evaluate the quality of their evidence. This phase helps to develop critical thinking and reasoning skills. Finally, students should present their conclusions or solutions to their peers and/or teacher. This can take the form of presentations, written reports or class discussions. Students should participate in the discussions in order to improve their understanding through dialogue. This last stage is called the **communication stage**.



*(Image source: Creative Commons)*

There are different approaches to inquiry-based learning. The differences lie in how controlled the process of exploration is. In structured inquiry, the teacher provides students with a specific question or problem to investigate and a clear set of procedures to follow. The teacher can provide resources for the research and suggests tools students can use (e.g., online tools, books, articles). The students are responsible for carrying out the investigation and drawing conclusions from their findings. This approach offers more guidance and structure and is therefore suitable for introducing students to the process of inquiry (Colburn 2000).

**Guided inquiry** offers students more autonomy than structured inquiry, but still provides support and guidance from the teacher. Students are given a question or problem to investigate, but they have to develop their own methods for investigating and answering it. The teacher is in the role of facilitator, guiding students' work and providing scaffolds or resources where necessary (Kuhlthau et al. 2007) but otherwise allowing students to find their own way to answer the key questions or solve a particular problem.

**Open inquiry** is the most student-centred form of inquiry-based learning, offering the highest degree of autonomy. Students are responsible for formulating their own questions, planning investigations and analysing data to draw conclusions. This approach encourages creativity and independent thinking but may require more support from the teacher to keep students on track (Banchi and Bell 2008). This may be more suitable for more experienced students, as they have to carry out their research almost on their own. The teacher should be ready to help them when needed and to help students stay motivated with interesting tips and hints throughout their research. During the reflection phase, the teacher can point out relevant aspects that students did not mention on their own.

Several different methods and approaches can be used to implement inquiry-based learning. One well-known method of inquiry-based learning is **Problem-Based Learning (PBL)**. Problem-based learning is a pedagogical approach that focuses on real-world problems as a starting point for learning. In PBL, students work in small groups to explore and solve complex, ill-structured problems that often have multiple solutions. The teacher presents students with a problem scenario, often based on real-life situations, which often requires interdisciplinary knowledge to solve. After the problem has been introduced, the next key step is for students to identify the learning questions - what do they know, what do they need to know, and how can they gather the necessary missing information (Hmelo-Silver 2004). Students work independently or collaboratively to investigate the problem by gathering information from a variety of sources and discussing their findings. They need to analyse the information, identify possible solutions and evaluate the advantages and disadvantages of each option. Finally, students reflect on their learning process, the effectiveness of their problem-solving strategies and the quality of their solutions. This last phase is crucial since it promotes learning about learning. PBL promotes the development of critical thinking, problem-solving, collaboration and communication skills.

The second method is **case-based learning (CBL)**. Case-based learning revolves around the analysis and discussion of real or fictional examples that are relevant to the topic at hand. Cases usually represent complex, authentic situations that require students to apply knowledge, think critically and make decisions. Whereas PBL presents students with a more open-ended problem, CBL offers a more detailed scenario (a more specific example) in which students deepen their understanding of the concepts of the subject by analysing examples and engaging in structured discussions. The teacher selects or develops a case that is relevant to the curriculum content and presents the students with a challenging problem or decision. The key is for students to analyse the case, identifying the key issues, stakeholders and possible solutions. Unlike PBL, where learners are presented with a problem, in CBL, they often have to define the problem themselves. Learners then engage in structured discussions in which they share their views and debate the merits of different approaches. In the final phase, learners synthesise their learning, consider the implications of the case for their understanding of the subject and reflect on the decision-making process. CBL is particularly popular in certain specific fields (ethics, law, medicine and business) but is just as useful for high-school students (Herreid 2007).

Project-based learning is a learning approach in which students work together on long-term, interdisciplinary projects focused on a central theme or issue. Projects often culminate in a final presentation or product that showcases students' learning. The teacher and students first work together to identify a central theme, question or problem to be explored, often related to real-world issues or topics of interest. In this first phase, a project is defined (the goal should be clearly defined). Learners then draw up a plan for their project, identifying the tasks, resources and timeframe needed to complete it. They then carry out research to gather the necessary information. In the central phase, often referred to as 'creating the project', learners work alone or in groups to create a product or presentation that demonstrates their learning and addresses the central question or problem. The whole process is quite time-consuming and can take several days or, in some cases, several months (Buck Institute for Education 2018). After the project, students share their work (including chosen methodology and reasons for it) with peers, teachers, or a wider audience, explaining their process and findings. Learners should be encouraged to reflect on their learning experience, the effectiveness of their project and their growth as learners. Project-based learning promotes creativity, critical thinking, collaboration, and the integration of multiple subject areas.



(Image source: Creative Commons)

Although similar in promoting active learning and critical thinking, these three approaches differ in their focus, scope, and outcomes. Project-based learning focuses on long-term interdisciplinary projects with tangible products or presentations; case-based learning involves the analysis and discussion of real or fictional examples to apply course concepts to real-world situations; and problem-based learning emphasizes collaborative problem-solving to address complex issues.

### 3. Examples and practical tips

#### Example #1: Sustainable urban design

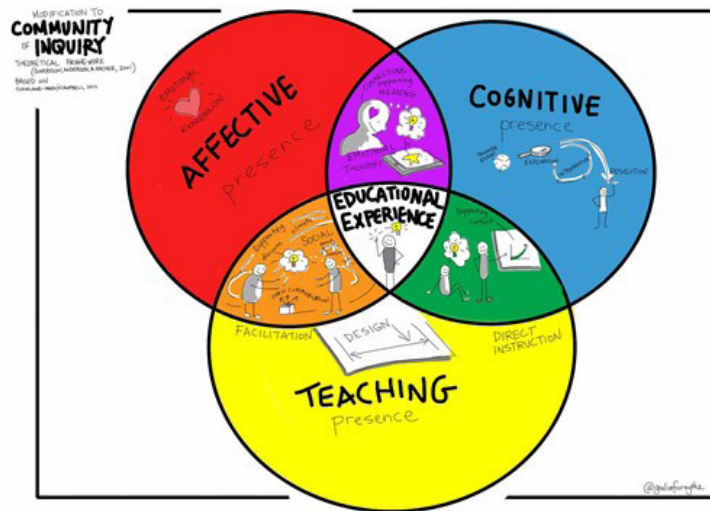
In this inquiry-based activity, students work in groups to develop a sustainable city plan that takes into account environmental, social and economic factors. Start by discussing the concept of sustainability and its importance for the future of our planet. Assign each group a specific aspect of city planning, such as transport, energy, waste management or green spaces. Encourage students to research sustainable technologies, policies and practices and incorporate these ideas into their city plans. Once each group has completed their plan, have them present their ideas to the class and discuss the benefits and challenges of implementing these sustainable solutions. You should discuss their learning process itself as well. This activity encourages critical thinking, collaboration and communication skills, while engaging students in real issues related to urban planning, environmental science and social responsibility.

#### Example 2: Ethical debate on artificial intelligence

In the second example of inquiry-based activity, students consider the ethical implications of artificial intelligence (AI). Divide students into groups and assign each group a specific case involving issues such as privacy, job relocation or algorithmic bias, without telling them what the main ethical issues are. Students have to detect potential ethical issues presented in their case on their own, then research their topic and analyse the ethical implications and possible regulations. After the research, organise a class discussion or panel debate where each group presents its findings and argues its position. This activity encourages critical thinking, research skills and persuasive communication while discussing technology, ethics and society.

There are several **practical tips** that can be important for the successful implementation of an inquiry-based learning model. The key to successful inquiry-based learning is that students have a lot of freedom in the learning process and (at least partly) learn on their own. It is also important to keep the activities interesting and fun so that students remain motivated when working independently. As a large part of inquiry-based learning is creativity and expressing one's own opinions and views, it is important to provide a safe learning environment where they know that they will not be judged for expressing their opinions. Encourage a culture of respect, curiosity and openness. Ensure that all students feel comfortable asking questions, sharing their thoughts and making mistakes (Hmelo-Silver 2007).





(Image source: Creative Commons)

Because inquiry-based learning can be time-consuming, good time management is important. Plan activities carefully, set time limits and monitor progress to ensure that learners have enough time to complete their research and draw meaningful conclusions. It is also a good idea to make sure that all students always understand the instructions, problems and scenarios before starting and that expectations are known as well - this will also make investigations easier and more time-appropriate. It is a good idea to link the content of the investigation to the curriculum so that you can be sure that students will be able to work independently and remember that it may also be useful to link the knowledge to students' other subjects to emphasise the cross-curricular applicability of the knowledge gained. As students do a big part of the research themselves, motivation to research and learn is key, so it is good to choose problems, scenarios and projects that touch on practical and real-world problems so that they are attracted by the realisation that they are gaining knowledge that can serve them in the real world.

Two other aspects are very important. Firstly, giving feedback on an ongoing basis. Check in with learners regularly, offer guidance and address any questions that arise during the inquiry process. Provide constructive feedback to help learners refine their questions, methods and conclusions (Hattie 2007), to avoid situations where at the end of a long research project, students discover that they set up the project very poorly in the first place and relevant conclusions can perhaps not be drawn at all. The second important tip is to always stress the importance of metacognition (thinking about thinking). (White 1998) Encourage learners to reflect on their learning process, including their successes, challenges and areas for improvement. This helps them to develop self-awareness and become more effective learners.

## 4. Relevance for digital literacy, online ethics, and navigating the digital world

Kuhlthau is convinced that inquiry is a way of learning new skills and broadening our knowledge for understanding and creating in the midst of rapid technological change (Kuhlthau et al. 2007). And rightfully so.

Inquiry-based learning is an important methodology for developing digital literacy, as it emphasises critical thinking and evaluation skills. For example, when students investigate the reliability of online sources in a project on climate change, they learn to assess the credibility of information, identify bias and distinguish between reputable and unreliable sources. These skills are essential in a digital environment full of varying degrees of accuracy and reliability. Online ethics is promoted through inquiry-based learning so that students engage with real-world ethical dilemmas related to digital platforms. For example, when students analyse cases involving misinformation on social media or copyright infringement, they are encouraged to think deeply about the ethical implications and consequences of their online actions. Inquiry-based learning enables students to understand the importance of responsible digital citizenship and to make informed choices when using digital tools and resources. Mastering the digital world is closely linked to this model as well, as it promotes flexibility, creativity and effective communication. By exploring emerging technologies such as artificial intelligence in different fields such as health or transport, students not only learn to research and analyse digital tools but also understand their potential social impact. (Kuhlthau et al. 2007) This hands-on approach to learning enables students to become proficient users of digital resources and prepares them for success in a rapidly evolving digital environment. Inquiry is a way of learning new skills and broadening our knowledge for understanding and creating in the midst of rapid technological change.



# GAME-BASED LEARNING



## 1. Introducing the topic

“Humans are not best described as Homo Sapiens, mankind who knows; but rather as Homo Ludens, mankind who plays.” (Scharp et al, 2021)



*(Image source: Creative Commons)*

School as a place for playful learning, Schola Ludus, was an idea proposed already, for instance by the 17th-century author of Jan Amos Comenius. It seems to be self-evident that game-based learning and similar approaches like gamification or playful design have relevance even nowadays.

As the name suggests - game-based learning will focus on incorporating games into learning. “The design process of games for learning involves balancing the need to cover the subject matter with the desire to prioritize game play” (Plass, Perlin, & Nordlinger 2010).

Game-based learning seems to have several advantages – motivational, it supports player engagement and adaptivity, and moreover, it offers room for graceful failure... (Plass, Homer, Kinzer 2015)

Game-based learning is not focused only on digital video games and their potential for education but can also be used in traditional offline analogue settings, and, in general, it’s about supporting playfulness in education. As we can see in the diagram below (Plass, Homer, Kinzer 2015) game-based learning can positively affect various dimensions of learning – cognitive, affective, behavioural, and social/cultural.

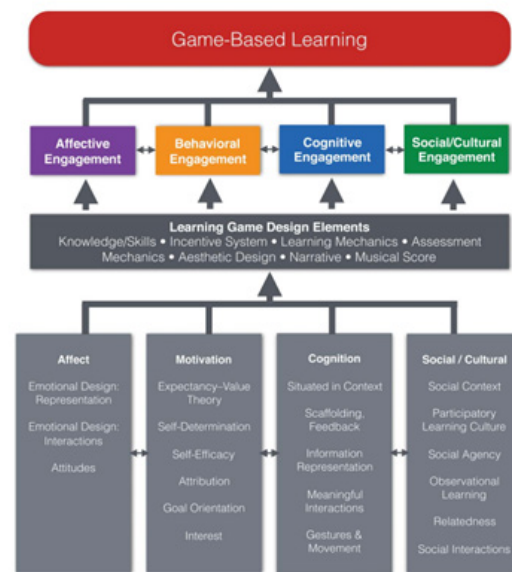


Diagram 1 (Plass, Homer, Kinzer, 2015)

It is worth noting that concepts like gamification and playful design are similar to game-based learning, and all of them can be classified as a form of experiential learning. They all try to promote playfulness, and fun as advantages leading to higher motivation and efficiency of learning. However, although the borders between these concepts are a bit blurry, we can say that the gamification uses only elements of games, that is, on a smaller scale, e.g. rewards like badges.

“The gamification of learning is an educational approach to motivate students to learn by using game elements in learning environments. The goal of introducing gamification in education is to maximize enjoyment and engagement through capturing the interest (motivation) of learners and inspiring them to continue learning. Game-based learning (GBL) is a type of game play that has defined learning outcomes. Generally, game-based learning is designed to balance subject matter with gameplay and the ability of the player to retain, and apply the subject matter to the real world.” (Aberšek 2016, 557)

The playful design is a similar concept that overlaps with gamification and includes a broader spectrum of activities and tasks that promote fun, humour, playfulness during fulfilling tasks either while learning or even at work. (see eg. Sharp et al. 2021) It is also possible to mention so-called “serious games”, which aim to train professionals and focus on problem-solving and not so much on fun and entertainment. They are used mostly in healthcare education, military training etc. (Pan et al. 2021)

## 2. Key methods and tools

Games that are focused on education, educational games, involve not just traditional games like card games, board games, messaging games, wheel of fortune, origami, puzzles, “but also include all educational software, teaching aids, toys with both the characteristics of education and fun, for example, electronic game tables developed for educational use, commercial games with educational value, and some interesting educational software, etc.” (Pan et al. 2021) At the same time, there can also be digital educational games or educational video games. “There are several types of digital educational games, including adventure and role-playing games, business games, board games, combat games, logic games and puzzles, and word games...” (Pan et al. 2021).



(Image source: Creative Commons)

It is important to note that while creating educational games for teaching or preparing for teaching, the teacher needs to keep in mind what the aim of the game is, that is, what the objective of the activity is, what we want to achieve and teach the students and why we chose the given game for the purpose. (Pan et al. 2021)

The games depending on their goal and nature can be understood and classified, for instance, from the following aspects:

- *Competitive, or cooperative games* (Competitive games try to promote competition between individuals or teams and use it as a motivational factor for learning. Cooperative games, on the other hand, promote cooperation between students and promote teamwork. However, there can be a combination of the two as well as we can eg. create 2 teams where members cooperate but compete against each other eg. in a sample workshop focused

on the theme- Can I avoid being noticed? Where there are 2 teams Big Brother and Little Sisters, discussing and preparing arguments for and against camera surveillance).

- *Socializing, or task-oriented games* (some games may focus mostly on socializing aspects eg. various so-called ice-breaking games where students get to know each other, other games are more oriented on solving problems, and tasks. However, as mentioned in other parts, it is often good to combine them, and in some games, it is interconnected).
- *Individual, or group games* (there can be games oriented on the individual learner and, of course, games requiring more people, as it is possible to see in the sample workshops there are many tasks focused on group work but many are suitable also for individual learner eg. thinking about answers to questions).
- *Cognitive, affective or conative games* (games can focus more on cognitive aspects e.g., on learning how to spot my digital trace or more on affective goals like emotional empathy or cooperation and creating bonds, friendship between students, or promote mostly the ability to act).
- *Higher-order games, or lower-order games* (games can be focused on the promotion of creativity, analysis or other higher cognitive functions based eg. on Blooms/Krathwohl's revised taxonomy of educational objectives (see eg. Krathwohl, 2022) or focused on lower functions like memorizing and classifying eg. pairs game, quizzes etc. However, as mentioned above, here it is also important to focus on the complexity of educational goals.).
- *Visual, auditory, and kinesthetic games* (games can target different senses, and it's important to keep in mind that different individuals can prefer different ways of obtaining and working with information, so it is useful to combine them).
- *Realistic or fictional games* (games can be focused on real life scenarios eg. dealing with realistic moral dilemmas, or can be focused on fictional situations like sci-fi thought experiments, and various role plays, both realistic and fictional games again have their place in education).

These are just some aspects that we can keep in mind when deciding which game to use when and for which group of students. Do we want to primarily promote the cooperation of the students? Do we want them to make them remember certain things? Do we want to stimulate their creativity? etc.

### 3. Examples and practical tips

The advantages of game-based learning are the fun component and that it allows one to make mistakes through experimentation in a risk-free environment. However, the teacher needs to prepare carefully for its implementation and not focus just on the fun alone without keeping in mind the objective of learning. “Before deciding how to use game-based learning, the teacher must first determine what he would like the students to learn. A teacher that fails to focus teaching around a central idea runs the risk of using a game that fails to connect with the students. To prevent this, teachers must tailor the material so that the material is neither too difficult for, nor too familiar to the students.” (Aberšek, 2016, pp. 557)



*(Image source: Creative Commons)*

There are many examples of games and fun activities in sample workshops that are one of the outputs of this project.

In a digital environment, we can see elements of games while learning often in many language learning apps. Eg. Duolingo awards badges and different fun levels and characters, that is, gamification elements of learning and practising new vocabulary, phrases etc.

Other platforms for digital education are for instance Moodle, Canvas, EdApp,... For instance, in Moodle, it is also possible to use methods of gamification when granting badges to learners after achieving a certain level, to incorporate quizzes etc. This should promote the motivation to learn and complete the tasks. Popular digital tools are also, for instance, Mentimeter, Kahoot, Quizlet, Gametize, Raptivity... etc, which can be used also for creating quizzes, tasks with badges, flashcards, and various games.



In classical analogue settings, we can use games even with minimal tools, some can be even without the need for any, using just our mind and, for instance, speaking and role-playing. Others can be used with minimum equipment like pen and paper, for instance, making a list of as many words as possible related to AI etc. In the contemporary world, it is interesting to combine various types of games – online/offline, digital/analogue in order to teach different ways how to get information and how to process it and communicate with others.

We can mention as an example of popular offline games eg. cognitive games for finding matching pairs of information eg. terms and definitions, opposites, synonyms etc.; cognitive games where one student obtains a given concept, and others have to guess based on certain restricted rules of asking questions, social games which promote cooperation or empathy like finding what we have in common etc.

## 4. Relevance for digital literacy, online ethics, and navigating the digital world

Game-based learning has its place also in digital settings. As was mentioned above, games can be played either online or offline without using any modern technology or even mixed. This gives teachers the advantage of making playful learning games also in the classrooms without computers, projectors etc., but at the same time, it is possible to use games also while teaching online.



*(Image source: Creative Commons)*

Games are a very powerful tool for increasing our motivation for learning. They can help students understand and remember things, learn how to communicate, cooperate, create, analyze etc., in a fun way, and the strong emotions and experiences related to playing games help us learn more effortlessly.

Games help us enhance our self-determination for learning, meet the need for autonomy, relatedness, and competence, and enhance our intrinsic motivation for learning. (Cheung, Ng, 2021)

As proposed in the created sample workshops, many games and fun activities can be used also in teaching digital literacy, online ethics and helping to get orientation in the digital world without boring the students to death.



# DIALOGIC EDUCATION AND DISCUSSION

# 1. Introducing the topic

Dialogic education is an approach to learning based on dialogue, interaction and joint research between teacher and student. This approach emphasizes active student participation, encouraging critical thinking and developing communication skills. "Focusing on the term itself, 'dialogue' can be defined in three main ways (Wegerif, 2019):

- i. a 'dictionary' or 'everyday' definition,
- ii. an epistemological definition,
- iii. an ontological definition." (Mercer, Wegerif R., Major L, 2020,2)

"A 'dictionary' or 'everyday' definition of dialogue typically treats dialogue as a synonym for conversation... Where there is collaborative learning amongst students or a high level of open-ended teacher-student interaction this might be referred to as 'dialogic education' without specifying any more technical meaning for 'dialogic' than that the teaching and learning takes the form of a dialogue" (Mercer, Wegerif R., Major L, 2020,2)

From a dialogic **epistemological perspective**, we construct knowledge through the dialogue, and we act upon our image of reality that is usually constructed and redefined through conversation. Since the dialogue is never closed, the questions we ask will change, so what counts as knowledge is never final. (Mercer, Wegerif R., Major L, 2020,2) This epistemological perspective on dialogue implies that education should be designed to engage students in an ongoing process of shared inquiry that takes the form of a dialogue (Wells, 1999; Linell, 2009)

**An ontological conception of dialogue** is concerned with the very nature of our existence and identity. Some claim that taking a dialogic perspective seriously as a theory of meaning implies that dialogue is not only a means to knowledge construction mediating between selves and reality but that selves and reality are also part of the dialogue (Wegerif, 2019). Applied to education, this ontological interpretation of dialogue suggests that it is not just a tool to construct knowledge and understanding jointly but that engagement in dialogue offers a way to change ourselves and our reality.

Dialogic education has several key principles:

- Dialogic education promotes an equal relationship between teacher and student. Students are encouraged to express their ideas, ask questions and express their opinions, while the teacher plays the role of moderator and encourages discussion.
- Dialogic education encourages students to think critically about different topics and problems. It encourages students to ask questions, analyse arguments and develop their own views based on evidence.

- Dialogic education emphasizes collaboration among students and encourages collaborative research. Students are encouraged to actively participate in group activities, discuss, share ideas and solve problems together.
- Dialogic education promotes understanding of other people's perspectives and the development of empathy. Students are encouraged to actively listen to the interlocutor, understand his views and try to see things from his point of view.

## 2. Key methods and tools

There are many methods that have been developed in dialogic education, here we will describe only the most used ones:

- Socratic dialogue
- Community of Philosophy Inquiry
- Dialogic Games

### 2.1. Socratic dialogue

Socratic method – “teaching by asking instead of telling” is a method of questioning named after the Greek philosopher Socrates (469–399 BC). The Socratic method is a means of evaluating beliefs by examining contradictions among their implications or in other words: learning to make room in our minds for different ideas and perspectives no matter how much they challenge our current beliefs. The aim of the Socratic dialogue is to achieve a genuine consensus about the answer to the general question. The starting point of the analysis is an example from real life, but it can also be children’s stories.

Socrates’ dialogic method consists of two stages: irony and maieutic. Socrates begins the conversation with the first stage, which is irony, with which he “cleans the field” of ignorance. This first stage of the method is a negative step in which Socrates shows his interlocutor that the knowledge he possesses is actually apparent knowledge, that is, ignorance. The second stage, the aforementioned maieutic, in its original meaning, is ‘midwifery skill’. With Socrates, it is a way of conducting a conversation based on ‘extracting’ or ‘giving birth’ to the real truth from the interlocutor, just as a midwife extracts a child from its mother. Socrates believes that true knowledge is hidden deep in the souls. His asking questions and suggesting answers help the interlocutor discover them. Key elements of Socratic dialogue in education include the following:

**1. Asking questions:** The teacher asks questions encouraging students to think and reflect on a certain topic. Questions often encourage students to question their assumptions, identify inconsistencies or gaps in their knowledge, and express their own ideas.

**2. Exchange of opinions and thinking:** Students are encouraged to present their opinions, arguments and ideas related to the questions posed. The dialogue is based on the exchange of different perspectives and argumentative discussion of the topic.

**3. Constructive criticism:** Socratic dialogue encourages students to think critically about the opinions and arguments of other dialogue participants. Students are encouraged to

express their objections constructively, ask follow-up questions and provide arguments that extend the discussion.

**4. Reflection and self-examination:** Socratic dialogue encourages students to reflect on their own opinions and attitudes and to check them themselves through questions and argumentation. The goal is to encourage students to develop their own critical thinking and the ability to question their own beliefs.

## 2.2. Community of Philosophy Inquiry

Community of Philosophy Inquiry (CPI) is an approach in education based on Socratic dialogue and the promotion of critical thinking through joint discussion. CPI brings together a group of people, usually in a classroom setting, to jointly explore philosophical topics, ask questions, and share their thoughts.

“In general, the Community of inquiry would, first, encourage self-criticism, that is, encourage reflection on the beliefs presently held, but only if such reflection is warranted by genuine doubt (as opposed to the artificial doubt of Descartes). Second, the Community of inquiry would allow and encourage openness toward criticism (as opposed to tenacious and authoritative communities). Participants in inquiry would be allowed the opportunity to criticize, refute, as well as present alternative views” (Liszka, 1996: 103–104). M. Lipman expands this concept and claims that Community of inquiry means converting the classroom into a Community of inquiry in which pupils listen to one another with respect, build on one another’s ideas, challenge one another to supply reasons for otherwise unsupported opinions, assist each other in drawing inferences from what has been said, and seek to identify one another’s assumptions.” (Ćurko, 2021, 23)

The “Community of inquiry” uses scientific methods to reach the desired understanding and clarification of a particular problem or question. It often happens that there is no definitive answer, but only the next question that requires new research. Today, the concept of a “community of researchers” is the most characteristic of the movement of philosophy for children, because it is one of the fundamental characteristics of philosophy for children. “Community of inquiry” is essentially a community of critical thinkers who are subject to sharp criticism of everything they discuss, including themselves and their attitudes and actions.

Systematic doubt, the search for understanding and answers and constructive criticism enable such communities to progress formally and substantively constantly.

Key elements of the Community of inquiry are:

- Collaboration and dialogue - Participants collaborate and share their opinions, thinking, ideas and questions through dialogue.
- Philosophical questions - asking philosophical questions that encourage critical thinking and reflection on fundamental topics such as ethics, knowledge, truth, freedom, justice and other philosophical concepts.
- Moderation and support – a moderator or leader facilitates the discussion and ensures that all participants have a chance to express their opinions.
- Development of critical thinking: CPI aims to develop critical thinking in participants.

### 2.3. Dialogic Games

Dialogic Games are interactive activities used in education to encourage dialogue, exchange of ideas and development of critical thinking. They provide a structured framework within which participants can express their views, ask questions, discuss a particular topic and explore different perspectives. Game structure: Dialogue games have a clear structure that allows participants to engage in dialogue. A game can have specific stages or steps, such as asking questions, exchanging ideas, debating or solving problems. Dialogue games have certain rules that participants should follow to ensure respect, balance and constructive discussion. Rules may include time for expressing opinions, time limits for responses, or the order of participants.

Dialogue games provide a structured environment in which participants are encouraged to actively participate in dialogue, exchange opinions and arguments, and develop their critical thinking skills. These games encourage students to listen to others, express their ideas.





## 3. Examples and practical tips

### 3.1. Socratic dialogue

Although the modern Socratic dialogue has its own special rules and adaptations to the context in which it is used, here you can find a classic examples from Plato's Gorgias.

**Socrates:** Then hear me, Gorgias, for I am quite sure that if there ever was a man who entered on the discussion of a matter from a pure love of knowing the truth, I am such a one, and I should say the same of you.

**Gorgias:** What is coming, Socrates?

**Socrates:** I will tell you: I am very well aware that I do not know what, according to you, is the exact nature, or what are the topics of that persuasion of which you speak, and which is given by rhetoric; although I have a suspicion about both the one and the other. And I am going to ask what is this power of persuasion which is given by rhetoric, and about what? But why, if I have a suspicion, do I ask instead of telling you? Not for your sake, but in order that the argument may proceed in such a manner as is most likely to set forth the truth. And I would have you observe, that I am right in asking this further question: If I asked, "What sort of a painter is Zeuxis?" and you said, "The painter of figures," should I not be right in asking, "What kind of figures, and where do you find them?"

**Gorgias:** Certainly.

**Socrates:** And the reason for asking this second question would be, that there are other painters besides, who paint many other figures?

**Gorgias:** True.

**Socrates:** But if there had been no one but Zeuxis who painted them, then you would have answered very well?

**Gorgias:** Quite so.

**Socrates:** Now I want to know about rhetoric in the same way;

- Is rhetoric the only art which brings persuasion, or do other arts have the same effect? I mean to say

- Does he who teaches anything persuade men of that which he teaches or not?

**Gorgias:** He persuades, Socrates, there can be no mistake about that.

**Socrates:** Again, if we take the arts of which we were just now speaking do not arithmetic and the arithmeticians teach us the properties of number?

**Gorgias:** Certainly.

**Socrates:** And therefore, persuade us of them?

**Gorgias:** Yes.

**Socrates:** Then arithmetic as well as rhetoric is an artificer of persuasion?

**Gorgias:** Clearly.

**Socrates:** And if anyone asks us what sort of persuasion, and about what we shall answer,

persuasion which teaches the quantity of odd and even; and we shall be able to show that all the other arts of which we were just now speaking are artificers of persuasion, and of what sort, and about what.

**Gorgias:** Very true.

**Socrates:** Then rhetoric is not the only artificer of persuasion?

**Gorgias:** True.

**Socrates:** Seeing, then, that not only rhetoric works by persuasion, but that other arts do the same, as in the case of the painter, a question has arisen which is a very fair one: Of what persuasion is rhetoric the artificer, and about what?

- Is not that a fair way of putting the question?

**Gorgias:** I think so.

**Socrates:** Then, if you approve the question, Gorgias, what is the answer?

**Gorgias:** I answer, Socrates, that rhetoric is the art of persuasion in courts of law and other assemblies, as I was just now saying, and about the just and unjust.

R. W. Paul divided the questions of the Socratic dialogue into six basic types. For example, we can also use fairy tale about Cinderella. Let us say that the basic question for thinking/discussion is: Is it fair that Cinderella becomes a queen? Let us see how this question goes in the case of Cinderella.

1. Questions for clarification: Why do you say that? How does that relate to our discussion?  
Why do you think that it is fair or unfair that Cinderella became queen?

2. Questions that probe assumptions: What could we assume instead? How can you verify or disapprove of that assumption?

Why did Cinderella become queen? Because she has shoes number 36,5? Does everyone who wears shoe number 36,5 r become king/queen? Did Cinderella become queen because she was beautiful? Why? What do you think?

3. Questions that probe reasons and evidence: What would be an example? What is ... analogous to? What do you think causes this to happen ...? Why?

Why? Why did Cinderella become the most beautiful girl in the party? Why prince just look at her? Does that make sense? Is that some kind of justice? Did she deserve it because of her hard life...? Is she so much better than all of us? Why?

4. Questions about viewpoints and perspectives: What would be an alternative? What is another way to look at it? Would you explain why it is necessary or beneficial, and who benefits? Why is it the best? What are the strengths and weaknesses of ...? How are ... and ... similar? What is a counterargument for ...?

What do the stepsisters think of Cinderella? What does her stepmother think about her chosen one? What do the stepsisters think of Cinderella? What do the other princesses think about the choice of Cinderella as the prince's wife?

5. Questions that probe implications and consequences: What generalizations can you make? What are the consequences of that assumption? What are you implying? How does ... affect ...? How does ... tie in with what we have learned before?

How would the story develop if the prince did not notice Cinderella? How would the story develop if the prince fell in love with Cinderella's sister? How would the story develop if Cinderella didn't like the prince at all?

6. Questions about the question: What was the point of this question? Why do you think I asked this question? What does ... mean? How does ... apply to everyday life?

Why did we even ask if it was fair for the prince to marry Cinderella? Does justice have anything to do with it? Why are we even asking this? Is it important to us? Why?

### 3.2. Community of Philosophy Inquiry

Here is an example of a workshop from the project "Look to your own thinking". Here you can see the main questions, delivered to children from animated characters Ratka the Duck, Sofia the Owl and Nessy:

**Ratka the Duck:** Good day to all of you joining us for Philosophy Day! My name is Ratka the Duck, and I'll be with you today.

**Sofia the Owl:** Hello! My Name is Sofia, and I would also like to talk to you.

**Ratka the Duck:** I have a couple of questions, and I was hoping you could help me to look for the answers.

**Sofia the Owl:** Do you like writing stories?

**Ratka the Duck:** I was wondering, when was the last time you wrote or came up with a story?

**Sofia the Owl:** What would the bad characters be like in your story?

**Ratka the Duck:** If you had to write a story about good and evil ... What would the good characters be like?

**Sofia the Owl:** Do you know any stories whose main character is good, but ugly?

**Ratka the Duck:** Would you use good, but ugly characters in your story? How did the other characters treat it?

**Sofia the Owl:** What is the main problem with the Ugly Duckling?

**Ratka the Duck:** How do you picture that Duckling?

**Sofia the Owl:** Did it deserve such treatment?

**Ratka the Duck:** Why didn't the others see its good qualities?

**Sofia the Owl:** Can you think of some of its good qualities?

**Ratka the Duck:** Is beautiful only something we can see?

**Sofia the Owl:** Do we have various kinds of beautiful?

**Ratka the Duck:** When does it happen?

**Sofia the Owl:** What does a beautiful feeling feel like?

**Nessy:** Hello, don't be scared. According to some people's standards, I am ugly, so people call me a monster. My name is Nessy, I am a descendant of the plesiosaurs, a dinosaur, I still exist and hide deep in the lakes.

**Sofia the Owl:** Nessy, don't worry, we won't tell anyone we saw you.

### 3.3. Dialogic Games

Here are some examples of dialogic games

#### 3.3.1. Crossfire

Participants from two or more teams get the opportunity to present arguments on a certain topic. Each team has a certain amount of time to present their opinion, after which the other team has the opportunity to ask questions or present counterarguments.

#### 3.3.2. Debate tournament

Participants compete in a debate on a specific topic. Teams get the opportunity to present their arguments, defend their positions and challenge the opposing team's positions. Participants are evaluated based on the quality of arguments, clarity of expression and ability to defend their point of view.

#### 3.4.3. Dilemmas and Scenarios

Participants are given situational dilemmas or scenarios that encourage discussion of ethical, moral or social issues. Participants must consider different perspectives, assess possible consequences and make informed decisions.



## 4. Relevance for digital literacy, online ethics, and navigating the digital world

### 4.1. Socratic dialogue in the digital world

Of course, the Socratic dialogue can also be held online through various internet tools for communication (Zoom, Teams, Meet...). Let's see how to implement a Socratic dialogue online about a digital subject. Let's take one of the most-watched videos on Youtube, "Baby Shark Dance" by Pinkfong (12.85 billion views). Give your participant the task to watch this short video, and start Socratic questions.

#### 1. Questions for clarification

Why is this video interesting to so many people? What is the value that attracts people to watch this video?

#### 2. Questions that probe assumptions.

Does this high number of views on YouTube confirm that this is a quality video? This also confirms that it is a good song in the video. Or is that not the case? What is it that attracts people to watch this video if not the quality?

#### 3. Questions that probe reasons and evidence.

Is it the simplicity of the melody and lyrics that attract children and parents to watch this song? Why is that so? Does this mean that people are more attracted to simplicity than complexity? Is simplicity important for quality or not?

#### 4. Questions about viewpoints and perspectives: What would be an alternative? What is another way to look at it? Would you explain why it is necessary or beneficial, and who benefits? Why is it the best? What are the strengths and weaknesses of ...? How are ... and ... similar? What is a counterargument for ...?

The Piano Sonata No. 11 (Turkish March) by Mozart has just 31 million views. Is that mean that is one of the most popular sonatas of all time? Does this mean that "Baby Shark Dance" is more famous?

#### 5. Questions that probe implications and consequences: What generalizations can you make? What are the consequences of that assumption? What are you implying? How does it tie in with what we have learned before?

How would a world look like in which Mozart became more popular than "Baby Shark?" Do you think that we need some kind of music education in order to know how to enjoy better quality music or not?

## 6. Questions about the question.

Why did we even ask about popularity on YouTube? Why is this important for the quality of life? Should we limit content on the Internet to only quality ones or not? How to do it?

## 4.2. Community of Philosophy Inquiry in the digital world

As in the Socratic dialogue, similar we can do in Community of Philosophy Inquiry and hold online discussions with the help of the Net tools for communication (Zoom, Teams, Meet...). It's a bit more difficult here because some slightly stricter rules are needed in the Community of Philosophy Inquiry. But also, we can start a discussion about "time spent on the Internet". This can be the main topic, with these main questions:

1. Do we use our time usefully on the Internet?
2. What does useful time mean anyway?
3. What is useful to do on the Internet?
4. Can we reduce the useless use of time on the Internet? How?
5. What will we gain if we reduce the useless use of time on the Internet? Will it improve our quality of life?

## 4.3. Dialogic Games in the digital world

Dialogic Games are more adaptable to the digital world than the above two methods. Again, it is about adapting methods and ways to the digital world and digital tools. Dialogic Games can be done in some internet tools that don't have to be live. They can go live, so it will be more like live games. Crossfire, Debate tournaments and Dilemmas and Scenarios can also be done in written format, which gives a new dimension. This new dimension can be done through a written dialogue, which gives the participants more time to think about their arguments and the discussion itself.

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