

# **LINK handbook on digital and gamified learning activities**

2021-1-IT02-KA220-ADU-000029478



This Handbook was edited and published in the frame of the Erasmus+ Strategic Partnership Learning Opportunities on Digital and Employability sKills for Young Adults with Behavioural and Cognitive Disabilities (LINK) 2021-1-IT02-KA220-ADU-000029478

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Last update: **09.01.2024**

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# CHAPTER 1. KEY PRINCIPLES OF DIGITAL PEDAGOGY AND GAMIFICATION. BENEFITS AND RISKS OF USING DIGITAL PEDAGOGY AND GAMIFICATION WITH THE TARGET GROUP.

## 1.1. INTRODUCTION AND CONTEXT.

*"Tell me and I forget it, teach me and I may remember, involve me and I learn" (Benjamin Franklin).*

During the last few years, educational pedagogy has changed significantly for the better as it has been focused on two main and fundamental concepts that promote quality and equity in the classroom, these are active learning methodologies and inclusion.

Active learning methodology refers to the kind of teaching process which centers on activities and tasks that encourage students to engage their learning process in a more autonomous way. In the past, students used to have a passive role during their learning process as they only received and collected information given by the teacher in class. However, active methodologies promote students' learning by doing different tasks taking an active role during their learning process meanwhile the teacher has not only a teaching but also a monitoring and guiding role. As a result, the student is more motivated and the quality of learning is much better due to the practical context of it. Concerning the types of active methodologies, we can find Project Based Learning, Problem Based Learning, Team Based Learning, Flipped Classroom and of course Gamification.

On the other hand, and according to education, inclusion refers to real learning opportunities for students who have traditionally been excluded. All the students participate in the same teaching

and learning dynamics in the classroom and these dynamics are adapted to the students taking into account their special educational needs. Inclusive schools and classrooms value the unique contributions students of all backgrounds bring to the classroom and allow diverse groups to grow side by side to the benefit of all.

This new educational context has found an ally which helps teachers and students to get these goals and objectives. This new component of the machinery is ICT. During the last few years, there has been a huge increase in the number of digital tools that can be used during the teaching-learning process. Furthermore, the Pandemic context in 2020 established a new context for education in which the use of digital tools for teaching and learning was essential and afterwards, many teachers and educators started to implement them in face to face lessons as well. There are digital tools for creating new material (infographics, presentations, videos, etc), teaching or practicing new contents, establishing communication, sharing documents or even creating quizzes and game. Taking into account all these essential factors in the new educational context; gamification as an active methodology, inclusion and new digital tools,



it has been developed the Erasmus+ KA220 ADU Learning Opportunities on Digital and Employability Skills for Young Adults with Behavioural and Cognitive Disabilities. The project has been elaborated by five different European centres which work on adult education and people with educational needs; Erasmus Learning Academy (Italy) project coordinator, Agrupamento de Escolas Anadia (Portugal), Education Centre of Roskiskis Municipality (Lithuania), CEPA Teresa Enríquez (Spain) and Maria's World Foundation (Bulgary) has as main objectives; to develop a flexible modular curriculum on digital and employability skills tailored for the target group; to develop gamified and digital learning activities and material adequate for the target group; to inspire and enable adult educators to organize high quality gamified and blended learning opportunities and to raise awareness on the needs and potential of the target group and the learning opportunities that can unleash it.

All these aims will be achieved by means of the creation of two project results, on the one hand, a Blended Education Course on Digital and Employability Skills and, on the other hand, this Handbook on Digital and Gamified Learning Activities for Adults with Behavioural and Cognitive Disabilities.

## **1.2. DIGITAL PEDAGOGY.**

### **1.2.1 DEFINITION AND CHARACTERISTICS**

Digital pedagogy refers to the use of contemporary digital technologies during the teaching-learning process.

Today's students use technology (IM, Facebook, Flickr, Skype) to be constantly connected to friends, family, information and entertainment. Technology allows them to connect with more people, in more ways, more often... The current generation seamlessly transition between their 'real' and digital lives (BECTA 2008, p. 12)

Nowadays, we live in a world that is interconnected by means of digital apps and social sites, so, according to this new context, the use of digital tools is mandatory in the classroom. If we navigate on the internet we will be able to find multiple digital tools and apps such as Canva, Genially, Padlet, Symbaloo, etc which can be used in an educational context.

Firstly, digital tools provide different alternatives to teachers in order to present new contents, secondly they supply students with new forms for elaborating and showing their learnings and projects in a different way and thirdly they are able to motivate students through numerous channels, one of them would be the digital tools focused on game-based learning.

### **1.2.2. OBJECTIVES OF DIGITAL PEDAGOGY.**

Digital pedagogy has plenty of objectives in the classroom in order to improve all kinds of students' skills.



The first and main objective is to develop students' digital competence by implementing ICT in the classroom the same ways as ICT is implemented in everyday life. As a result, they will be able to use different devices, platforms and applications not only in the classroom but also out of it.

The second main objective is to develop students' personal autonomy and broaden their skill of learning how to learn. In some educational contexts, ICT is necessary to fulfill an activity or accomplish a specific task individually, consequently students will need to expand their personal autonomy to complete any activity demanded.

The third objective is to expand their soft skills in and out of the classroom. The use of ICT allows them to work in pairs or in groups in order to accomplish a task, therefore they will need to communicate, interact and sometimes negotiate with their partners.

As a consequence of all the goals mentioned before, we can find the last main objective of digital pedagogy that is to develop students' personality. The use of different ICT devices, platforms and applications by working individually or in groups in order to complete several tasks will allow students to cultivate their own personality taking different decisions during their learning process.

### **1.2.3. TYPES OF DIGITAL RESOURCES.**

To apply ICT in the classroom we can find and use different types of digital resources taken from the Universal Design for Learning principles.

Therefore digital resources are divided into three important groups; representation, action and expression, and engagement.

Representation digital resources (the what of learning) are related to the teacher and how content is received by students since they must have access to the information in different formats; auditory, visual or textual. The teacher must present contents in multiple media, offering several alternatives and tools, providing different supports so that all students can recognise and acquire the knowledge being taught.

Action and expression digital resources (the how of learning) are connected to learners as these resources refer to the tools that allow students to use different strategies in order to show their knowledge and skills in an alternative way in the classroom by providing models, feedback and support for their different levels of proficiency.

Engagement resources (the why of learning) correspond to the teacher in order to motivate students by means of different tools. The educator must give students choices to fuel their interests and autonomy. Some of these tools are especially related to gamification or game-based learning contexts.

Thanks to the use of these three types of resources in the curriculum, students are able to gain knowledge, skills and enthusiasm.

As it was mentioned, nowadays this classification of resources is tightly linked to the Universal Design for Learning framework, as in class we can find many different students with many different abilities and capacities and these resources must be used and understood by everyone.



#### 1.2.4. BENEFITS AND RISKS OF DIGITAL PEDAGOGY FOR OUR TARGET GROUP

Digital pedagogy and tools have proven to be highly beneficial for people with intellectual difficulties. The expansion of social networks allows them to access a vast amount of information and communicate with more people. Furthermore, gaining any new skills is crucial for their adaptation and socialization.

Digital tools can also help in job searching by providing access to more job opportunities and making it easier to apply for them.

The interactive approach and the experiential learning helps people with difficulties understand and remember information very well, since they learn better by participating and trying things in a practical way.

Digital skills promote social inclusion, making them more like other people. Additionally, access to information is easier, especially for those who struggle to develop connections with people. For example, expressing oneself through buttons may be easier for those who have difficulties writing by hand, and those with additional sensory difficulties can communicate through speaking, seeing, and touching.

However, there are also risks associated with digital pedagogy and tools. Digital pedagogy and digital tools often rely on abstract ideas and processes.

The abstract thinking of people with intellectual difficulties is very influenced by the disability of the person. Some of the risks may be that the information presented may not be clear enough. More explanation and practical examples are needed to overcome this risk.

Generalization is also a challenge, in the process of learning through digital pedagogy often we may show a process or an application and rely on the fact that learners will generalize this experience and apply it in other similar processes and softwares. Unfortunately people with intellectual difficulties have problems with the process of generalization. This means that they will need to discuss and try practically each application, process and software that they will need to use in the future.

By using digital pedagogy and learning more about computers and the internet, people with intellectual difficulties become more independent and gain access to a whole new world. Unfortunately this comes with risks of the internet - communication with dangerous people, fraud etc. people with intellectual difficulties build trust with strangers more easily and often they can not assess the risks. This is why there must be an special attention to security on the internet.

Different people with intellectual difficulties have different levels of understanding information, tasks and processes. This may be difficult to build a group with a common understanding of the material. It is good to make groups according to the level of understanding.





There is also a need for more explanation and to always keep in mind if the information is understandable enough for everybody.

Metaphors are another language tool that is challenging to understand for people with intellectual difficulties. It is essential to avoid metaphors or explain them properly when using digital tools, games, and software.

Some people with intellectual difficulties may have physical conditions such as Epilepsy or other that could be affected by flashing lights or a lot of color. It is important to have information about the level of risk for such stimulus on people with additional physical difficulties.

It is possible that with a lot of fun digital tools, softwares or games people with intellectual difficulties may become too excited. It may be difficult for them to concentrate and come back to the material once they get very distracted. It is important to have balance between exciting and fun activities and calmer more serious topics.

People with intellectual difficulties have difficulty remembering some information for a longer time. More exercises and repeating may be needed in order for the information to be remembered properly.

## 1.3. GAMIFICATION

### 1.3.1. DEFINITION AND CHARACTERISTICS.

“Along with other extremely important actions such as eating, sleeping, or relating to others, playing is part of our most primitive brain. Playing is a fundamental part of the evolutionary process; it helps us live in society and understand social roles. Additionally, it fosters creativity and motivates the individual to want to explore the world around them” (Manuela Mena)

Motivating students becomes a difficult task in some contexts since teachers must compete against social networks, videogames and technology in general. However, there is a methodological tool that can become an important ally in the classroom, this methodological tool is Gamification.

The first documented use of the term gamification is recorded in the year 2008. The term was used in a blog post by Brett Terrill, who described the word as the act of 'taking game mechanics and applying them to other contexts to increase user engagement.' Since then, gamification has generated enormous interest among experts from various fields such as business, politics, and education. In 2012 authors such as Werbach or Hunter mentioned the use of elements and techniques that belong to games in non ludic contexts and Kapp started to define and match this concept to education as it consists of “applying mechanics, aesthetic and strategies associated with games in order to motivate, foster and solve problems.”



Nowadays, gamification is widely used in educational contexts and many educators apply this methodology in the classroom due to its good results. Gamification as an active methodology, consists of making use of game mechanics in an educational setting and applying them by means of different tasks that must be solved by students in an autonomous way. These game mechanics are related to the use of elements such as score rankings, avatars, specific game rules, etc. As a result, students are much more motivated, they are aware of their learning process and acquire knowledge autonomously and in a very different form. Thanks to gamification, effort, self-affirmation and collaboration are widely encouraged and students are able to get cognitive, emotional and social development.

Although their meaning and implementation in the classroom is very different, these days it is quite usual to mix these two terms that look pretty similar; Gamification and Game-Based Learning, however, they are not the same. On the one hand, during a gamified activity, students are able to learn not by playing specific games but doing some activities and tasks related to a specific content in an autonomous way, in a ludic atmosphere as if they were playing a game. Students collaborate among them to get a common objective that is not to win or to lose but to make progress and acquire some knowledge. On the other hand, Game-Based Learning consists of utilizing particular educational games as learning tools in order to assimilate or evaluate different and specific knowledge,

the atmosphere is much more competitive than in a gamified activity as the main objective is to win the game using the learnt contents.

### **1.3.2. OBJECTIVES OF GAMIFICATION.**

This active methodology has many different objectives:

Firstly, the main goal of Gamification is to motivate students during the teaching-learning process. This methodology helps students internalize and acquire new knowledge by engaging them in a ludic atmosphere. Students are more motivated to participate and they take part in their own learning process in an active way.

Secondly, this methodology provides students a context to collaborate among them and work in groups to get a common objective. As a result, they develop social skills since they have to make decisions all together, accept a specific role in the group, argue their own ideas and accept others. According to this, they develop autonomy and critical thinking. Furthermore, they need to put their knowledge into practice in order to solve problems, consequently they develop the competence for solving problems

Thirdly, gamification provides students the opportunity to face and accept their own mistakes during the learning process. This ludic atmosphere is a safe place to fail and try again taking into account that the mistake is part of the process and something unavoidable in order to achieve their goals. This methodology allows students to evaluate themselves by means of the feedback received that provides them information about what it is





necessary to correct, learn and improve in order to move forward and solve the tasks and activities presented.

Finally, Gamification provides a good atmosphere to apply ICT in the classroom since many activities must be developed and done by means of digital tools inside and outside of the classroom. Consequently, the use of this methodology gives students the choice to develop their digital skills as well.

### 1.3.3. ELEMENTS OF GAMIFICATION.

In 2012 Werbach and Hunter established the well-known pyramid of Gamification which describes the basic elements in every gamified activity; dynamics, mechanics and components.

#### Dynamics

According to Werbach and Hunter, the dynamics in Gamification are all those aspects related to human beings' wishes, necessities and curiosities that define the motivation of users.

The most relevant dynamics are the following:

**Narration:** learners must know what the game, the activity or the task is about.

**Constraints:** learners need to know which are the borders, the limits of the task and this knowing is quite engaging for its users.

**Emotions:** in a gamified activity we need to achieve specific emotions that are able to maintain learners' attention and motivation during the development of the activity

#### **Relationships:**

using this kind of methodology, students need to interact among them to achieve specific goals, so this fact establishes

different types of relationships.

**Progression:** it is necessary to encourage learners' sense of progress throughout the gamified activity.

#### **Mechanics**

Mechanics are the key elements that are used in a gamified activity in order to implement the task dynamics. They are related to the principles, the rules and the procedure that manage users' behaviour by means of feedback, incentives and rewards.

The most relevant game mechanics are the following:

#### Challenges:

in order to complete any task or activity proposed, learners need to make an effort to fulfill it.

#### Competition:

As in any competition there are people who win and people who lose, also a prize which keeps students motivated.

#### Cooperation:

just the opposite to competition since students need to work all together to achieve a common goal.

#### Feedback:

the positive information in real time about the development of the task.

**Reward or incentives:** the type of mechanics that encourages the achievement or the effort made by the learner.

#### Resource acquisition:

it is related to the necessity to acquire and get specific resources in order to do the task.



### Turns:

it refers to learners' participation according to different turns during the gamified activity.

### Components

Game components are connected with the specific forms for achieving the dynamics and mechanics aims. Some of the most common and well-known components are teams, avatars, collections, quests, points, virtual goods, gifting, achievements, combat, etc.

Another well established framework of reference inside the gamification literature is the Octalysis framework, a design created by Yu-kai Chou back in 2008, subsequently expanded and refined. The framework is used to analyze and design engaging experiences, including the educational area and many more, based on the concept of breaking down human motivation into eight core drives. These are mostly categorized into "White Hat" dynamics and "Black Hat" dynamics. Below described are the eight drives, the first four pertain to the first category, the last four to the latter, the descriptions trying to decline the motivator in educational terms with concrete examples.

**Epic Meaning & Calling:** This drive relates to the human desire to be part of something greater than oneself and to have a sense of purpose in the education path. It might involve showing students how their education can contribute to a meaningful future, such as solving real-world problems or making a positive impact on society.

**Development & Accomplishment:** It pertains to the desire for growth, learning, and achieving goals. It might involve setting clear learning goals, providing challenges, and recognizing students' accomplishments. Students feel motivated when they can see their skills and knowledge improving over time, as well as when they are given opportunities to achieve milestones.

**Empowerment of Creativity & Feedback:** This drive is about the expression of one's own creativity and originality within the educational process. It involves providing opportunities for students to think critically, solve problems, and engage in creative projects. Giving constructive feedback and recognizing students' creative efforts helps them feel empowered and motivated to continue exploring their ideas and expressing their unique perspectives.

**Ownership & Possession:** This drive is about the desire to acquire a sense of ownership over the educational process. It involves giving learners choices and autonomy in selecting topics or projects of interest, allowing them to personalize their learning experience. Students can feel a greater sense of responsibility and engagement when they have a sense of ownership over their educational journey.

**Social Influence & Relatedness:** It relates to the need to connect, socialize, and be influenced by others. In education, it involves creating a supportive and collaborative learning environment where students can connect with their peers, teachers, and mentors.



Group projects, discussions, and opportunities for students to share their knowledge and skills foster a sense of belonging and motivate students through social influence and positive relationships.

**Scarcity & Impatience:** It represents the drive to obtain something rare, exclusive, or time-limited. In the education context, this drive can be used strategically to create a sense of urgency and motivation. By introducing time-limited opportunities, students are motivated to take action and make the most of these scarce resources or opportunities.

**Unpredictability & Curiosity:** This drive is about the human desire for the unknown, surprises, and curiosity. In the education context, it might refer to incorporating surprises, mystery, and engaging learning materials to stimulate curiosity and exploration, keep students engaged and eager to discover more.

**Loss & Avoidance:** It relates to the drive to avoid negative outcomes, loss, or missing out on something. In education, it can relate to setting up learning experiences whereby negative consequences of some actions are made visible in order to motivate students to stay committed or concentrated on something.

The Octalysis framework uses these core drives to analyze and design experiences whereby a mix of the most relevant motivators can be leveraged to motivate and engage the learner/player. By understanding and incorporating these drives, educators can create more engaging gamified learning experiences.

#### 1.3.4. KEY PRINCIPLES FOR GAMIFICATION.

There are some basic principles that must be implemented in any gamified activity.

In the first place, if educators want to succeed using this type of methodology, they must make a good design of activities by selecting a specific curricular content, applying the pedagogy criteria and analyzing previously the usefulness of the resources that will be applied during the whole process.

As Gamification is based on Behaviourism the learning process follows these stages; observation, action, feedback, response and reward, so by repeating this process several times learners will finally learn, they will get the knowledge.

Regarding the final stage before final learning, the rewards, we can find two different types of rewards. On the one hand, there are extrinsic rewards which are related to all the incentives or the prizes that learners can get out of the action such as points, badges, etc. On the other hand there are intrinsic rewards which are connected with the satisfaction, the experience of performing the action itself. These types of rewards are associated to both kinds of learners' motivation; extrinsic motivation, the motivation which is out of the learner, all the factors that provide pleasure and satisfaction such as points, prizes, etc and intrinsic motivation, the inner encouragement that drives them to perform the action because they like it and feel good.

Flow is an important component in any gamified activity.



It refers to the balance among different factors that allow a good development of the activity. So, in order to get this flow, the activity needs to be a challenge for them, it must not be very complex, the target must be designed in a really clear way and learners need to receive feedback in order to know the quality of their procedure during the activity. If these four elements are not accomplished, flow will not be generated and learners will probably get bored or anxious and finally they will give up. However, if educators succeed and flow is generated, learners will not only learn but also they will have a good time, so we get to another essential principle for gamification that is entertainment.

Finally, gamification also implies emotional factors since in a gamified activity learners can develop a positive dependence because of the different challenges proposed, curiosity due to suggested enigmas or a self-image of themselves (sometimes graphic when they use specific avatars). Moreover, they develop their sense of competence by means of the points achieved and error tolerance because the feedback which they receive is immediate. As a result, and as in every learning process in which senses and emotions are involved, it will attract their attention more easily and knowledge will be acquired better and tightly.

### **1.3.5. BENEFITS AND RISKS OF USING GAMIFICATION WITH OUR TARGET GROUP.**

Gamification and game-based learning have gained popularity as effective methods for engaging learners with intellectual and cognitive disabilities. However, educators approaching to this innovative methodology should be aware of both the risks and benefits associated with its use.

Firstly, they can help learners understand the material more easily by presenting it in a gamified format. Secondly, learners with difficulties often learn best through experiential learning, and the interactive nature of games can facilitate this process effectively. Finally, the engaging nature of gamification can help sustain learners' attention for longer periods, promoting greater involvement in the learning process.

Nevertheless, it is crucial to ensure that the games are feasible and not excessively challenging. Learners may become frustrated if they are unable to succeed in a game that is too difficult for their abilities. Ensuring that the games are appropriately designed and offer a reasonable level of challenge can help maintain motivation and engagement. In connection to this, it is important to consider the complexity of the rules in the games used. Elaborate rules may pose difficulties for learners with disabilities, so straightforward rules shall be preferred.

It is additionally worth noting that an important element in games is the ability to try and retry until success is achieved, without penalizing mistakes.



However, while this can be beneficial for motivation, there is also a risk that learners may become demotivated if they repeatedly fail to succeed. Therefore, it is important to strike a balance and provide appropriate support and guidance to ensure that learners remain motivated even in the face of challenges.

Among other risks to be considered, learners with intellectual disabilities may have difficulty distinguishing between the fun and serious parts of a task. To mitigate this, it is crucial to clearly underline and explain the different aspects of the process. While it is possible to combine fun and serious elements, care should be taken to minimize potential confusion.

Another risk to consider is the use of bright colors, blinking, and changing pictures, as these can pose challenges for learners with sensory sensitivities or some times of epilepsy. It is important to be mindful of these factors and ensure that the visual elements used are appropriate for the learners' needs.

It is then essential to consider the distinction between "white hat gamification" and "black hat gamification" mechanics, as explained above. White hat gamification refers to positive game elements that motivate and engage learners in a constructive manner. On the other hand, black hat gamification involves more subtle and exploitative elements to drive motivation. When designing gamified learning experiences, educators shall be cautious about incorporating black hat gamification elements and ensure a well-balanced approach with white hat gamification.

It is crucial to prioritize a positively-balanced use of gamification motivators to create a safe and inclusive learning environment for learners with intellectual and cognitive disabilities.

## CHAPTER 2

Most used digital tools and platforms.  
Game mechanics and game-based digital  
applications.





# INTRODUCTION

In the previous chapter, we delved into the foundational principles of digital pedagogy and gamification, emphasizing their inclusive role. The implementation of these principles has opened new avenues to engage learners actively, break down barriers to inclusion, and promote quality education.

This Chapter will transition from more theoretical elements to concrete practice, meaning it will present the most common and popular tools and apps that can support the enactment of digital and game-based pedagogy. Digital tools have emerged as powerful support to teaching and learning, a number of resources, tutorials, guides and tips are available on the net for each of them. What we witness is however a lack of guidance and resources when it comes to using these tools in the context of inclusive teaching, when a number of extra considerations and adjustments should be carefully thought about. The effect this void is likely to produce on adult educators might range from fear to reluctance.

face to the use of digital and game-based pedagogy.

The tutorials featured in this chapter serve not only as a bridge between the theoretical underpinnings of inclusive education and the real-world applications but also as a concrete, evidence-based resource for tailoring the most commonly used digital and game-based tools to the unique needs of young adults with cognitive and behavioral disabilities.

We will go through a diverse selection of digital tools, each carefully chosen for their potential to enrich the educational experience for our target group. In section 2.1 Target oriented tutorials will be provided for the following Digital tools: Canva, MiroBoard, Padlet, Jamboard, Mentimeter, Google Meet, Zoom, Google Mail Powerpoint and Liveworksheets. In section 2.2 Target oriented tutorials will be provided for the following Game-based digital applications: Wordwall, Baamboozle, Kahoot, Socrative, Actionbound.

Each tutorial wants to offer a quick yet comprehensive guide to each tool, highlighting considerations that educators and facilitators should be mindful of when using it with young adults with cognitive and behavioral disabilities. More precisely, for every tool, we'll provide detailed information on the following key elements:

1. **Type of Tool:** identifies the category or type of digital tool (e.g., interactive whiteboard, graphic design tool, quiz platform, etc.).
2. **Tutorials Available:** mentions and links which existing relevant tutorials or guides are available on platforms like YouTube or the internet, which can help users to learn how to use the tool effectively.
3. **Key Features:** lists the most important functions and capabilities of the digital tool.
4. **Pros/User-Friendly Features:** highlights the positive aspects of the tool that make it user-friendly and beneficial for educators and learners, especially for young adults with cognitive and behavioral disabilities.

5. **Cons/Non-User-Friendly Features:** points out any drawbacks or challenges associated with the tool, particularly when it comes to usability and the specific needs of the target group. These elements will provide a structured and informative overview for each tutorial in Chapter 2, helping readers understand the tools and their potential in the context of inclusive education.

# DIGITAL TOOLS



# CANVA - TUTORIAL

## Key Features

1. Create new material (documents, interactive board, video, presentations, social media posts and etc.);
2. Simple to use and great-looking;
3. User friendly drag and drop system;
4. Divided by themes/topics;
5. Free;
6. A lot of functions (templates, visualization of information, photo editor, video editor and etc.).

## Type of tool

Canva is an online design and visual communication platform.

## www-tutorial

<https://www.canva.com>

<https://www.canva.com/learn/a-step-by-step-guide-to-designing-from-scratch/>

<https://www.youtube.com/watch?v=Al4yUDMFbw4>

## PROs/User friendly features

1. Easy to log in/sign up;
2. User friendly drag and drop system;
3. Templates (no need to work a lot on a project);
4. Visualization of information;
5. Different templates according to the purpose;
6. Available on Mac OS, iOS, Android, desktop app for Windows 10 and later.

## CONS/User non friendly features

1. Hard to explain the process of downloading/sharing;
2. Too much buttons and pictures in the website;
3. Difficulties in adapting the text and pictures to fit in the templates.



# MIRO BOARD - TUTORIAL

## Key Features

1. Establishing communication;
2. Create and innovate material faster;
3. Make collaboration easier;
4. Centralize and standardize communication;
5. Supports (almost) every file type;
6. Apps for (most) any device.

## Type of tool

Miro is team's visual platform to connect, collaborate, and create together,

## www-tutorial

<https://www.miro.com>

<https://www.youtube.com/watch?v=mNNPchRnDp8&t=111s>

## PROs/User friendly features

1. Easy to log in/sign up;
2. Easy to use;
3. Templates & frameworks;
4. Infinite canvas;
5. Widgets;
6. Mouse over collaboration;
7. Easy screen sharing and presentations;
8. Embedded video, chat and commenting.

## CONS/User non friendly features

1. The actual editing process of the pages is difficult;
2. You can't always tell who added what to a project/board so it can be confusing to know what was changed/by whom.



# PADLET - TUTORIAL

## Key Features

1. Establishing communication;
2. Sharing documents;
3. Easy and intuitive;
4. Universal and inclusive;
5. Supports (almost) every file type;
6. Apps for (most) any device;
7. Beautiful and fun;
8. Private and secure;
9. Flexible and versatile;
10. Personal profile;
11. Search for information and inspiration.

## PROs/User friendly features

1. Easy to log in/sign up;
2. Easy to use (add posts with one click, copy-paste, or drag and drop, works the way your mind works - with sight, sound, and touch, changes are auto saved);
3. Opportunity to share/receive information in an organized way;
4. Available in 42 languages;
5. Upload files from your computer, take a picture or video from your phone, or link from the web;
6. Post images, documents, videos, music, and files from Photoshop, Illustrator, Autocad, and more;
7. Available on iOS (iPhone, iPad, iPod Touch), Android.

## CONS/User non friendly features

1. Need to be able to identify different file formats to upload;
2. Not user friendly, a bit tricky sometimes.

## Type of tool

Padlet is an innovative platform that facilitates communication between teachers and students and works as an online noticeboard. It is a visual board for organizing and sharing content.

## www-tutorial

<https://www.padlet.com>

<https://www.youtube.com/watch?v=qgChcWG6e2g>

[https://www.youtube.com/watch?v=\\_dRr8FOY5p0](https://www.youtube.com/watch?v=_dRr8FOY5p0)

<https://www.youtube.com/watch?v=j0jcxg26onM>





# JAMBOARD - TUTORIAL

## Key Features

1. A digital whiteboard letting collaboration in real time using either the Jamboard device, web browser or mobile app;
2. Make collaboration easier;
3. Work with Google Drive;
4. Sharing documents;
5. Host Video meetings;
6. Collaborate with any device.

## PROs/User friendly features

1. Write and draw with the included stylus and using a mouse or trackpad;
2. Search Google and insert images or webpages;
3. Sketch a box, star, cat, or dragon. Image recognition technology converts your sketch into a polished image;
4. Present your jam or white board to a Google Meet video call to people viewing remotely;
5. Easy to add Google Docs, Sheets, and Slides to a jam;
6. Jam files are automatically saved to Drive. You can view and edit your jams from anywhere with an internet connection. Your jam work saves automatically;
7. Display upcoming Google Calendar events on Jamboard;
8. Tap an agenda item to start a scheduled meeting;
9. Available on Mac OS, iOS, Android.

## CONS/User non friendly features

1. Tools can be a little clunky at times;
2. Sticky notes always appear in the same place, requiring participants to move to a different place on the Jamboard in order to see all notes created;
3. Large amounts of users may have trouble editing the same board at once;
4. Those unfamiliar with Google programs may need additional support.

## Type of tool

Jamboard is a digital whiteboard that lets you collaborate in real time using either the Jamboard device (a 55-inch digital whiteboard that works with G Suite services), web browser or mobile app. It is important to mention that in January 2024 this digital tool will be replaced.

## www-tutorial

<https://jamboard.google.com>

<https://www.youtube.com/watch?v=S9m4HCjOkcA>

<https://www.youtube.com/watch?v=6aQ5OBAV8n8>



# MENTIMETER - TUTORIAL

## Key Features

1. Enables the creation of live polls or surveys;
2. Provides tools to help the presentation experience for both user and audience, including voice over narration and a presenter-only view with notes and annotations;
3. Provides a variety of slide design tools, such as animations, icons and transitions;
4. Displays real-time student responses to questions an instructor asks during a live class or event;
5. Contains gamification tools, including but not limited to badges, leaderboards, and point scoring;
6. Facilitates the crowdsourcing, moderation, and upvoting of audience questions;
7. Enables users to create surveys through a simple drag-and-drop or WYSIWYG editor;
8. Allows for creation of surveys in different languages and advanced survey translation;
9. Includes features to support hybrid or virtual events.

## Type of tool

Digital platform tool

## www-tutorial

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

<https://www.youtube.com/watch?v=VpbXY98R39c>

[https://www.youtube.com/watch?v=4o-QrC\\_TpgI](https://www.youtube.com/watch?v=4o-QrC_TpgI)

## PROs/User friendly features

1. Involvement of the target group engaging and visually appealing;
2. Concern with inclusiveness: high-contrast mode and screen reader compatibility;
3. Real-time feedback in the learners interactions.

## CONS/User non friendly features

1. The need to follow instructions and access information from two different sources/devices at the same time (smartphone/projector);
2. Difficulty in navigate the platform or use the device to access the platform;
3. "Overstimulation".



# GOOGLE MEET - TUTORIAL

## Key Features

1. A variety of free features;
2. The virtual meeting background, which allows you to create a more professional background when you're conducting a meeting;
3. App Integration (Google Meet integrates seamlessly with Gmail, Google Calendar, and Microsoft Office apps);
4. Compatible Across Devices (Google Meet works on computers, tablets, Android, and Apple devices);
5. Live Captioning (Automated live captions provide another way for participants to follow along in meetings);
6. Messaging (Messaging during calls allows you to share files and links without interrupting the speaking person);
7. Screen Sharing (Share your screen with other participants with ease);
8. Unlimited Number of Meetings (Create an unlimited number of meetings with 100 participants each);
9. Video and Audio Preview Screen (After clicking on a meeting link, you'll have time to adjust your video and audio settings before entering the meeting).

## PROs/User friendly features

1. Free for all Google users;
2. Easy to use. Joining a meeting is as simple as clicking or tapping a link. Creating a meeting is also simple;
3. Does not need to be installed on the PC;
4. Google document sharing (documents, spreadsheets, presentations);
5. Ability to join meetings through a web browser or through Android or iOS apps.

## CONS/User non friendly features

1. The application only allows for sharing one screen at a time;
2. Application does not allow waiting rooms that give the host complete control over when someone joins the meeting;
3. Google Meet also doesn't feature an in-app whiteboard;
4. Video recording, are behind a paywall.

## Type of tool

Google Meet is a video communication service developed by Google.

## www-tutorial

[https://support.google.com/a/users/answer/9282720?hl=lt&ref\\_topic=7306097&sjid=16318524706340764705-EU&visit\\_id=638253635286172796-651247456&rd=1#get-started](https://support.google.com/a/users/answer/9282720?hl=lt&ref_topic=7306097&sjid=16318524706340764705-EU&visit_id=638253635286172796-651247456&rd=1#get-started)



# ZOOM - TUTORIAL

## Key Features

1. Joining and Hosting Meetings: a. Via Meeting ID: If you're invited to a meeting, you'll receive a unique Meeting ID. Click "Join" in the Zoom app, enter the Meeting ID, and click "Join Meeting." b. Via Link: Click on the Zoom meeting link sent to you, and it will automatically open the Zoom app and join the meeting;
2. Hosting a Meeting: a. Click "Host a Meeting" on the Zoom app's home screen. b. Choose between "With Video Off" or "With Video On," depending on whether you want to start with your camera on or off. c. Invite Participants: You can invite participants by sending them the Meeting ID or sharing the meeting link through email, messaging apps, or calendar invites;
3. Zoom Etiquette and Tips: a. Be Punctual: Join meetings on time to show respect for other participants' schedules; b. Maintain Professionalism: Dress appropriately and maintain a professional background if possible; c. Stay Engaged: Be an active participant by asking questions, responding to others, and using non-verbal cues like nodding and thumbs-up.

## PROs/User friendly features

1. One-Click Join: Zoom's "One-Click Join" feature allows participants to join meetings with incredible ease. Whether they receive a meeting link or have the Meeting ID, joining a Zoom meeting requires just a single click;
2. Intuitive Interface: Zoom boasts an intuitive and user-friendly interface. The layout is clean and easy to navigate, with essential controls prominently displayed. Functions like muting/unmuting your microphone, starting/stopping your video, and sharing your screen are readily accessible during a meeting.

## CONS/User non friendly features

1. Meeting Fatigue and Zoom Exhaustion: While not a specific feature of Zoom itself, the platform has been associated with the phenomenon of "Zoom fatigue" or "meeting fatigue";
2. Limited Recording Duration (Free Plan): On the free Zoom plan, users have access to the recording feature, but there's a limitation on the recording duration. The recording is automatically stopped after 40 minutes for group meetings with three or more participants.

## Type of tool

Meeting platform

## www-tutorial

<https://www.youtube.com/watch?v=QOUwumKCW7M>



# GOOGLE MAIL - TUTORIAL

## Key Features

1. Spam filtering. Gmail uses advanced technologies to keep spam out of your inbox. Most spam is automatically sent to a separate spam folder, and after 30 days it is deleted;
2. Conversation View. An email conversation occurs whenever you send emails back and forth with another person (or a group of people);
3. Built-in chat. Instead of sending an email, you can send someone an instant message or use the voice and video chat feature if your computer has a microphone and/or webcam;
4. Call Phone. This feature is similar to voice chat, except that it allows you to dial an actual phone number to call any phone in the world. It's free to make a call to anywhere in the United States or Canada, and you can make calls to other countries at relatively low rates.

## Type of tool

Google mail (Gmail) is a free email service provided by Google.

## www-tutorial

[https://www.youtube.com/watch?v=OD7H4p\\_luvs](https://www.youtube.com/watch?v=OD7H4p_luvs)

## PROs/User friendly features

1. Free and easy to use;
2. Spam protection. This can help to keep your account secure and your inbox organized;
3. Gmail allows you to customize your inbox with themes, labels, and filters;
4. Can be accessed from any device with an internet connection, including smartphones and tablets;
5. Gmail is integrated with other Google services, such as Google Drive and Google Calendar.

## CONS/User non friendly features

1. Limited storage;
2. A large number of users of Gmail and the users have no freedom of choosing their own username.



# POWERPOINT - TUTORIAL

## Key Features

1. Write here a list of features
1. Getting Started: Open PowerPoint and select a slide layout that suits your presentation style. Typically, the Title Slide layout is a good starting point. Add a title and, if needed, a subtitle to introduce your presentation's topic.
2. Adding Content: Use the provided content boxes on the slide to add text, images, and other media. Simply click on a content box to start typing or use the "Insert" tab to add images, shapes, charts, and multimedia.
3. Slide Design and Formatting: Customize the slide design by selecting a theme from the "Design" tab.
4. Slide Transitions and Animations: Make your presentation more engaging by adding slide transitions and animations. Access these features from the "Transitions" and "Animations" tabs. Apply subtle transitions between slides and use animations to reveal elements one by one during your presentation.
5. Organizing and Reordering Slides: Use the "Slides" pane on the left to organize and reorder your slides. You can add, duplicate, delete, or rearrange slides easily to create a logical flow for your presentation.
6. Presentation Delivery: Before presenting, enter the "Slide Show" mode to see how your presentation will appear to the audience. You can navigate through slides using arrow keys or mouse clicks.

## PROs/User friendly features

1. Intuitive Interface: PowerPoint has a straightforward and familiar interface, making it easy for both beginners and experienced users to navigate and use the software effectively;
2. Customizable Themes and Styles: Users can easily customize the appearance of their presentations by selecting different themes and applying various styles, colours, and fonts to match their preferences or branding;
3. Animation and Transition Effects: Users can easily add animation and slide transition effects to their presentations, enhancing the visual engagement and keeping the audience interested.

## CONs/User non friendly features

1. Complex Formatting: While PowerPoint offers a range of formatting options to create visually appealing slides, some users might find the formatting process complex and time-consuming, especially when trying to achieve precise alignment or design elements;
2. Audio and Video Compatibility: PowerPoint might have limitations in handling specific audio and video file formats. Users may need to convert or optimize media files before embedding them into presentations.

## Type of tool

Presentation and gamification tool

## Target group

Learners

## www-tutorial

[www.youtube.com/watch?v=XF34-Wu6qWU](https://www.youtube.com/watch?v=XF34-Wu6qWU)





# LIVE WORKSHEETS - TUTORIAL

## Key Features

1. Interactivity: LiveWorksheets allows teachers to create engaging and interactive learning materials that go beyond traditional static worksheets;
2. Feedback: Teachers can provide immediate feedback to students, making it a useful tool for formative assessment;
3. Customization: Educators can customize the content and design of worksheets to suit their specific teaching needs and objectives;
4. Accessibility: Students can access these worksheets from a variety of devices, such as computers, tablets, and smartphones;
5. Sharing and Collaboration: Teachers can share their worksheets with colleagues and collaborate on creating resources.

## Type of tool

LiveWorksheets is an online platform that allows educators to create interactive worksheets and activities for their students.

## www-tutorial

<https://www.liveworksheets.com/>

<https://www.youtube.com/@LiveWorksheets>

## PROs/User friendly features

1. It can be used as assessment or evaluation tool;
2. It gives the evaluation quickly;
3. The tasks are interactive.

## CONS/User non friendly features

1. It requires a stable internet connection and students have to work online;
2. Creating an effective task can be time-consuming, required some time and practice.

# GAME-BASED DIGITAL APPLICATIONS



# WORDWALL - TUTORIAL

## Key Features

1. Wordwall provides teachers with a user-friendly interface to create engaging and interactive activities for their students. You can design activities such as quizzes, word searches, matching games, crossword puzzles, flashcards, and more. The platform offers a range of templates and customization options, allowing teachers to tailor activities to their specific needs;
2. Wordwall has a vast library of pre-made activities created by teachers from around the world. Teachers can search and browse through the library to find activities suitable for their lessons, or they can modify and customize existing activities to fit their specific requirements;
3. Wordwall supports collaborative learning by enabling teachers to create activities that promote student interaction. For example, teachers can design team-based quizzes or word-building games that encourage students to work together. The platform also allows for live participation;
4. Wordwall offers built-in assessment features that allow teachers to track student progress and performance. Teachers can generate reports to evaluate individual student performance or gain insights into overall class performance. This feature helps teachers identify areas where students may need additional support and adjust their instruction accordingly.

## PROs/User friendly features

1. Intuitive Interface: Wordwall has a user-friendly interface that makes it easy for teachers to navigate and create activities;
2. Extensive Activity Options: it offers a wide variety of activity types, including quizzes, games, puzzles...;
3. Collaborative Learning Opportunities: Wordwall promotes collaboration among students by allowing teachers to create interactive activities that encourage teamwork.

## CONS/User non friendly features

1. Limited Free Features: it has certain limitations on the number of activities that can be created or accessed;
2. Limited Customization in Pre-made Activities: Wordwall offers a library of pre-made activities, but the level of customization available for these activities may be limited;
3. Wordwall primarily operates as an online platform, and therefore, it requires a stable internet connection for usage.

## Type of tool

Gamification Digital Tool

## www-tutorial

<https://www.youtube.com/watch?v=Zkcz-OPZLEA>



# BAAMBOOZLE - TUTORIAL

## Key Features

1. Creating a Bamboozle Game: To start using Bamboozle, first, go to the Bamboozle website and sign up for an account. Once logged in, click on "Create" to begin making your interactive game. Give your game a title and select the type of game you want to create (e.g., quiz, bingo, memory match, etc.);
2. Adding Questions and Content: Customize your Bamboozle game by adding questions, content, or challenges. For example, in a quiz game, you can enter multiple-choice or true/false questions along with their respective answers. In a memory match game, you can upload images and match them with their corresponding pairs;
3. Designing the Game Board: Bamboozle provides various templates and customization options to design your game board. You can choose colors, themes, and fonts to match your game's style or subject. Personalizing the game board will make it more engaging and visually appealing to participants;
4. Playing the Game: Once your Bamboozle game is ready, you can start playing it with your audience. You can share the game's unique link or code with participants, and they can access it on their devices (e.g., smartphones, tablets, or computers). As the host, you can project the game on a screen or share your screen during virtual sessions;
5. Engaging Participants and Scoring: During the game, participants will respond to the questions or complete challenges based on the game type. Bamboozle keeps track of participants' scores in real-time, adding a competitive element to the experience. After the game, you can review the results and celebrate the winners.

## PROs/User friendly features

1. Intuitive Game Creation: Bamboozle provides an easy-to-use interface for creating games. Users can quickly set up games by adding questions, content, and customizing the game board without any technical expertise;
2. Pre-made Templates: The platform offers a variety of pre-made templates for different game types, such as quizzes, bingo, memory match, word search, and more. These templates help users get started quickly and save time in designing the game from scratch;
3. Real-time Scoring and Leaderboards: During the game, participants' scores are updated in real-time, providing a dynamic and engaging experience.

## CONS/User non friendly features

1. Limited Free Plan: Bamboozle offers a free plan with basic features, but some advanced functionalities may require a paid subscription. Users on the free plan might feel limited in terms of the number of games they can create or the customization options available to them;
2. Limited Question Types: While Bamboozle supports various game types, the platform may have limitations in terms of the question types it supports. For example, it might not offer more complex question formats like matching or fill-in-the-blank, which could be desired for certain educational purposes.

## Type of tool

Gamification tool

## www-tutorial

<https://www.youtube.com/watch?v=usH0hHhGRhQ>



# KAHOOT! - TUTORIAL

## Key Features

1. You can create quizzes in a few minutes;
2. You can add YouTube videos into questions;
3. Learners can play with ease at home or in the classroom;
4. Learners can play both individually or in groups;
5. Users can keep time flexibility in mind according to the level of the questions;
6. Attention is created through true/false questions;
7. Kahoot trainers can download reports in a spreadsheet;
8. Individualized learning is possible;
9. Kahoot trainers can blend multiple questions into one form, i.e., quizzes, polls, puzzles, and slides;
10. You can create games according to the potential of the students;
11. You can assess the understanding of students learning through the option of puzzles;
12. The quizzes can be created and shared by many trainers amongst themselves.

## PROs/User friendly features

1. A safe competitive environment;
2. The curiosity that the images, sounds and problems presented raise;
3. The challenge for the student to reach adequate answers to the questions posed;
4. Motivation raised by the points given after each question and the rank provided.

## CONS/User non friendly features

1. The need to allocate proper time to answer in order to avoid stress;
2. Kahoot! may be difficult to use for students with visual or hearing impairments;
3. Kahoot! may be less effective for teaching complex concepts;
4. The teacher does not have a "room" number, thus, a different number is assigned to each activity, which the student will have to enter on their device.

## Type of tool

Game-based Digital Learning Platform.

Creators create and display questions on the screen, and the learners answer them with the help of a smartphone, tablet, or computer.

## www-tutorial

<https://kahoot.com/>

<https://www.techprevue.com/kahoot/>

<https://www.youtube.com/watch?v=KJgZZQcsSPk>

<https://www.youtube.com/watch?v=rnNCBZY3Yg8>



# SOCRATIVE - TUTORIAL

## Key Features

1. Can be accessed from Windows, Apple, and Chrome and also usable in smartphones, tablets, and mobile phones; no downloads are required;
2. Learners do not need to create accounts; teachers invite learners via a URL into a room to access the platform;
3. Quick Question allows students to answer a multiple choice, true/false, or open-ended question in real-time;
4. The site requires all teachers to create a free account;
5. Space Race allows teachers to design a quiz so that either individual students or student teams can compete with another.

## Type of tool

Game-based Digital Tool

## www-tutorial

<http://www.socrative.com/>

<https://www.youtube.com/watch?v=46ptcGPSbxk>

## PROs/User friendly features

1. Flexibility: it works as an assessment tool, as an in-class practice tool, and as an out-of-class practice tool;
2. A very valuable tool for remote teaching;
3. Allows trainers to create rich quiz-type content and engage all learners through quick formative assessment questions;
4. Healthy team competitions.

## CONS/User non friendly features

1. The difficulty in platform navigation and using devices to access the platform;
2. One-way communication tool, which may not be suitable for learners with disabilities who may need more personalized support;
3. The graphic design is not appealing;
4. While images can be uploaded to a quiz, there is no support for audio or video files.





# ACTIONBOUND - TUTORIAL

## Key Features

1. Creating a Bound: To get started with Actionbound, sign up for an account and log in. Click on "Create Bound" to begin making your interactive activity. Give your Bound a title and description to provide participants with an overview;
2. Adding Tasks and Elements: Customize your Bound by adding various tasks and elements. You can include text to provide instructions or information, insert images or videos for visual content, incorporate audio files, and set up quizzes or puzzles to challenge participants;
3. Location-Based Tasks: Make your Bound interactive and engaging by adding location-based tasks. Enable GPS-based tasks that require participants to visit specific locations to complete the challenges. You can set up questions or actions tied to these locations, enhancing the real-world experience;
4. Virtual Bounds: Extend the reach of your Bound by creating virtual tasks. Participants can complete these tasks remotely without physically visiting specific locations. This feature adds flexibility for a broader audience to participate in your activity;
5. Customization and Sharing: Customize the appearance of your Bound by selecting design templates, adding your branding elements, and choosing colors and fonts. Once your Bound is ready, you can share it privately with specific participants or publicly with a wider audience. Share the Bound's unique code or QR code for easy access.

## PROs/User friendly features

1. Intuitive Interface: Actionbound provides a user-friendly interface that is easy to navigate and understand, making it accessible for both beginners and experienced users;
2. Bound Creation Wizard: Actionbound offers a step-by-step bound creation wizard that guides users through the process of creating their own interactive scavenger hunts or digital tours. The wizard simplifies the creation process and ensures that users can easily add elements such as tasks, clues, questions, and multimedia content to their bounds.

## CONs/User non friendly features

1. Steep Learning Curve: While Actionbound provides a user-friendly interface, some users may find the initial learning curve to be steep, especially if they are not familiar with similar interactive platforms or have limited technical expertise. The abundance of features and customization options may require some time and effort to fully grasp;
2. Limited Design Customization: Actionbound offers templates and customization options, but the level of design customization available within the platform may be limited for users with specific design preferences or branding requirements.

## Type of tool

Gamification Tool, educational Game, city game, digital scavenger hunts.

## www-tutorial

[https://www.youtube.com/watch?v=t\\_sQkCCjm8c](https://www.youtube.com/watch?v=t_sQkCCjm8c)



## CHAPTER 3. LINK DESIGN APPROACH TO DIGITAL AND GAMIFIED LEARNING ACTIVITIES

### 3.1. INTRODUCTION

In this chapter, we will discuss the methodological approach employed in the LINK Adult Education Course on digital and employability skills to design and implement activities. In first place we will be tracing the foundation of LINK design approach, to then show how the approach adopted was responding to specific needs of the project target groups. We will then detail how concretely LINK course was structured thereof, providing a useful guide to support adult educators with its implementation. Finally we will give hints on how to tailor and adapt this approach to other settings.

As said, the LINK approach main aim was catering to the specific needs of educators and young adults with behavioral and cognitive disabilities. Recognizing the need for more flexible and inclusive learning paths, LINK project followed a 4-step roadmap to define a suitable learning design approach.

#### Step 1: Background and LINK Course

The LINK project was born from a realization that the pandemic context had deepened educational disparities, making it crucial to establish more adaptable and inclusive learning approaches. The LINK course, structured as a modular curriculum, addresses the specific needs of young adults aged 19-24 with behavioral and cognitive disabilities. By providing a flexible and tailored learning experience, the project

to equip these young adults with essential digital and employability skills to enhance their prospects in the job market.

#### Step 2: Learning Objectives

At the core of the LINK project are the Learning Objectives (LO) that represent the general aims from a teacher's perspective. The LOs set the overarching goal of each Skill Unit in the curriculum. A single LO can have multiple outcomes, allowing educators to adapt the activities and assessment methods to suit the diverse learning needs of the target group.

#### Step 3: Learning Outcomes (LO)

The third step of the roadmap involves defining Learning Outcomes (LO) that represent the specific, concrete and realistic outputs expected from learners. These outcomes are derived from the Learning Objectives and provide clear guidelines for educators to assess learners' achievements. Each Skill Unit in the curriculum is associated with a set of distinct learning outcomes, indicating the competencies young adults should prove at the end of their learning journey.

#### Step 4: Designing activities

In the final step, the project takes a step back to center once again on the target group and their educational journey. Understanding the journey of the target group allows the project team to design activities that resonate with the learners' experiences, interests, and challenges. By



emphasizing active methodologies, the LINK course encourages engagement and empowerment along this educational journey. As the young adults progress through the modules and Skill Units, they encounter various activities that cater to their individual needs, fostering a sense of accomplishment and self-esteem.

It is only by viewing education as a journey with its protagonists - young adults with behavioral and cognitive disabilities - as surrounded by a network including families educators and other individuals involved in their learning progress, that it was possible to start designing activities. In the next sections we will focus on the main focus points of LINK design approach and methodology, namely, the needs of the target groups, the modular approach of the LINK course, the creation and implementation of activities (and in particular the use of the activity chart) to only at the end provide concrete usable tools and tips for adaptation of the LINK approach and instrument to different target groups.

### 3.1.1. TARGET GROUPS

The target group of the LINK course comprises two key stakeholders: educators and young adults with behavioral and cognitive disabilities.

**a. Young Adults.** When designing the curriculum, the project team recognized the importance of tailoring the content to address the unique needs and abilities of young adults with behavioral and cognitive disabilities. Inside such group,

learning needs, potential and difficulties face to education and instruction might be very different, hence the impossibility for one single product to fit such a big and diverse audience. Nevertheless, some common patterns among the target group have been observed in terms of learning preferences, such as that learners excel in practical matters, and abstract or complex concepts might require additional time and concrete examples to grasp effectively. After first drafting the activities to be included in the course, LINK followed the following principles in order to tailor them for reaching the widest possible target audience.

- Resizing: Most games and activities dynamics were simplified after the first draft, resizing both the content and pace to suit a widest range of learning capabilities. The learning materials and activities needed to be carefully structured to provide sufficient time for comprehension and assimilation.

- Timing: The time needed for the completion of the activities can be different for every target group, the project team stressed the importance of allowing ample time for learners to process information and practice new skills at their own pace. To meet these needs the amount of activities in each Skill Unit is relatively little and, as explained in 3.3.1 the distinction between introductory, instruction and follow-up activities, allow adjustment in the pace and timing.

- Practicality: As the primary objective is preparation for the labor market, the course emphasizes practical skills that are directly applicable to real-world job



scenarios. The use of real-life examples and hands-on experiences enhances indeed understanding.

·**Logic:** Incorporating logical reasoning that aligns with the learners' abilities and cognitive processing.

**b. Educators.** The educators targeted by the LINK course play a critical role in facilitating the learning process. They act as instructors and guides, helping young adults build digital and employability skills. As such, the methodological approach takes into consideration the diverse teaching styles, needs, and capabilities of educators, ensuring that they can effectively implement the activities and support the learning objectives.

Inside such group, learning needs and potential might be very different, hence the implementation of the course cannot escape the need for a tailored approach, which require adult educators to carefully consider adaptation of the content and material concerned. In order to make it flexible and tailorizable, several arrangements have been taken to answer the needs of educators (which will be more exhaustively explained in section 3.2):

**-Modular approach and Skill Units.** The modular approach allows educator to pick only a portion of the whole LINK course, always making sure to be delivering an independent and “complete” learning experience that is relevant for learners. Each module has then its own Skill Units, small portions of learning experience connected to one of few learning objective which is in turn focused on concrete skills (hence the name Skill Unit).

**-Pre-knowledge.** The specification of the pre-knowledge in each Skill Unit immediately gives educator an idea of whether the entry requirements and skills requested for implementing a specific Skill Unit fit their target group or not.

**-Canva templates.** The use and provision of Canva templates for the supporting materials, provides educators with a structured idea of how that material could look like but leaves them the possibility of partially changing and adapting them according to the needs of each different target group.

**-Tips for educators.** In most activity charts, tips for educators are provided to take into account different scenarios and give concrete suggestions for implementation or adaptation.

**-Target-oriented tutorial.** Innovative tool tutorials are provided in Chapter 2 for educators to acknowledge potential pitfalls and risks of using the ICT or game-based tools picked for a specific activity with the target group.

By focusing on the needs of both educators and young adults, the LINK project ensures a well-rounded and impactful learning experience. Empowering educators with the necessary resources and support enhances their ability to cater to the unique learning requirements of the target group. As the young adults progress through the curriculum, they benefit from tailored content and activities that nurture their practical skills and abilities, ultimately preparing them for successful integration into the labor market. The holistic



approach of the LINK project aims to foster a more inclusive and supportive educational environment, where educators and young adults collaborate to achieve meaningful learning outcomes.

### 3.1.2. ACTIVE METHODOLOGY: INTEGRATION OF GAME-BASED AND ICT-MEDIATED LEARNING ACTIVITIES

The methodological approach employed to develop LINK activities is centered around active learning methodologies, namely game-based and ICT-mediated learning activities. These can play a vital role in engaging young adults and enhancing their learning experiences, as they offer a dynamic and interactive learning environment that fosters motivation and participation.

The incorporation of game-based and ICT-mediated learning activities required careful consideration during the design and development stages. The project team had to take into account the target group's specific needs and abilities to ensure that the activities were well-tailored to the widest possible audience. Knowledge retention and skill development were at the core of the activities design.

When implementing active methodologies, it was essential to consider potential pitfalls that might arise, especially when using digital and game-based pedagogy. The project team has identified and analyzed these challenges, aiming to equip educators with strategies to mitigate risks and maximize the benefits of these approaches. Understanding the potential challenges beforehand allows educators to proactively address them and ensure a smooth learning experience for the young

adults. Additionally, from a technological perspective, practical issues, such as software compatibility and accessibility, should be addressed to ensure a seamless learning experience for the young adults.

### 3.2. THE LINK COURSE: GENERAL STRUCTURE AND USAGE GUIDE

This paragraph provides a short user guide to the LINK Adult Education Course on digital and employability skills, accessible at INSERIRE LINK. A carefully structured modular format and a strong emphasis on concretely achievable Learning Objectives and Learning Outcomes are visible markers of the LINK course, with the goal of ensuring flexibility and meaningful learning experiences.

LINK Course is organized into **5 Modules**, tailored to address relevant skill development requirements of the learners, as follows:

- First Digital Steps
- Navigating Useful Programs and Apps
- Communicating in the Digital Era
- Entering the Job Market
- Soft Skills for the Job Market

Each Module consists of two or three **Skill Units** that can be delivered as independent short courses. The whole modular structure is available in the [https://eulinkproject.weebly.com/uploads/1/0/2/5/102510630/table\\_link\\_course.pdf](https://eulinkproject.weebly.com/uploads/1/0/2/5/102510630/table_link_course.pdf) and allows for flexibility and customization, enabling educators to adopt a pick and mix method according to their own target group needs.

Each Skill Unit is designed to address specific learning objectives and outcomes related to digital and employability skills. The curriculum incorporates innovative digital pedagogy and gamification





mechanics, making the learning experience more engaging and effective for the target group. More specifically, each Skill Unit includes:

- A short background** – essential context and information about the skills being covered and relationship with the job market

- Learning objectives and learning outcomes** – a clear understanding of the skills, knowledge, or competencies that will be gained

- Pre-knowledge** – prerequisite knowledge or skills that learners should have before starting the skill unit

- Indicative content** – topics and key concepts being covered

- Teacher-led and teacher-backed activities** – a brief description of the activities that could be implemented to reach the Skill Unit objectives, each linking to a detailed activity chart (whose description is provided in Paragraph 3.3.1)

- Assessment method** – formative assessment strategies and tools to evaluate learners' understanding and mastery of the content

In order to understand the connection between the learning outcomes and the activities, we have coded each learning outcome in the following way, e.g. 3.1.3 (Module 3, Skill Unit 1, Learning Outcome 3). In the overview of teacher-led and teacher-backed activities, each activity name is followed by the coded number for a specific learning outcome.


The course is designed to last 200 hours, including 140 hours of teacher-led instruction and 80 hours of teacher-backed instruction (more details on this

distinction is provided in Paragraph 3.3.1).

### 3.3. THE ACTIVITY CHART

The following activity chart is an example of the distribution of the items and elements that must be taken into account in each teacher-led and teacher-backed activity of the LINK course. According to this, we will analyze the diverse types of activities that can be found in the curriculum, the learning outcomes and the necessary support for their implementation. Finally, we will focus on a guide for facilitation of both teacher-led and teacher-backed activities.

Example of an activity chart for a teacher-led task.



## DO YOU KNOW MY FAMILY?

**Activity type:** Face-to-face. Follow-up

**Topics and content:** Word and its formats

**Learning outcomes:** 2.1.1 The learner is able to underline, use different fonts, sizes, colours and bold types in a Word document.

**Target group:** e.g individual activity

**Material**

Physical materials: laptop or desktop computer with mouse, keyboard and monitor

**Additional resources**

Space for links to video or documents to go deeper into the topic

**Step by step process**

1. The learner starts the word processor program.
2. The learner writes the activity title in capital letters selecting font, size and bold.
3. The learner changes the text's font, size and colour to write a first paragraph indicating the name, surname, age and hobbies.
4. The learner repeats this process three times to write about three members of the student's family.
5. The learner selects the names and surnames with the mouse and put them in bold
6. The learner selects each hobby in the text and underline them in the text.

**Debriefing**

Write discussion questions here to help your students process the activity they just did.

Am I able to select part of the text with the mouse?  
Do I write texts in upper and lower case?  
Can I change the font of a text?  
Am I able to create texts in different colours and sizes?

**Tips**

Check that the computer equipment to be used works and has the word processor installed.  
Make sure that the students are able to find the necessary buttons and tools in the program interface to carry out the activity.

**Connections with other activities**

Activity "Who is who?" Module 1. Submodule 1.2. Basic File Functions

Example of an activity chart for a teacher-backed task.



## THIS IS ME!

**Activity type:** Online. Evaluation

**Topics and content:** Word and its formats

**Learning outcome:** Learners are able to underline, use different fonts, sizes, colours, in a Word document. Students are able to delete, copy and paste in a Word document. Students are able to use different margins, orientation and alignment. Learners are able to insert a table into the document and insert an image into the table..

**Target group:** Individual activity

**Material**

Physical material: laptop or desktop computer with mouse, keyboard and monitor. Projector

**Additional resources**

**Step by step process**

- Write down here a list of steps to implement the activity: e.g.
- Create a Word document.
- Go to page layout and set up the margins of the document with a 3 cm alignment for each side (top, bottom, right and left).
- In this document write three paragraphs.
- Fill in the first paragraph with personal information (age, family, friends, hobbies).
- In the second paragraph write information about your town or city of residence.
- In the same paragraph insert a table with different cells and insert in them two pictures of the most touristic places in your town or city.
- In the third paragraph write information about a tourist destination you would like to go to, insert a table and insert two pictures of that place.
- At the beginning of the first paragraph write your name in bold and in the second paragraph write your name in bold.
- At the beginning of the second and third paragraphs write the names of the corresponding places in italics and underlined.

**Driving questions**

- Where should I go to open word documents?
- Which tab should I open to change the margins in a document?
- Which browser should I use to search for information?
- Which tab should I open to create a table?
- How can I copy an image from the internet?
- How can I paste an image into a table?
- Which tab should I open to make the font bold, underline and italicise it?





### 3.3.1. ACTIVITIES

#### Teacher-led versus teacher-backed activities

Firstly, the activities of our curriculum are divided into two main categories, on the one hand teacher-led activities and on the other hand teacher-backed activities.

This distinction was initially meant to be the expression of the traditional binomial of **blended education**: the integration of face-to-face and online learning. However, based on the project's evolution and consideration of the challenges faced by the target group, the project team decided to marry the increasing demands of blended learning environments with the strong need for more in-person interaction of the target group, thus reimagining the nature of online activities to be more in line with the in-person experience.

The following distinction follows:

- **Teacher-led activities** are done in the classroom with the teacher as an instructor and educator. The teacher elicits information from students, instructs, teaches, guides, monitors, supports and corrects students when it is necessary during the teaching-learning process. The number of hours allocated to this kind of instruction have been increased.

- **Teacher-backed activities** were initially intended to be conducted remotely by learners using a specific platform. However, during the evolution of the project we realized that we were very optimistic and we started to be aware of all the problems and barriers that could

appear, especially with our target group. Therefore, these activities were shifted to a learning situation that does not require facilitators to lead the whole class but that still could benefit from the presence of an educator that could back the individual learning process, either inside or outside the classroom setting. This adjustment allows the teacher (or another educator) to be present to monitor and provide guidance to students while they complete the tasks.

The title of each activity is accompanied by an icon that identifies whether the activity is:

-teacher-led



-teacher-backed



This methodological distinction entails a significant difference in terms of the facilitation process, which we will talk about in Paragraph 3.3.4.

Apart from this division of activities into these two main groups, in our curriculum there are different types of activities according to the objective to achieve.

#### Introduction activities

They are teacher-led activities which prepare learners before the instruction and appear at the very beginning of the Skill Unit. By means of them, the students are asked about their previous knowledge and they are provided with essential information to begin the Skill Unit. They also enhance their motivation towards the contents that will be learnt.



These introduction activities are presented by means of online quizzes or surveys using platforms and apps such as Mentimeter, Socrative or Kahoot.

### **Instruction activities**

They are teacher-led activities that appear after the introduction activities mentioned earlier and they support the learning process by means of visual examples and practicing. The instruction must be done by putting into practice short exercises that belong to a longer process until the learner assimilates the mechanism of the task and follows the steps without any doubt or problem. Therefore, these short tasks must be done several times in order to internalize the process.

### **Follow-up activities**

They can be teacher-led or teacher-backed activities and they constitute the end of a process formed by small chained tasks in order to achieve a bigger objective by doing a longer task. The objective of this type of activity is to know if the learner is autonomous when they want to aim a specific goal. If the activity is backed, the educator must provide driving questions that guide the process to follow in order to help students accomplish the tasks and achieve the goal.

### **Evaluation activities**

They are usually teacher-backed activities as, at this point, learners must be completely autonomous in order to manage to do a specific activity and achieve a specific goal. They always appear at the end of each Skill Unit and

contain all the previous learning outcomes in only one activity. By doing it properly we understand that the learner has achieved all the learning outcomes and the learning objective of each specific Skill Unit.

### **Individual versus group activities**

According to the different types of activities previously mentioned, in our curriculum there are individual and group activities. Introduction and sometimes follow-up activities are group activities as partners' contribution to complete the task helps, motivates and makes them be aware of the sense of belonging to a group with a common objective. These group activities help them be more relaxed in case of failure.

Individual activities are more exigent and they appear in instruction, evaluation and sometimes follow-up activities. They are quite necessary during the teaching-learning process since they help them be autonomous in order to accomplish any task of each Skill Unit.



### 3.3.2. LEARNING OBJECTIVES AND LEARNING OUTCOMES

Two important and essential elements in every Skill Unity are the learning objectives and the learning outcomes because they configure the results of the teaching-learning process and the course itself.

The **learning objectives** are the concrete expression about what students should be able to know as a result of the teaching, the learning and the activities done during each Skill Unit.

The learning objectives in our curriculum are divided and separated according to the different Skill Unit. So, there are different learning objectives in every one as they have different contents.

On the other hand, the **learning outcomes** are the specific tasks based on the learning objectives that any learner of the course must be able to do at the end of every Skill Unit in order to achieve the learning objectives. Therefore, for every learning objective in a single Skill Unit, we can find three, four or five specific learning outcomes. For example, in Module 2 Navigating and useful programs and Apps the learning objective for Skill Unit 2.1 is this module will teach how to do basic word processing of a text and according to this objective, the learning outcomes are the learner is able to underline, use different fonts, sizes, colours and bold types in a Word document, the learner is able to delete, copy and paste in a Word document or the learner is able to use different margins, orientation and alignment.

### 3.3.3. SUPPORT FOR IMPLEMENTATION.

In order to implement our curriculum activities, each single activity template specifies the materials, tools and the step by step process needed in order to accomplish every task.

#### **Materials and Tools**

Physical material: laptop or desktop (with monitor, keyboard and mouse), projector, screen (or digital board) and printer.

Link to activities: When necessary, printed material on paper will be needed, so the link to the activity will appear in the activity chart as well as the link to some online activities such as Kahoot or Socrative surveys or quizzes.

Software: Word and Powerpoint.

Digital Tools: Canva, Genially, Padlet, Symbaloo, Google Drive, Mentimeter and Live Worksheets.

Game-based Tools: Socrative, Bamboozle, Quizlet, Action Bound and Wordwall.

#### **Additional Resources**

In some activities of our course there are some youtube videos that support the information about the tool that will be used during the specific activity or the task that will be done. These additional resources are really helpful for learners as they support the teacher's explanation in class.

#### **Step by Step Process**

One of the most important elements of the activity chart is the Step by Step Process. This part of the template shows how the activity must be implemented



by the teacher in class following a specific order that helps the educator and learner accomplish the task.

### 3.3.4. GUIDE FOR FACILITATION

To ensure effective facilitation and seamless implementation, the project team considered valuable insights gained from analyzing the pros and cons of digital tools (Chapter 2) and general tips and risks associated with using digital and game-based pedagogy (Chapter 1).

#### **Facilitating teacher-led activities**

For facilitation of teacher-led activities, the project followed the Kolb Experiential Learning Cycle. After finishing every activity of this kind, the educator and learners will focus on a **debriefing** about the task completed. This debriefing will be executed by means of several questions which will make students analyze the process, their learning and their achievements. This reflective process enhances understanding, encourages self-evaluation, and helps learners apply their learning to their own developmental objectives.

There are two types of questions for the debriefing. On the one hand, these debriefing questions are centered on their new abilities to accomplish short tasks during the longer process of the activity. For example if the activity is related to inserting an image in the table of a Word document the debriefing questions would be: Am I able to look for specific images on the internet? or Can I insert a table in

the word document? These types of questions allow them to be aware of their ability to execute the task during the whole process, so it is a self-evaluation. On the other hand, these questions may also be focused not on the ability to fulfill them, but on how to execute specific tasks during the process. So, according to the activity mentioned before, some debriefing questions would be: How do I open a Word document? or How can I insert an image in a table? These types of questions help them internalize the steps to accomplish every single small task that belongs to a bigger task during the process.

Finally, at the end of a face-to-face activity chart there are some **tips for facilitation** to further aid the educator to implement the activity in class (such as checking wifi connection before starting the activity, providing visual aids during the different explanations or verifying the necessary buttons and tools that will be used during the activity). The project team derived such tips by drawing on lessons learned from analyzing digital tools' pros and cons concerning their use with the target group (Chapter 2). Furthermore, local case studies (Chapter 4) played a pivotal role in understanding and addressing challenges faced by the target group and develop concrete tips



and solutions to be integrated into the curriculum. This empirical approach ensured that the curriculum evolved to meet the specific needs and requirements of the widest possible target group.

### **Facilitating teacher-backed activities**

As we mentioned in Paragraph 3.1.1 about activities, the teacher-backed activities are primarily meant to be implemented in class as follow-up tasks that learners will do by themselves. In the facilitation of teacher-backed activities, the approach involves guiding questions rather than direct instructions. These driving questions will guide students through the implementation of the activity. For example: Which is the name of the website you need to go to? or Do you remember how to underline a piece of text in a word document? In this way, the teacher serves as a scaffold, supporting learners' exploration and problem-solving. The goal is prompting learners to think critically, analyze information, and develop independent problem-solving skills to ultimately accomplish the tasks by themselves properly.

[https://www.canva.com/design/DAFo6R1PsMk/gi27WSN6UpdaSn3jWodAHA/edit?utm\\_content=DAFo6R1PsMk&utm\\_campaign=designshare&utm\\_medium=link2&utm\\_source=sharebutton](https://www.canva.com/design/DAFo6R1PsMk/gi27WSN6UpdaSn3jWodAHA/edit?utm_content=DAFo6R1PsMk&utm_campaign=designshare&utm_medium=link2&utm_source=sharebutton)

### **3.4. CREATE YOUR OWN ACTIVITIES. TIPS AND SUGGESTIONS.**

The last section of this chapter is focused on tips and suggestions for educators to create and adapt their own activities.

First of all, you can find below the Canva template link of an empty chart for both teacher-led and teacher-backed activities with all the important elements mentioned before





## CHAPTER 4. LINK CASES STUDY. USING DIGITAL PEDAGOGY AND GAMIFICATION TO TRAIN ADULTS WITH COGNITIVE AND BEHAVIOURAL DISABILITIES

After the implementation of the five local courses of this project, we have collected valuable information, so you can find below a list of suggested tips for adaptation which does not aim to be exhaustive or universal but is crafted from our project team's experience dealing with a diverse target group of learners.

### **Teacher-student ratio**

First of all, consider the number of educators needed for the group. Consider that students with more severe disabilities often require increased individualized attention, support and a bit of adaptation at the beginning of the course. Adjust the teacher-student ratio accordingly to ensure that everyone receives the necessary assistance.

According to our experience, a ratio of two or three students per educator is adequate to teach lessons properly in a class with a homogeneous profile of students.

### **Customized explanation**

Adapt the level of explanation, language, and the amount of information provided to align with the level of the difficulties of the group. Tailoring the communication to suit their comprehension levels is essential for effective learning, so use a simple and clear language and avoid complex sentences and activities with too many operations like “copy, paste, underline,” etc.

Giving orders using abstract concepts such as “left” or “right” must be avoided and they should be substituted by concrete and visual concepts using different colours or symbols in order to fulfill specific tasks.

The instructions for completing the activity must be divided into very short and clear commands that should be repeated several times during the accomplishment of the activity.

### **Visual materials**

Recognize that some individuals in the group might rely on icon graphics, specific communication software, or other visual tools for understanding.

Ensure that additional visual materials are available for the oral instruction by means of physical material such as words or symbols on the board, printed pictures, 3D figures, digital material on the Digital Board and icon graphics on the own computer to aid comprehension for all students, especially for those who depend on them completely.

### **Flexible training duration**

Be flexible in determining the training duration. The level of disabilities and the unique needs of each person may vary. Some may require more time to grasp concepts, so adjusting the duration to accommodate these differences is important.



Regarding the duration of each session, classes of two hours are too long for the target group even with a break in the middle of the lesson as they cannot be concentrated for so much time. According to this, the perfect time duration of each class should be one hour maximum.

### **Scheduled breaks**

People with more difficulties might benefit from more frequent breaks during activities. These breaks can provide a chance to recharge, refocus, and maintain engagement in the learning process.

Depending on the difficulty of the task, give them several minutes between one activity with specific material and the following one in order to prepare students. All this will help them be more focused and concentrated on the following material and task to accomplish.

### **Peer support**

Encourage collaboration within the group by allowing participants with fewer difficulties to assist those with more severe challenges. This peer support not only fosters a sense of community but also enhances the overall learning experience.

Heterogeneous groups of students with mixed abilities can be created in order to do specific activities. This type of dynamics makes students encourage one another and also increases students' motivation and self-esteem as they are aware of helping their partners and the whole group as well.

### **Movement and flexibility:**

Recognize that some participants may need to move around the room and be engaged in physical activities before or during computer-based tasks. Adapt the learning environment to accommodate these needs, understanding that flexibility is key in addressing each person's unique requirements.

Encourage students who finish the task to get up and help other partners who are in the process of accomplishment. If they get tired, they can do some stand-up games until their partners complete the task, such as being in a circle around a table any visual activity on the Digital Board or the activity called "Dance with the broom" in which the participants pair up for a dance and one participant dances with a broom. All pairs dance to the music. When the music stops the participants have to change pairs. Whoever is left without a dance partner has to dance with the broom.





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