Gamify youR yOuth Work

Handbook on Gamification
in
Youth Work

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1. ABOUT THE PROJECT

The main goal of the GROW project is to explore and increase the capacity of all partner organisations from programme and partner countries on gamification in youth work. GROW seeks to increase and develop the competences of youth workers, thanks to the development of a course for youth workers on gamification methods, including materials, video tutorials, and a training curriculum. The project's key output is a handbook that aims to support youth workers on game-based elements and apps in activities for young people. The partner organisations share their best practices on the project's theme so as to collect best methods and build the capacity of youth workers internationally, and, especially locally by leveraging, exploiting their multiplier effect through the promotion and dissemination of materials, web conferences, and local trainings in each partner country.

The target groups are youth organisations and youth workers who are interested in the topics of game-based learning, e-learning and gamification in their daily activities and training for young people, especially those with fewer opportunities.

Today's scientists firmly believe that games are an important part of the human experience. Gamification is increasingly being used in education to increase student motivation and thus improve learning outcomes. It is also an evolving trend in youth work. Much research shows that gamification in education can improve motivation and engagement, through more participative and learner-centred tools. Furthermore, as youth is the most dynamic social group exposed to constant flow of information and, consequently, less responsive, youth workers are constantly looking for new ways to engage young people and communicate with them in their language. Gamification creates the opportunity to meet the needs of youth and better involve them into different activities. To meet the needs of youth workers in creating new, more engaging, and participant-cantered environments, organisations from 6 countries (Italy, Greece, Spain, Albania, Kosovo and Montenegro) have joined forces to design and implement GROW – Gamify youR yOuth Work project.

The project aims to build the capacity of youth workers in participating countries and beyond in gamification methods and innovative tools that they can use in their daily activities with young people, especially those with fewer opportunities. The GROW project focuses on creating a blended training course (including curricula, video tutorials, and a handbook) for youth workers. Training will be delivered in the local training courses in each of the partner countries, and all the materials will be freely accessible on the project and partners' websites and social media to foster their reusability and sustainability. In addition, youth workers interested in the topic of gamification will have an open space for the exchange of experiences and best practices in the form of a Community of Practice established during the project's lifetime.

2. RECOMMENDATIONS ON HOW TO USE THE HANDBOOK

Here are some recommendations on how to effectively utilize the gamification handbook:

- **Read Thoroughly: First,** read the handbook thoroughly from beginning to end. This will give you a comprehensive understanding of the concepts, strategies, and best practices related to gamification.

- **Determine Your Goals:** Clearly define your goals for using gamification in your project, whether to increase engagement, improve learning outcomes, or enhance the user experience. Once you know your goals, you can tailor the handbook's advice to your specific needs.

- **Select Appropriate Chapters:** The handbook is likely to cover a wide range of topics related to gamification. Select the chapters that are most relevant to your project's goals and focus on those initially. You can always come back to other sections later.

- **Apply Theory to Practice:** The handbook may contain theoretical concepts. Translate these into practical strategies and tactics that can be applied to your project. Think about how you can implement gamification elements effectively.

- **Test and Iterate:** View the implementation of gamification as an ongoing process. Test different approaches, gather feedback, and be willing to iterate on your gamification strategies to optimise results.

- **Engage Stakeholders:** Involve your team, stakeholders, or users in the process. Discuss the handbook recommendations with them, gather their input, and ensure that the gamification elements meet with their expectations and needs.

- **Monitor and Measure:** Establish key performance indicators (KPIs) to measure the impact of gamification. Monitor these metrics regularly to gauge the effectiveness of your gamification strategies and make adjustments as needed.

- **Stay Updated**: The field of gamification is constantly evolving. Stay updated with the latest trends, case studies, and research related to gamification. The handbook may not cover the latest developments, so seek out additional resources.

- **Collaborate and Share Knowledge:** If you're successful with gamification, you should share your experiences and insights with others in your organisation or industry. Collaboration and knowledge sharing can lead to better outcomes for everyone.

- **Customise and Innovate:** While the handbook provides valuable guidance, don't be afraid to customise and innovate. Each project is unique, and what works best for one may not work for another. Be creative in adapting gamification to your specific context.

- **Seek Expert Advice:** If you encounter challenges or need in-depth guidance, consider consulting with experts in the field of gamification. They can provide specialised insights and help tailor strategies to your project's needs.

- **Evaluate Ethical Considerations:** Always consider the ethical implications of your gamification strategies, particularly concerning user privacy, consent, and fairness. Ensure that your approaches align with ethical standards and best practices.

3. PARTNERS AND TEAM BEHIND THE PROJECT

3.1. About the project Partners

3.1.1. YouNet APS

YouNet APS is a qualified and innovative organisation, founded in May 2010 in Bologna. It is active in the fields of education, training, and youth development. YouNet APS has extensive experience with EU programmes and facilitates hundreds of young people in gaining experience and learning opportunities throughout Italy and Europe every year.

YouNet APS promotes, designs, and carries out various activities, including learning mobility and European active citizenship initiatives, medium and long-term internships, volunteering and educational projects, cultural, social, and editorial activities, as well as training programmes and educational, promotional, and informative initiatives on European and youth-related topics, such as youth unemployment and youth entrepreneurship.

YouNet APS is deeply rooted in the regional territory, particularly in Bologna and the province, where it regularly organises projects, activities, and collaborations with local and regional institutions.

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www.you-net.eu

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3.1.2. People in Focus

People in Focus is actively engaged in a continuous and long-term process aimed at empowering citizens and young people through well-defined methodologies. Our daily work focuses on capacity building and dissemination in various fields, including active participation, monitoring public institutions, environment, countering violent extremism, community policing, tourism, and more. We strive to involve different target groups in national, regional, and international activities to encourage them to discuss and voice their concerns.

People in Focus boasts extensive experience in projects involving the engagement of local communities through the organisation of youth exchanges, training sessions, workshops, awareness campaigns, lunchtime talks, webinars, study visits, information sessions, cultural events, and more. Additionally, we conduct research studies to provide an overview of specific issues in our community.

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3.1.3. Fundación General de la Universidad de Burgos

The General Foundation of Burgos University is a public non-profit organisation that promotes science, culture, education, and social assistance for the University of Burgos. FUBU has a team of 25-30 professionals working in education, employment, and business innovation, with a focus on technology and knowledge transfer.

Key Areas:

- Training: FUBU organises training programmes, postgraduate courses, and seminars in collaboration with institutions and companies.
- Labor Access: The Foundation collaborates with companies to provide job opportunities for young graduates and students through scholarships, internships, and training programmes.
- Innovation and Business: FUBU facilitates knowledge transfer between academia and businesses, promoting innovation and entrepreneurship in the region.
- Project Management Office (PMO): The PMO supports EU and national projects in areas such as labour and social sciences, rural development, training, and technology transfer.

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3.1.4. Open Data Kosovo

Open Data Kosovo (ODK) is a civic-tech, non-governmental organisation located in Kosovo, dedicated to fostering a local and vibrant tech ecosystem. Since its establishment in 2014, ODK's team comprises tech enthusiasts with a mission to enhance open data practices, ultimately increasing government transparency and accountability using technology.

Through its programme pillars, ODK aims to achieve the following goals: increasing knowledge and utilisation of open data to support data-driven decision-making, policy formulation, and process optimisation in day-to-day strategies (Open Data); developing digital solutions for local and international partners from NGO, public, and private sectors to enhance efficiency (Digital Transformation); building the capacity of tech and open data enthusiasts from various sectors, guiding them toward skill development (Capacity Building); and, last but not least, providing a space for individuals and initiatives that share our enthusiasm for the development of the tech ecosystem and digital transformation in Kosovo and around the world (Community).

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3.1.5. K.A.N.E.

Social Youth Development, K.A.NE., is a non-governmental and non-profit organisation active in the fields of Education, Youth, Social Inclusion, Vocational Training and Culture. K.A.NE. was founded in 2008 in Kalamata, Greece.
The organisation's main objectives are to foster youth motivation for active citizenship, and to support personal and professional development of people through educational activities, especially targeting people at risk or facing social exclusion, young people in general and adult/vet learners.

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3.1.6. TC Taraba

Training Centre Taraba is an NGO founded in Podgorica in December 2015 by a group of enthusiastic individuals with a vision to enhance Montenegrin society. The main goal of the organisation is to provide training and education for adults while promoting lifelong learning to develop local community capacities. By promoting informal learning and education, Training Centre Taraba seeks to create tools for the recognition of learning outcomes in any educational process. The organisation places special emphasis on the promotion human resources in various educational areas, both at the national and international levels.

Taraba pays particular attention to vulnerable groups within the community, helping them in improving their skills and achieving equal status in society. The organisation strives to promote the professional and sustainable skill development for every member of Montenegrin society.

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https://www.facebook.com/tc.taraba/

3.2. Team behind the project

Project Managers:

YouNet APS: Milena Gad

People in Focus: Armelia Barçi

Fundación General de la Universidad de Burgos: Alejandra Romero Calvo

Open Data Kosovo: Blerta Thaci

K.A.N.E.: Spiros Koutsogiannis

TC Taraba: Bojana Laković

4. CURRICULUM ON GAMIFICATION IN YOUTH WORK

4.1. Introduction to gamification

4.1.1. What it is?

Image 1: Source: https://upload.wikimedia.org/wikipedia/commons/2/22/Gamification-in-business-illustration-web.jpg [1]

The term gamification is a relatively new word that made its a ppearance in English dictionaries at the beginning of the 21st century. There are different definitions of gamification. For example, the Oxford English Dictionary defines gamification as: *the use of elements of game-playing in another activity, usually in order to make that activity more interesting* **[2]**, whereas the Cambridge English Dictionary as *the practice of making activities more like games in order to make them more interesting or enjoyable* **[3]**. However, the definition that most of the sources seem to agree with is that gamification is simply **the application of game design elements and game principles into non-gaming contexts.**

Regardless of the term being relatively new, the idea of adding game elements, such as points, badges, leaderboards, quests, stories etc. is not a novelty. A great example of gamification is the scouts' badges system, where scouts need to complete certain activities/tasks to earn their badges (orientation, fishing, camping, etc). Additionally, companies have been using

gamification strategies to promote their products for years, using points systems, loyalty awards, or membership levels, where the more you use a service/product, the higher level you get to and the more benefits you have (see frequent flyer cards).

[1] Attribution: Disertel, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons
[2] https://www.oxfordlearnersdictionaries.com/definition/english/gamification
[3] https://dictionary.cambridge.org/dictionary/english/gamification

4.1.2. What are its main elements?
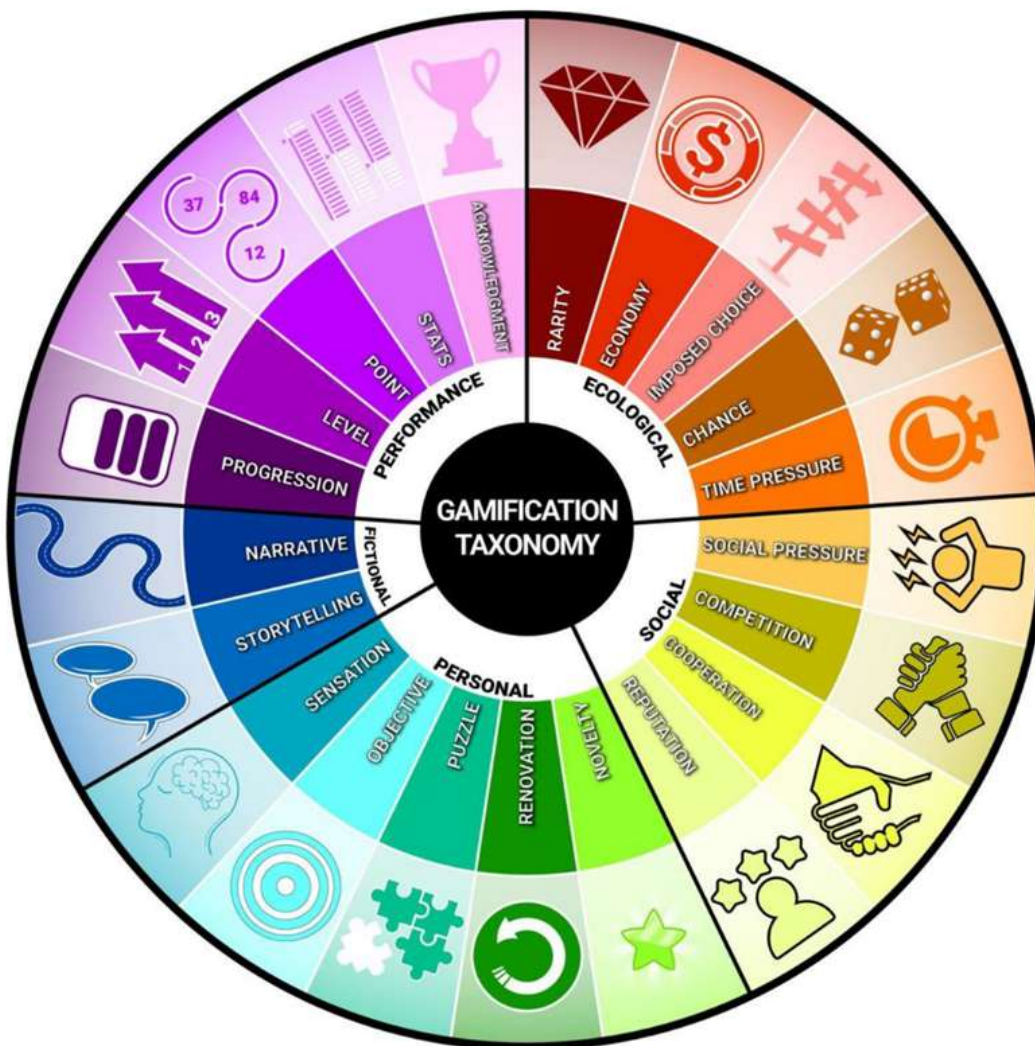
Image 2: https://upload.wikimedia.org/wikipedia/commons/9/9c/Gamification_Taxonomy.png [1]

In a conference paper presented in 2019 during the 19th International Conference on Advanced Learning Technologies [2], Toda et al. made a list of 21 game elements that can be used for gamification for educational purposes.

After extensive research and consultations with experts, Toda et al. (2019) [3] proposed a taxonomy which comprises 21 game elements (as seen in image 2 above) and their description (see table I).

What is very important to remember is that although gamification uses game elements in non-game settings and it is not to be confused with game-based learning, which uses pre-existing or specially developed games to reach desired learning outcomes.

Gamification is mainly used as a tool to increase engagement and motivation of the users/learners. By setting specific goals to be reached, badges to be earned, levels to be conquered, the users are more inclined to work towards achieving these goals.

Take for example the learning platform Duolingo. It is primarily a platform that help its users to learn a foreign language. It encourages users to use the platform more by having the users pass levels, compete in challenges, earning badges after each achievement (i.e. After completing story sets or learning XX number of new words, etc), and having a daily stream feature that counts the days of continuous play. All these are elements that make the use of the platform more fun and motivate users to continue using the app.

Another thing that you need to keep in mind when designing or using gamification is that "acknowledgement" or, in other words, feedback is an element that should not be underestimated, but should instead be part of any gamification activity planning. Direct feedback either positive or negative (it can be a short message, a badge, a simple acknowledgement of a job well-done or of the need to try again) is crucial as it allows the users to monitor their progress and motivates them to complete their tasks and reach their goals.

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[1] Attribution: Sisotani, CC BY-SA 4.0 <https://creativecommons.org/licenses/by-sa/4.0>, via Wikimedia Commons
[2] Toda, Armando & Oliveira, Wilk & Klock, Ana & Toledo Palomino, Paula & Pimenta, Marcelo & Gasparini, Isabela & Shi, Lei & Bittencourt, Ig & Isotani, Seiji & Cristea, Alexandra. (2019). A Taxonomy of Game Elements for Gamification in Educational Contexts: Proposal and Evaluation. 10.1109/ICALT.2019.00028.
[3] Toda, Armando & Oliveira, Wilk & Klock, Ana & Toledo Palomino, Paula & Pimenta, Marcelo & Gasparini, Isabela & Shi, Lei & Bittencourt, Ig & Isotani, Seiji & Cristea, Alexandra. (2019). A Taxonomy of Game Elements for Gamification in Educational Contexts: Proposal and Evaluation. 10.1109/ICALT.2019.00028.

4.1.3. What are the benefits?

Gamification is used in many different settings and not without reason. We see it being used in marketing, fitness, education and training, healthcare, corporate environments, various online apps and websites, and so on.

Gamification is a tool that helps **increase user motivation and engagement**, as it exploits the competitive nature of people and the need for achievement, recognition, and self-expression. In a sense, gamification gives users control over the process, as well as direct feedback on their progress and uses challenges or competition with other users to boost their motivation to complete their "tasks".

In addition, gamification **makes the process fun**. Whether in learning, where learners must meet specific learning goals, in marketing, where consumers must earn points, for example, or in business, where employees must meet specific performance goals, gamification can make the process more fun.

Another big advantage of gamification is that it has **specific goals.** Gamification helps users achieve the next goal.

Increased self-esteem and satisfaction from the process can be another great benefit of gamification. The user can have an immediate view of their progress (level up, earn badges, reach goals) and that sense of accomplishment helps keep the motivation alive. Even in cases of failure, the users seem to be more motivated to try again in order to achieve the goals/tasks.

Finally, **feedback and recognition** are important aspects of gamification, as described above. It allows users to track their performance, but also feel that their achievements are instantly recognised.

4.2. Gamification in youth work and non-formal education

4.2.1. How does it work? Benefits and risks

The concept of Gamification in youth work

Organisations, youth workers and individuals working with youth constantly have searched for and used new ways of engaging young people in more interactive and fun ways, even though they were not aware of the "gamification concept". In the 21st century it involves social media, project management and assessment tools, competition elements, special design for tools and campaigns, digital solutions, development of special training and programmes supplemented with different ice-breakers, energizers, get to know each other, networking and leisure activities, the team works, simulations and many more. Gamification in youth work and non-formal education is all about boosting activities with elements that can help to engage the target group and maintain their interest in a topic or activity.

Gamification in youth work can be evaluated as a tool for a variety of activities:

• socialisation;

• meeting with peers;

• identification with society;

• identification of expectations;

• demonstration of goals to be achieved;

• linkage of expectations with goals;

• linkage with benefits at the end;

• evaluation of achievements;

• identification of further personal development needs;

• soft skills training;

• contributions and appreciation of others.

In order to achieve the results we wish, it is important to pay attention to some principals:

1. Hands-on approach. Instead of giving knowledge, learning by doing needs to be promoted.

2. Simulations. The "knowledge to memorise" needs to be substituted with roleplaying, which creates and improves skills, habits and behaviours. It initiates the independent thinking process, problem solving ability and creativity, which are necessary skills for the future market.

3. Creativity. There are different ways of problem solving, and each approach needs to be analysed individually, not judged. In the case of young people, it eliminates the fear of expression, enhances initiative and encourage creativity.

4. Feedback. Different methods can be borrowed from games and digital apps to give meaningful feedback on the job done and motivate them to do even better. It allows visualizing progress and comparing to others.

5. Social component. Synergy can be reached within a collaboration with others, and new things learned, by simply discussing in a team. Self-development cannot be reached without practical life skills training.

Game elements and their functions

Similarly to any game, gamification uses the power of games and includes such components as: a goal that needs to be achieved, rules that specify how the goal is to be reached, a feedback system that shows the progress achieved, and the principle of voluntary participation (as listed by Jane McGonigal); as well as elements like time, competition, cooperation, reward structure, levels, storytelling, a curve of interest, and aesthetics, added by Karl Kapp. Elements can be classified more specifically or generally, depending on the author of this classification.

A more specific description of each element can be found in the Table below[1]:

Game elements	Description	Motivational functions
Quests	Little tasks that have to accomplish within the game	Quests provide clear goals, highlight the consequences of a goal and emphasise the importance of a player's action within a given situation.
Points	Rewards accumulated for certain activities within the game	Points function as immediate positive reinforcement that take form of mostly virtual rewards, provided for executed actions.
Badges	Visual representations of achievements that can be collected within the game	Badges display the player's success in the form of virtual status symbols and therefore motivate the player. Badges denote group identification by communicating shared experiences and activities, thus enhancing the feeling of affiliation. Badges also represent a goal-oriented function and the player's competence.
Progress bars	Feedback on the player's current progress towards the goal	Both progress bars and performance graphs provide feedback. Progress bars depict distance from the goal.

[1] Sailer, M., Hense, J., Mandl, H., Klevers, M., Psychological Perspectives on Motivation through Gamification, 2013

Performance graphs	Feedback on the player's performance in comparison to their previous performances	Performance graphs compare the players' performance to previous performances, thus noting improvements and fostering a motivation to achieve mastery.
Leaderboards	A list of all players, usually ranked by their success	Individual leaderboards foster the sense of a competition and motivate achievement. The players who atop the leaderboard may feel especially competent, while those at the bottom may feel demotivated. Leaderboards that provide a team score can foster a feeling of social relatedness among the team members, since such leaderboards emphasise the collaboration needed for shared goals.
Meaningful stories	The story line the player lives through within the game	By offering a variety of meaningful stories, feelings of autonomy can arise. An inspiring character can increase positive feelings. Stories should match the player's interests and spark attention to context.

Avatars	Visual representations that the player can choose to associate themselves with	The option to choose from various avatars can foster a feeling of autonomy. Positive feelings and emotional bonds can arise by providing many avatars.
Profile development	Development of the avatar and its attitudes	

Benefits of gamification in youth work

Gamification has a great impact on non-formal education and youth work. It allows us to focus attention on topics that are difficult to elaborate and helps to discuss and learning in a relatively easy way. It also allows young people from different backgrounds to be closer to each other and with the topic of the activity. It is observed that the engagement is greater when gamification tools are integrated into the educational process. Gamification elements are useful for young people who have difficulties in cognitive, methodological, or social learning (slow learning, lack of organisation in work, resistance to rules etc.). Gamification allows participants to learn better through repetition, to recognise mistakes in an non evident way and to help youth to understand their way of learning.

Increase Learner Engagement

Games appeal to our basic instinct to play. Games can transform boring content into engaging and interesting experiences, they can foster friendly competition among peers, and can lead learners to feel pride in completing a course after a series of gamified challenges and tasks. Learners who are cognitively active, enjoy the learning process, and feel genuine emotion in response to the outcome of an educational game will enjoy higher retention of the content. Physical and mental activity make for more meaningful experiences than passively scrolling, clicking next, and listening to long lectures, and this activity correlates to increased employee engagement metrics and higher productivity on the job. Gamification is a way to make learners want to achieve the learning objectives of a course.

Provide Instant Feedback

A necessary feature of games is feedback, whether positive or negative. Educational games allow learners to make progress, not by chance, but by knowing or answering a question or scenario. Similarly, the lack of knowledge or an incorrect response does not allow learners to move forward. By integrating immediate feedback into gameplay and linking that feedback to the game's outcome, learners can monitor their progress throughout the game and may even

feel intrinsically motivated to complete the game successfully. Leaderboards and scoreboards offer an additional feedback mechanism, allowing learners to see how their results compare to their peers.

Boost Motivation with Features Such as Badges

Badges in gamified learning content can be as simple as virtual ribbons, stickers, or prizes that learners earn for the completion of modules or tasks within the game. These badges can be displayed in several places, from inside the game, on the company's intranet, or even externally in places such as LinkedIn. According to Medium, badges are crucial "because they make the user feel important and skilled." Badges give learners a sense of completion as well as a sense of authority, as they are a tangible symbol of the learner's accomplishments.

Risks of Gamification in youth work

Image2, Source: https://keenethics.com/wp-content/uploads/2022/09/Risks-of-Gamification-in-Learning-1.jpg

Gamification has its risks and it doesn't solve all inefficiencies linked to the activity. In fact, there may be other problems aside from motivation that need to be accounted for.

For instance, a poor learning environment or content, or a lack of facilitator support, may be the cause of inferior training programmes. It also may easily shift the focus to other directions not linked with the topic.

In other words, while gamifying can prove to be transformative, it can sometimes be counterproductive. If you don't consider your audience and their needs, you may struggle to achieve your original activity objectives. Given these points, simply adding game mechanics to training does not automatically guarantee learner engagement.

Below you may find some of the risks of gamification in non-formal education process:

· **Over-gamifying**

If you gamify everything, you risk losing learning results. Educators should deliver different aspects of learning via different methodologies. Along with gamification in education, there are classroom instruction, webinars, and e-learning courses.

 Forcing everyone into games

You can't expect that each student or trainee will enjoy gamification. There are people treating learning seriously. Making them play instead will result in adverse learning experiences. Students may feel dissatisfied, confused, or sceptical.

 Over-focusing on fun

While focusing on making your course fun, don't forget about the purpose you pursue. Gamification and simulation help you achieve the learning goal. They aren't the goal themselves.

 Neglecting assessment

You have to track the performance and productivity of your students. Don't forget about regular outcome assessment while pursuing other gamification techniques. Otherwise, you risk failing the essential purpose of learning and training.

4.3. Gamification in youth work and non-formal education - examples and case studies

There are countless resources for enhancing the youth work practice and make the process more fun and effective. This module will introduce some specific examples with gamification activities that include role play, through which young people are asked to pose arguments in different roles and introducing healthy competition. Technology can significantly support the implementation of youth work through games.

4.3.1. Case study: Using Computer Games in Youth Work

For many young people, social media and computer games are increasingly the medium and social space where they meet and make friends. It is a very different space to the youth centres, clubs, streets, or public parks that are envisaged as the context in which youth work happens. However, it certainly is a social space and one in which young people are increasingly expressing themselves, engaging with each other, developing their understanding of the world and articulating their views. In this context, there is considerable discussion and interest in the concept of virtual or digital youth work. The term 'digital youth work' means that digital media and technology are proactively used or addressed in youth work as a tool or an activity. The intention within this area of practice is to use technology, and elements like computer games and virtual reality, as a means of engaging with young people.

There are many different ways in which youth workers can integrate computer games into their practice. Much of this depends on what you are looking to achieve and whether you have the confidence to use computer games in this way. At a basic level, you can use computer games to encourage young people into a youth work setting either by making games available in a centre, or by setting up play events online. If you intend taking computer games a step further, using them to do youth work, it is best that they are integrated into a well thought out and structured programme.

There are several points to keep in mind:

- It is best to dedicate time to consistent game-play rather than using computer games sporadically or for a single purpose. In this way, games become a part of the routine of the youth group and your relationship with them.

- As with any youth work intervention, you will need to clearly determine the purpose of game-based learning and choose the approach, the game or the games you intend to use carefully.

- You should first play the game with colleagues to ensure it aligns with your values, the learning you want to achieve and the interests and abilities of your youth group.

- When you are using games in this way, it is best to structure the process to involve a learning phase, playing phase and a debriefing phase. You share information about an issue, (for example, climate change) play a game about climate change and then debrief on how the group found the experience, what they learned and how they want to respond to it. There are many different ways in which you can structure this process – e.g., share information, then play, debrief and respond. Or perhaps share information, then play, debrief, share more information, play again, debrief and then respond. Or you could play the game as the starting point to motivate the group to learn and then follow this up by sharing information and encouraging them to act on the issue.

Within computer games-based learning, there are three distinct approaches that are commonly used in both formal and non-formal education:

·   The first approach, special purpose games, involves accessing and using games specially designed for the educational purposes you intend.

·   The second approach, commercial off-the-shelf games, entails using mainstream games to highlight an issue.

·   The third approach involves facilitating young people in making their own computer games.

Special Purpose Computer Games

The most common way to use computer games is to find customised games already designed to achieve specific learning outcomes. Many knowledge-based games cover mainstream subjects such as math, science, geography, and languages. Increasingly, computer games are used to teach skills in first aid, science, conflict resolution, engineering, and to encourage changes in behaviour, such as diet, recycling, and mental health.

Simulation games have been used to draw attention to conflicts and encourage action on the part of players. Games like 'Darfur is Dying' were developed to highlight the conflict in Darfur. 'PeaceMaker,' '9/12,' 'This War of Mine,' and 'War on Terror' critically examine geopolitics and conflict. Games like 'World Climate,' 'World Without Oil,' 'AdaptNation,' 'Never Alone,' and 'Bee Simulator' aim to raise awareness and engagement with climate change. Computer games like 'Papers Please,' 'My Life as a Refugee,' 'Against All Odds,' and 'Salaam' focus on migration and refugees.

In recent years, some Development Education organisations have been experimenting with the use of virtual reality in their practice (e.g., Concern Worldwide). The UK's Department for International Development (DFID) has collaborated with Google Expeditions on a series of virtual tours of UK Aid projects. These can provide viewers with an immersive experience of a Syrian refugee camp, enabling them to learn about the stories of individual children who have been forced to leave their homes. The UN's 'Clouds Over Sidra' shares the story of Sidra, a Syrian refugee living in the Za'atari camp in Jordan. In the video, viewers are virtually taken on a tour around the camp where she and 90,000 other refugees live.

Mixed Reality Games

Two further concepts that are important in the contemporary gaming context are virtual reality and augmented reality, collectively referred to as mixed reality. They offer another layer of immersive and collaborative potential and have become more accessible in recent years with the ongoing popularisation of virtual reality headsets and location-based games. Augmented Reality (AR) games are a genre which combine the real world with fantasy. They have, in recent times, harnessed technology to seamlessly integrate both physical and computer-generated environments in games such as Pokémon Go. In this AR game a cartoon-style map of the user real-world location was created. It then superimposed Pokémon creatures that the player had to pursue and capture. While this game may seem quite frivolous, its developers envisaged it as a game to promote physical activity and mental well-being. Its popularity, with 65 million monthly active players nine months after its launch, demonstrated the technical possibilities and the level of engagement that such applications can command.

Virtual Reality (VR) has been defined as 'a three-dimensional, computer-generated environment which can be explored and interacted with by a person. That person becomes part of this virtual world or is immersed within this environment and is able to manipulate objects or perform a series of actions.' Virtual Reality Society (2017).

Commercial Off-The-Shelf Games

Another approach to take with games-based learning is to design learning into an existing mainstream commercial game. Minecraft can be used for projects in construction, design, electronics and coding. Assassins Creed can be used to explore geography and history. Roblox can present opportunities to engage with problem-solving in maths and business. Civilisation and the various editions of The Sims can address issues of planning and sustainability. In order to use these games, you will need to be familiar with them yourself.

Remember such games were designed as entertainment and will need to be shaped and integrated into a learning or personal development process within a youth work context. While

many games have significant learning and skills development built-in, you can add to this in a straightforward way. Get a group to work together to recreate their youth centre or other public buildings in Minecraft. Add some technical challenges – opening doors, working lights, using lifts etc. Get groups to build a town in Minecraft and to decide on where certain buildings are located. SimCity or Roblox could be used similarly.

4.3.2. Case study: Gamification in the Informal Learning Space of Higher Education (in the Context of the Digital Transformation of Education)

Informal education is a type of education that doesn't follow a rigid structure and doesn't always happen on the school or university premises. This term encompasses individual classes under the guidance of coaches or tutors and short-term courses that pursue practical short-term goals. Such training or lectures are often conducted by public organisations, volunteers and universities, and they are free for students.

The informal learning space does not categorise students by age, professional or intellectual abilities, and sometimes has no actual time limitations. Institutions or organisations that provide informal education usually do not award qualifications and do not conduct a formal assessment of participants' academic achievements (Tkachenko 2015, p. 304).

Today, informal education is on the rise as the entire world has recognised its benefits. While 7-10 years ago there were a handful of specialists involved in this field, today, we recognize a powerful, comprehensive infrastructure. The introduction of quarantine restrictions related to the response to the COVID-19 pandemic has become a catalyst to the incredible change. The second most important reason is technological progress and competition that urges businesses to increase the entry professional requirements for potential employees.

Gamification in the informal learning space of higher education is focused on utilizing students' main wishes, promoting students' involvement in the learning process, encouraging achievement and significant results. Such efficiency is explained by two factors:

- Immediate feedback. Passing levels and some "assessment" mechanics allow the student to immediately get an analysis of their results. In this case, the gamified system responds to the target actions of the player, gives room for manoeuvres and this is how a student consciously approaches the learning strategy. (Werquin, 2012);

- The versatility of mechanics and forms. Each student can have their prototype of a player, an appropriate character and strengths, which means that to achieve the best

results, each student must be motivated and participate voluntarily. The variety of mechanics that gamification provides help find an individual approach to different students of higher education (Romi & Schmida, 2009).

As for the natural forms of acquiring knowledge and practical skills, college undergraduates prefer the excitement, a story with a plot, a game. These elements facilitate the consolidation of the information received during lectures. What is especially valuable is that a gamified system generates or simulates stressful or ambiguous situations that stimulates students to reveal their inner intellectual and psycho-emotional reserves. This is a new practice of selecting specialists who have been trained by potential employers, which is not based on the student's grades or the diploma. (Lepper, 1998).

The use of gamification in the informal educational space of higher education can create a game environment that stimulates the internal motivational process through a situation of choice, steering the student towards exploration and independent action. The possibility to make a choice and implement it while solving a problem, allows a student to grasp the meaning of the action "from within". A personal choice leads to meaningful action, and this sequence turns the learning process into a vital goal, which is a condition for effective learning. The student is not alienated from the educational process, as sometimes happens in the case of formal learning, but, on the contrary, they become involved in it. Now a student is motivated to resolve a task and this motivation is related to the internal content of the discipline. (Malone & Lepper, 1987, pp. 23–27).

The formation of a student's conscious attitude to learning involves independent and responsible action, which means a student accepts the educational goals and objectives inside the informal learning space. The difference between the communication component of the informal educational environment (game platform) and the formal educational communication lies in the principle where the educational information is not only transmitted in the virtual reality but, first of all, it offers actions to solve educational tasks with regard to the goal. Knowledge is not transmitted but created, while the student does not prepare for practical professional activity, but instead, joins it (Bessmertny & Gaenkova, 2016).

Today, coaches and teachers working in the informal learning space of higher education, in collaboration with computer game designers, are actively developing visualised models of informal learning and modular training programmes based on virtual games. Game modules represent a systematic way of mastering learning material, which allows students to obtain practical knowledge in various subject areas (Sylvia, Tang, Wong, Li, & Cheng, 2021).

Since gamification is often preferred over other technologies ever deployed in the informal learning environment, it is necessary to identify and systematize the advantages of gamification and the ways to include the game in the system of informal learning:

No.	Ways to include gamification in non-formal education	Advantages of gamification in non-formal education
1.	Creating game moments that support learning objectives.	This allows students to develop thinking and agility.
2.	Reward system in the educational process	Through obtaining incentives for completing the task students naturally reveal their best skills. • system of points and scores • score table and rankings • internal prize store
3.	Materialisation of ideas	By making the ideas tangible and understandable, the teacher simplifies the assimilation of the material.
4.	The course is divided by levels of difficulty	One way to keep a student motivated is to make their progress visible. Each level involves overcoming obstacles and tackling the ever-increasing complexity of the content.

5.	Practice dominates over the theory	In gamified informal learning space, students are supposed not only to have knowledge but also to apply it in practical tasks. (Nicholson, 2012, p. 28).
6.	Encouraging independence	Gamification enables higher education students to demonstrate initiative and learn from their experience. To succeed in studying, one needs to carefully consider the lesson plan so that it is simple, short, and as clear as possible.
7.	Role-playing games in the learning process	In the role-playing game, the student acts on behalf of their character, uses the acquired knowledge and skills to solve problems in a non-typical situation. This visualisation makes the learning process more emotional, improving its quality and motivating the student to follow through the topics one by one.
8.	Competition spirit	Gamification of learning in the informal educational space of higher education involves students/players' rivalry and confrontation where everybody tries to reach their goal.
9.	Interactivity	Different types of tests and materials, simulators and practical classes more actively involve the student in learning, making it interesting and more effective.
10.	Teamwork	Learning objectives, which require cooperation between groups of students, are a good example of practice and an element of gamification. Such tasks have to be interesting to perform, and they are all about creativity and collaboration between students.
11.	Room for risk	It gives a possibility to encourage a student to gamble inside a task and not be afraid of being punished for a wrong answer.
12.	Deadline system	A student is stressed by the time constraints, which increases their ability to retain information and makes intuitive learning possible. (Gamification).

13.	Case-based approach in the educational process	Situational learning is used in learning simulations, where higher education students explore the system, playing with its model (Nikitin, 2016).

The efficiency of gamification within the informal learning space of higher education is explained by its ability to fill in those gaps of formal education that are typically overlooked in conventional learning, namely, effective interaction and communication in the educational community. However, it should be borne in mind that there is a risk that new useful skills acquired by higher education students through informal education will not be in demand in formal education system.

Therefore, we believe that the progressive forms of informal education should be gradually injected into the tissue of formal education while also consolidated at the legislative level (Tsay, Kofinas, & Luo, 2018). It should be noted that the informal learning space in higher education is pivotal for the introduction of gaming techniques and practices in a non-gaming context with the educational purpose. This is reinforced by the rapid pace with which the innovative approaches and teaching methods are implemented and tested, including the widespread use of role-playing, situational and other types of games.

Conclusion

The quality and affordable higher education is a solid foundation for the development of a forward-looking, progressive digital society. The countries that understood this at the right time have successfully built an effective system of both formal and informal education, navigating their economies through the sweeping waves of the new technological world and embracing the digital transformation.

Today, these are two parts of one whole, informal education is no longer perceived as the opposite of formal or as its substitute. Information and communication technologies are an integral part of full-fledged professional training in the higher education establishment. Now, students have the realistic possibility to confidently join the workforce and feel comfortable in the conditions of the full scale digitalisation of society.

4.4. Gamification planning. How to effectively plan gamification activities

4.4.1. What is *gamification strategy*?

A gamification strategy is a planned approach to implementing gamification techniques to achieve specific goals. It involves identifying the target audience, defining the objectives, selecting the appropriate game mechanics, designing the user experience, and measuring the outcomes. The value of applying gamification strategies lies in their ability to enhance engagement, motivation, and performance. Game-based learning, when done right, can take training and learning to the next level, from gaining basic knowledge to the application of critical thinking and more accurate decision-making. For best outcomes, you must ensure that gamification in learning goes beyond the fun element and is relevant to the skills of participants that they wish to upgrade.

In order to plan meaningful gamification activities, you can start by thinking about how to create play elements that align with a non-game context. In pursuing this strategy, you should recognize that the play activity must be, by definition, optional.

Creating a play space based on optional elements instead of imposing a scoring system and goals on participants will raise the chances of participants finding meaning and building internal motivation to engage with the non-game context.

When designing gamification activities, creating an information-based space where participants can explore on their own terms will enable play. Participants should have the opportunity for initial engagement with a concept that should create anticipation about what might happen, which can then lead to a surprise. The participant can embrace the surprise and gain pleasure and understanding.

At the heart of the concept of meaningful gamification is creating an information-based ludic learning space where participants can explore and find meaning. This can be a physical space or

a virtual space, but the idea is the same - develop a set of mechanisms that can be used for play (and therefore be used for games) that help the participant discover what is interesting and relevant about the underlying non-game context and connect that to his or her prior experiences, knowledge, and skills. Since each participant is finding what is meaningful to him or her, each participant can take away different things from the gamification experience.

Another interesting model to consider for meaningful gamification is that of the science playground. A science museum contains exhibits and interpretations, and a participant should figure out what to do with each exhibit in order to explore the underlying principles. The science museum is a prime example of a ludic learning space. One problem with science museums is that a participant will be eager to manipulate the exhibit, will not read the instructions, and end up missing the underlying points. In developing meaningful gamification, this challenge will be present; players need to have a free choice in accordance with the concepts of play, but designers need to make it easy for interested players to learn more about the non-game gamification setting. Gamification training can be of two types: Gamification in a course, implying that it is a one-time event; and gamification in a curriculum, which means that gamification elements are added into the full curriculum.
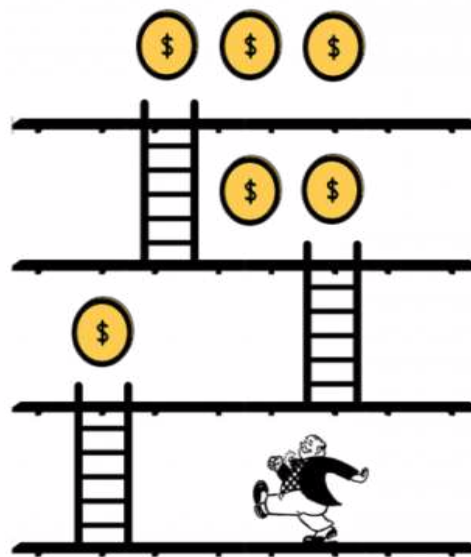
When working on gamification and planning gamification activities **here are some things you need to know before using it and selecting gamification services[2]:**

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[2] https://www.hurix.com/selecting-gamification-services/

Gamification is not a game: As stated above, gamification is not just a video game, rather, it is the use of game mechanics to induce certain behaviours. Humans possess the tendency to alter and influence behaviour while playing games, receiving rewards, etc. Gamification harnesses this tendency to influence one's own thinking and become effective problem-solvers in the real world.

Building empathy: Good gamification practices are not just about good design; rather they focus on encouraging empathy between team players. The main purpose of game-based learning is not to engage learners through games that are over-competitive or manipulative but to encourage empathy and create an experience that helps them to gain a sense of mastery and retain autonomy at work while maintaining their well-being and healthy relationships with their team members. While designing games, it is important to ask what is in it for your participants. Good gamification implies that each participant is the hero of the game and is never belittled by over-emphasizing peer performance in fierce competitions.

Providing an engaging experience: Gamification makes learning more meaningful by breaking down concepts into bite-sized chunks or micro-nuggets. In a world of endless diversions and dwindling attention spans, publishers, trainers, and educators can make learning more engaging by designing content in small and very specific nuggets or micro bites. A microlearning nugget is usually within a 3 to 5 minutes window since in this time window learners are more alert, more engaged, and therefore more likely to show interest and retain their learning. Games help to cut training into small sessions, allowing learners to respond positively. Besides, they can be personalised to offer to learn from participants in areas where they are not performing well.

Driving intrinsic motivation: Research shows that when it comes to performance, people are more motivated by job satisfaction than high cash rewards. In other words, intrinsic motivation matters more than extrinsic motivation. As mentioned above, gamification is more about influencing human behaviour. It is important to define the rules of the game to ensure that gamification activities meet organisational goals. While implementing gamification in training, it is important to define and implement the rules to enjoy meaningful gamification.

Changing organisational culture: Gamification in training sets goals for the participants, and these goals can be tied to organisational goals. When participants see their performance in games they know it is objective and fair. So, gamification results in greater transparency, thus, changing the culture and the way performance is viewed and managed.

Gaming versus traditional learning: Game-based learning is unique in the sense that it involves a higher level of customisation, and participants can learn at their own pace, with ample time for practice and feedback. Learning involves both individual learning and team learning, and an instructor is or can also be present to solve problems that students don't comprehend.

Collaborating with the team: Since gamification involves a real-world situation, the entire team can collaborate in the learning environment, brainstorm on the possible outcomes and share their ideas to overcome the problems.

Reducing chances of failure in the real world: Game-based learning resembles the real-world situations, which means that the organisation benefits by allowing participants to make and learn from their mistakes in the virtual world. Participants trained extensively through gamification avoid traps and pick up crucial tips and are less likely to fail in the real world.

Higher receptivity to learning: Game-based learning is multi-sensory learning which greatly enhances a learner's ability to grasp and retain concepts. Participants can learn new concepts faster, retain them in their memories and remember to use them effectively in real-time.

Gamification is a great tool with which you can reach following aspects that are very important in youth work

● **Motivation**-because gamification rewards participants and challenges them to keep going, they are motivated to improve and/or beat the competition.

● **Engaged Learners**: key to engagement is variety and interaction. Gamification is a small slice of the eLearning pie along with storytelling, scenarios, audio, video, graphics and social learning.

● **Learner Autonomy**. Gamification allows individuals to learn at their own pace and level, and taps into intrinsic motivators like competition, improvement, and completion.

● **Instant Feedback**. Games provide feedback as players demonstrate their mastery. If they do well, it's onto the next level; if not, they get another chance to see what they missed.

● **Social Learning**. Friendly competition and collaboration allow learners to forge new connections. A 2020 article in Educational Psychology Review found that learners respond positively to mild social pressure when they are competing with members of a community.

- **Emotional Connection**. Gamification often uses storytelling to help learners apply what they've experienced in simulated situations, which creates an emotional connection (and, in turn, stronger neural connections).

- **Meaningful Goals**. Levelling up and completing games gives learners meaningful, tangible goals to work toward.

- **Cognitive Relief**. Brains love to multitask, but multitasking can hurt training efforts. Games direct attention to one task at a time, which increases focus and reduces the cognitive load on the brain.

4.4.2. How to plan *gamification*?

Not to be confused with game-based learning, which asks youngsters to play games in the service of education, gamification is all about taking the features that make games so engaging and applying them in other kinds of learning activities. These features include things like:

- Experience points that accumulate toward mastery

- Badges that reward players for achieving something notable

- Leaderboards that show how players stack up against the competition

- Quests that let players make meaningful choices

- Checkpoints that mark progress toward a goal

- Boss battles that present a tough challenge and test players' skills

4.4.3. Why is it important to plan *gamification*?

When it comes to gamification, you want to drum up a lot of interest from your learners, so you might plan an organisation-wide competition. The problem? If you create a competition that is too large in scope, you're bound to motivate those at the top of the leaderboard, but you'll probably lose those who are consistently on the bottom, without any chances to move up. Instead, plan on short-term competitions in a variety of applications, and create a leaderboard that resets after a week or so to give everyone a fair chance.

There is such a thing as "trying too hard" when it comes to gamification, especially if you're so focused on the aspect of fun that you miss the point of training. You could create the world's most exciting game, but if learners perceive that it has little to do with their training, they might ditch it for something more conventional. Respect your learners' time and remember that while edutainment is important, subject matter should still be on point.

Experiential eLearning is the key to training success. Module difficulty levels and progression are customised to learners' individual needs. Ongoing checkpoints and interactivity ensure learners don't simply play content in the background or skip ahead without engaging in the material. Points and levels add friendly competition among teammates to satisfy extrinsic motivation needs.

Planning game-based training is great – unless, of course, your learners don't really understand the purpose. Without clear game goals, like target scores and outcomes, learners could lose interest. And, without clear rewards, such as badges and prizes, learners could lose motivation. Both goals and rewards should be an integral part of the planning and development stage of the game.

4.5. Practical tools for the creation of gamification activities

Gamification is based on a variety of tools and techniques that enhance student engagement, motivation, and concentration. The software used in gamification comprises different tools and platforms that allow the application of game mechanisms to various non-game contexts, such as work, school, and non-formal activities. In response to the increasing interest in gamification and gamified components, app designers and software producers have developed numerous tools, incorporating specific features and elements that boost learners' motivation, improve employee performance, and enhance the attractiveness of learning activities.

Moreover, it's important to note that gamification goes beyond technology; it also revolves around effective design. It doesn't require exclusive online delivery or the use of digital tools. Offline activities can readily integrate gaming principles to create engaging and motivating experiences. This holds particular relevance in non-formal and informal learning, which is commonly employed by youth workers and youth organisations.

In order to introduce gamification in your activities, projects or workshops, here follows a non-exhaustive list of practical tools available for free that might be useful. Let's start with the most commonly used digital tool.

4.5.1. Actionbound

Actionbound is a valuable tool for creating engaging experiences in outdoor settings by facilitating interactive activities for groups of people. This application provides the opportunity to arrange educational tours, guided walks, or enjoyable treasure hunts that foster team bonding. One of its many features includes a quiz mode with questions that offer points based on the predetermined number of attempts, penalties for errors, or time taken.

Additionally, the platform supports team tournaments, allowing members to compete against each other. It also allows users to incorporate photos and videos, which can be scored within the app and are essential for progressing to the next task.

Actionbound enables the customisation of the treasure hunt's setting in any location, such as your own city, providing players with hints on Google Maps. This tool is particularly intriguing for team-building activities and city tours that incorporate gamification elements. It introduces a competitive aspect, a scoreboard, and an enjoyable way of learning about new places.

Link: https://en.actionbound.com/

4.5.2 Quizlet Live

Quizlet is an educational platform suitable for both young educators and students, designed to structure and enhance the learning process. It provides various features that allow users to practice and reinforce their knowledge. These include interactive flashcards, which enable users to engage with the content by associating names or terms with specific parts of diagrams or images. Additionally, Quizlet offers a learning mode that adapts to students' needs, helping them learn the material within a set timeframe.

The platform also incorporates gamified activities, such as timed games with scoring, to make studying more engaging. Furthermore, Quizlet allows the importation of content, making it possible to create study sets based on existing notes or documents in formats like Word, Excel, or Google Docs, among others. This feature enables users to easily convert their study materials into interactive learning resources.

Link: https://quizlet.com/

4.5.3 Pear Deck

Enhancing the effectiveness of our explanations and presentations as youth educators is achievable. By incorporating gamification elements through platforms like Pear Deck, educators can elevate their explanations and presentations by infusing them with interactive features. Pear Deck is a live slideshow tool compatible with Google Slides or PowerPoint presentations, enabling students to access the slides on their individual devices. During a lesson, students can receive various forms of content, including questions, images, and supplementary materials. The aim is to create a bidirectional learning environment that maximises the impact of explanations. Additionally, teachers have the option to include interactive slides to gather feedback, conduct quick formative assessments, or gauge the students' emotional state. When students respond, their answers can be shared anonymously by the educator, ensuring that only the educator knows who submitted each answer. This fosters a safe environment for students to participate, knowing that their classmates cannot identify them based on incorrect answers.

Pear Deck offers five different types of interactive questions/answers: 'Draggable Response' (students drag objects over the slide), 'Drawing Response' (students draw directly on the slide), 'Free Response: Text' (for longer answers), 'Free Response: Number' (for numerical answers), and 'Multiple Choice' (for questionnaires). Furthermore, Pear Deck goes beyond being a mere slideshow tool with the inclusion of the Flashcard Factory vocabulary game. Flashcard Factory allows educators to upload or create lists of vocabulary words and definitions, either using their

own definitions or extracting them from an embedded dictionary. Students then work in pairs, taking turns to write sentences using the given words and illustrating them with accompanying drawings. Teams earn points based on the evaluation of their cards at the end. The flashcards can also be exported to Quizlet Live for further study.

Link: https://www.peardeck.com/googleslides

4.5.4 Quizizz

Quizizz is an application that enables educators to introduce gamification into their classrooms by creating quizzes, capturing students' attention, and promoting active learning. It also provides students with the opportunity to self-assess their knowledge through engaging game-based challenges. With Quizizz, students can participate in quizzes covering a wide range of topics, either individually or in group assignments facilitated by the educators. Students do not need to register separately, as educators provide them with access to the questionnaires using a unique "game pin." Students can conveniently view the content on their own devices, including PCs, laptops, tablets, or smartphones.

The platform offers five types of question formats for quiz creation: 'Multiple Choice' (selection-based questionnaire), 'Check-Box' (multiple correct answers), 'Fill-in-the-blanks' (providing the answer in the designated space), 'Open-Ended' (allowing longer responses), and 'Poll' (for gathering opinions rather than correct answers). Media content such as videos or images can also be incorporated into the quizzes. Game modes are designed to foster healthy competition among students. When starting a live quiz, educators can choose a gaming mode, allowing individual students to answer at their own pace, while their scores can be aggregated for team-based competition or individual performance comparisons. Quizizz provides detailed insights at both the class and student levels for each quiz. By leveraging feedback from live quizzes and homework assignments, educators can generate comprehensive statistics that focus on individual students and the overall class performance. This allows tracking of each student's progress, assessing comprehension levels across subjects, and analysing the learning curve for every assignment.

Link: https://quizizz.com/

4.5.5 Socrative

Socrative is a free application designed to engage students and track their progress using multiple-choice tests, evaluations, and other activities in the classroom. It is compatible with various devices such as PCs, tablets, and smartphones. An advantage of Socrative is that students do not need to create personal profiles; instead, the youth educator creates an account linked to their email, which is sufficient for students to access the application.

The app offers multiple activity options, including 'Quiz' (questionnaire), 'Space Race' (timed questionnaire with a competitive element), and 'Exit Ticket' (questionnaire with results ranking). Educators can also choose the type of answers students can provide, such as 'Multiple Choice' (multiple options), 'True or False' (binary answers), and 'Short Answer' (brief responses).

In all three activity types, educators can view students' live answers and review them in a report stored within the application. This allows educators to monitor individual student progress and identify any questions they may have answered incorrectly, providing an opportunity to revisit the content if necessary. The games in Socrative incorporate rankings, which can be used as an evaluation tool.

The Space Race function in Socrative fosters friendly competition among students. By racing across the screen with correct answers, a graded assessment can be transformed into an enjoyable activity. This competitive element adds excitement to student participation.

Additionally, Socrative offers two paid options: Socrative PRO for Primary and Socrative PRO for Secondary and Companies, which provide advanced features beyond the free version.

Link: https://www.socrative.com/

4.5.6 Kahoot

Kahoot is a free platform that allows users to create engaging and interactive learning games within minutes. It offers various formats, including customizable time limits and the number of questions. Additionally, videos, images, and diagrams can be incorporated into the questions to enhance student engagement. While Kahoot provides three paid plans with more advanced features, the basic version is available for free.

Kahoot games are best enjoyed in a group setting. To participate, players need to join the game using a unique PIN provided by the host. Each player answers the questions on their own device, while the questions are displayed on a shared screen. One of the advantages of Kahoot is that students are not required to create personal profiles, and the platform is compatible with any device, including PCs, tablets, and smartphones. In addition to live games, Kahoot also allows the creation of challenges that players can complete at their own pace, making it suitable for homework or remote training purposes.

Kahoot offers various types of questions to choose from, including 'Quiz' (multiple-choice questionnaire) and 'True or False' (binary answers). Premium plans provide additional question types such as 'Type answer' (short answer), 'Slider' (guessing a number on a sliding scale), and 'Puzzle' (placing answers in the correct order).

At the end of each round in a Kahoot game, points are awarded based on correct answers and response speed. A podium displaying the top three players or teams is revealed, creating a sense of achievement and celebration among students. Educators also have the option to provide prizes to those who make it onto the podium, further motivating and engaging the students.

Link: https://kahoot.com/schools-u/

4.5.7 Mentimeter

Mentimeter is a powerful tool that promotes student engagement through live polls, quizzes, multiple-choice questions, and word clouds. With its user-friendly online editor, the platform enables educators to create interactive presentations effortlessly. It facilitates real-time audience participation, saving time and allowing for task customisation based on the audience's preferences. Additionally, once the presentation concludes, results can be shared and exported for further analysis. Furthermore, these results can be compared over time to track the progress of learners.

Mentimeter is widely used in both traditional classroom settings and virtual learning environments. It provides educators with valuable insights into student comprehension and

engagement, helping them adjust their teaching strategies as needed. The platform's versatility extends to various educational contexts, making it an asset for teachers and trainers alike.

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

4.5.8 H5P

H5P is a browser-based platform that enables users to create and share interactive HTML5 content. This versatile platform allows the creation of interactive videos, quizzes, course presentations, and branching scenarios, incorporating gamified elements into the self-learning process. It offers a wide range of content types, such as dialog cards, crosswords, drag-and-drop activities, word searches, guess-the-answer exercises, image hotspots, and many more. These diverse content options make H5P suitable not only for individual activities but also for developing comprehensive training courses for self-paced learning.

In addition to its extensive content library, H5P is known for its user-friendly interface, making it accessible to educators and content creators of all skill levels. The platform supports easy integration with Learning Management Systems (LMS) such as Moodle, WordPress, and Drupal, allowing seamless incorporation of interactive content into existing courses and websites.

Furthermore, H5P promotes collaboration and sharing of content across its global user community. Users can access and modify publicly shared content, fostering a collaborative environment for educators to exchange ideas and resources. This collaborative aspect enhances the platform's value as a resource for educators looking to create engaging and interactive learning materials.

H5P is a cost-effective solution, as its core features are available for free, making it accessible to a wide range of educational institutions, trainers, and content creators. This accessibility and the platform's versatility have contributed to its widespread adoption in the field of e-learning and digital education.

Link: https://h5p.org/

4.5.9 Genially

The Genially application is a digital tool that allows users to create interactive presentations and graphics. It is particularly beneficial for working with children and youth. The platform provides a wide range of presentation options, including captivating animations, interactive quizzes, and engaging escape rooms. Users can access the standard content for free, making it a cost-effective choice for creating dynamic and interactive materials.

Genially is a versatile digital tool that has gained popularity in the education sector due to its ability to create engaging and interactive content. Here are some key features and benefits:

1. Templates and Customisation: Genially offers a variety of pre-designed templates to help users get started quickly. However, it also allows for extensive customisation, enabling users to tailor their content to specific educational needs.

2. Interactivity: The platform excels in providing interactive elements that enhance engagement. These include interactive quizzes, clickable hotspots, drag-and-drop activities, and more. Educators can create gamified content to make learning fun and dynamic.

3. Real-time Collaboration: Genially supports real-time collaboration, allowing educators to work on projects with students or colleagues simultaneously. This feature promotes teamwork and creative collaboration.

4. Accessibility: Genially's content can be accessed on various devices, making it a versatile choice for both in-person and remote learning. It's compatible with computers, tablets, and smartphones.

5. Analytics: Educators can track student engagement and interaction with the content. This data helps in assessing the effectiveness of the materials and making improvements as needed.

6. Accessibility Features: Genially strives to be an inclusive platform by providing features for accessibility, such as screen reader compatibility and keyboard navigation.

7. Cost-Effective: As mentioned in the original text, the core features of Genially are available for free, making it an affordable option for educators and students. There are also premium plans with additional features for those who require more advanced functionalities.

Genially is an excellent choice for educators looking to create captivating and interactive educational materials, whether for traditional classroom settings or remote learning

environments. It adds a creative and dynamic dimension to presentations and content delivery, making the learning experience more engaging and enjoyable for students of all ages.

Link: https://genial.ly/it/

4.5.10 Plickers

Plickers is an interactive assessment tool that merges physical cards with digital scanning to facilitate engaging quizzes and assessments. With Plickers, every student holds up a distinctive printed card, which the teacher scans using a mobile device. Instantly, the tool gathers and presents the responses, providing an enjoyable and effective method for evaluating learning progress.

One of the remarkable aspects of Plickers is its low-tech, high-impact approach. It successfully bridges the physical and digital realms, offering a practical solution for educators. Unlike many digital assessment tools that require individual devices for every student, Plickers relies on printed cards, making it a cost-effective and accessible choice for teachers.

Plickers is known for its user-friendly setup. Educators can quickly print Plickers cards directly from the platform, assign them to students, and be ready to start the assessment process. This simplicity is one of the platform's major advantages, especially for teachers with busy schedules.

One of the most valuable features of Plickers is its ability to provide real-time feedback. It allows educators to assess student understanding on the spot during the lesson. This instant feedback is crucial for making on-the-fly instructional decisions, ensuring that the teaching is tailored to the students' needs.

Plickers is versatile, accommodating a range of question types, including multiple-choice, true/false, and open-ended questions. This flexibility makes it adaptable to various assessment needs and learning objectives.

For educators who value data-driven instruction, Plickers offers data analysis tools to track and analyse student performance over time. It is a valuable resource for identifying areas where students may need additional support or further instruction.

In addition to its functionality, Plickers introduces an element of engagement into the learning environment. Students actively participate by physically holding up their Plickers cards, which can make the assessment process more enjoyable and interactive.

Plickers is compatible with both iOS and Android devices, ensuring that it can be used with a wide range of mobile devices, making it accessible for teachers who use different technology platforms.

Privacy is a significant consideration with Plickers. The platform maintains student privacy by not displaying individual responses publicly. Only the teacher has access to the assessment data, creating a safe and non-threatening assessment environment.

In summary, Plickers is a valuable tool for educators seeking an easy-to-implement, cost-effective, and engaging method for assessing student understanding in real time. Its unique blend of low-tech and digital features makes it a practical addition to the teaching toolkit, especially for those working in settings with limited access to digital devices.

Link: https://www.plickers.com/

4.5.11 Classcraft

This is an educational platform that leverages gamification to transform the classroom into an immersive role-playing game. It empowers teachers to allocate points, monitor student behaviour, and design quests and challenges to actively involve students. By doing so, Classcraft fosters an atmosphere of teamwork, collaboration, and a positive learning environment.

This innovative tool provides teachers with a range of capabilities to create an engaging and motivating learning environment:

1.   Points and Rewards: Classcraft allows educators to allocate points to students for a variety of achievements, such as completing assignments, demonstrating teamwork, or excelling in assessments. These points serve as an incentive system, fostering a positive atmosphere where students are encouraged to excel and take ownership of their learning.

2.   Character Customisation: Students can personalize their in-game characters, giving them a sense of agency and individuality within the classroom setting. This customisation process can be both fun and empowering for students, as it allows them to express their personalities and preferences.

3.   Behaviour Monitoring: Classcraft provides teachers with a mechanism to track student behaviour and participation. This feature promotes responsibility and accountability, as students are aware that their actions are being observed and evaluated.

4.   Quests and Challenges: Educators have the creative freedom to design quests and challenges that align with the curriculum. These quests engage students in active learning and can make complex subjects more accessible and enjoyable.

5.   Teamwork and Collaboration: Classcraft places students into teams, encouraging collaboration and mutual support. The platform fosters a sense of camaraderie and emphasizes the importance of working together to achieve common goals.

6.   Classroom Management: Classcraft offers useful tools for classroom management, simplifying lesson organisation, student progress tracking, and overall classroom management. This contributes to a well-structured and focused learning environment.

7.   Parent Engagement: Parents can stay informed about their child's progress and behaviour through Classcraft, enhancing communication between educators and families. This transparency supports a holistic approach to education.

8.   Accessibility: Classcraft is accessible on various devices, including computers, tablets, and smartphones. This adaptability ensures that it can be used in various learning environments, whether in-person or remote.

9.   Educator Community: Classcraft boasts a thriving online community of educators who share resources, lesson plans, and creative ideas for maximizing the platform's benefits in the classroom. This network serves as a valuable resource for educators seeking to make the most of Classcraft.

Classcraft has gained widespread adoption by educators worldwide, earning praise for its ability to boost student engagement, motivation, and collaboration. It stands as a powerful tool for modern educators looking to create an interactive and positive learning environment while effectively integrating gamification into their teaching practices.

Link: https://www.classcraft.com/
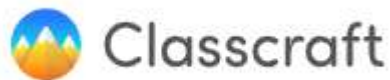
4.5.12 Gamification offline

While gamification is often connected to new technologies and digital tools, it is not limited to their use. Incorporating gamification into various activities can be achieved without relying on specific applications. Numerous techniques are available to provide an exciting experience for your audience. In fact, many of these methods have been successfully employed in non-formal and informal settings, including popular icebreakers. Thus, gamification can be implemented effectively beyond the realm of digital platforms, offering engaging and interactive experiences.

In the following part of this paragraph, you will find instead a list of different techniques and tools that are not available digitally but can be implemented offline.

Here are some tips on how to implement gamification into your activities:

- Badge System: Use badges to recognize accomplishments and progress.
- Point System: Award points for tasks, providing a sense of achievement.
- Competitive Environment: Introduce friendly competition to boost engagement and teamwork.
- Leaderboards: Show immediate feedback and encourage healthy competition.
- Story and Narratives: Add storytelling elements for engaging activities, especially for young participants.
- Clear Goals and Challenges: Define goals and set challenging tasks for increased interest.
- Curiosity and Surprise: Use cliffhangers and surprises to maintain curiosity and avoid repetition.
- Levels and Progression: Let participants progress through tasks and goals.
- Time Pressure: Add time limits for excitement and urgency.
- Personalisation: Allow participants to personalize avatars and profiles for ownership.
- Social Interaction: Encourage collaboration, competition, or cooperation with social features.

Let's explore a variety of versatile tools and resources for creating engaging offline activities with gamification techniques. These resources offer educators creative ways to infuse excitement and interactivity into their lessons, fostering a dynamic and enjoyable learning environment. From classic board games and puzzles to role-playing and storytelling cards, each tool brings its unique elements to gamify the educational experience.

Dixit Cards: Dixit cards are a great resource for creating gamified storytelling activities. These cards feature unique and imaginative illustrations that can spark creativity and engagement.

Board Games: Traditional board games like "Monopoly," "Scrabble," or "Settlers of Catan" can be adapted for educational purposes. They often involve strategy, decision-making, and competition, making them ideal for gamified learning.

Role-Playing Games (RPGs): RPGs like "Dungeons & Dragons" encourage storytelling, decision-making, and teamwork. They can be adapted to teach various subjects and foster creativity.

Escape Room Kits: Escape room kits designed for educational purposes challenge students to solve puzzles and riddles to "escape." They can be tailored to teach specific topics or skills.

Flashcards: Gamify the process of memorisation by turning flashcards into a quiz game. Students can compete to answer questions or match terms with definitions.

Treasure Hunts: Create treasure hunt activities where students follow clues and solve riddles to find hidden "treasures" or pieces of information related to the lesson.

Puzzle Games: Jigsaw puzzles, crossword puzzles, and Sudoku puzzles can be used to enhance critical thinking and problem-solving skills. Create puzzles related to educational content to engage students.

Quiz Bowls: Organise quiz bowl competitions where students compete to answer questions on various topics. This format encourages quick thinking and competition.

Story Cubes: Story cubes are dice with images that can be used to inspire creative storytelling. Roll the dice and ask students to incorporate the images into a story related to the lesson.

Role Cards: Provide students with role cards that assign them specific roles or characters in a scenario. This can encourage role-playing and decision-making activities.

Word Games: Word games like Scrabble, Boggle, or Hangman can be used to reinforce vocabulary and language skills in a gamified manner.

Art and Craft Supplies: Encourage creativity by providing art and craft supplies. Students can create visual representations of concepts or characters related to the lesson.

Outdoor Activities: Outdoor activities such as scavenger hunts, nature walks, or geocaching can be gamified to teach environmental science or geography, for example.

Storytelling Cards: Storytelling cards with images or prompts can be used to spark creative storytelling sessions. Students draw cards and create stories based on the content they represent.

These tools and activities can be adapted and customised to suit various educational objectives and age groups. They add an element of fun and engagement to the learning process, making it more enjoyable and memorable for young participants.

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References
1. IGI Global (https://www.igi-global.com/dictionary/badge-system/50941)
2. https://hatrabbits.com/en/gamification/
3. https://xperiencify.com/gamification-tools/

4.6. Gamification assessment and evaluation methods

Education systems worldwide are constantly evolving to keep pace with the changing demands of the modern world. With the rapid advancement of technology, the use of Information and Communication Technologies (ICTs) has become increasingly essential in the education sector. ICTs have revolutionised the way education is delivered and received, making it more accessible, efficient, and effective.

E-learning is one of the most significant developments in the education sector in recent years. It involves using electronic media, such as computers, the internet, and mobile devices, to facilitate learning and teaching. E-learning platforms are designed to offer flexible and interactive learning experiences, and they can be accessed anytime, anywhere. E-learning is not only limited to online courses, but it also includes the use of educational software, digital textbooks, and multimedia resources.

Incorporating ICTs into the education system has numerous advantages. E-learning platforms provide learners with a self-paced and personalised learning experience, catering to their individual needs and preferences. Learners can access learning materials, complete assignments, and communicate with instructors and peers from anywhere in the world, using any device with an internet connection. E-learning platforms also promote collaborative learning, enabling learners to share knowledge and ideas with their peers.

Moreover, e-learning has proven to be a cost-effective solution for education institutions. It eliminates the need for physical classrooms, textbooks, and other traditional learning materials, reducing the cost of delivering education significantly. E-learning platforms also allow for efficient tracking of learners' progress and performance, enabling instructors to provide timely and personalised feedback.

The field of education recognizes that not all learners have the same educational needs and that different pedagogical approaches should be used depending on the specific learning requirements. To cater to these diverse educational needs, educational institutions have started to adopt innovative technological means, including gamification, to enhance the learning process.

Gamification is a contemporary trend in education that involves incorporating gaming elements into the learning process to create an engaging and stimulating experience for learners. With the help of Information and Communication Technologies (ICTs), gamification can offer a unique approach to education, enabling learners to acquire new skills and knowledge through interactive and enjoyable activities.

Gamification's appeal lies in its ability to create an emotionally engaging experience that motivates learners to participate actively in the learning process. By incorporating game elements such as points, badges, and leaderboards, gamification can provide learners with a sense of achievement and progress, encouraging them to continue learning and achieving their educational goals.

Moreover, gamification can be tailored to the expectations and interests of "digital native" students, who have grown up surrounded by technology and are more receptive to interactive and multimedia-based learning methods. By using ICT tools, gamification can offer a personalised and adaptive learning experience, where learners can learn at their own pace and according to their specific needs.

Gamification focuses not on a learning game, but on creating a game experience in a certain learning content or activity. It applies gaming elements and mechanics that affect students' emotions, feelings, thoughts, and behaviours to achieve the set learning objectives. Some of the most common and popular elements are earning badges, points and awards; passing through levels and telling a story; leader boards and ranking; feedback; challenges; competition, and so on.

Gamification has gained popularity in recent years, with higher education institutions and primary education systems worldwide adopting this approach. However, despite its widespread use, the concept of gamification is still relatively new and requires further exploration. One of the challenges with gamification is that there is no definitive consensus on the specific elements that it entails.

Educational computer games are designed to facilitate learning and assess the knowledge of learners on a particular subject while achieving specific learning objectives. The use of gamification and educational computer games can be applied at both the micro and macro levels of education. At the micro level, gamification can be employed to support specific learning activities such as creating problem situations, forming concepts, checking and evaluating knowledge and skills, and so on. On the other hand, at the macro level, gamification can be employed to support an entire topic from the content, section or whole course, providing a more comprehensive approach to learning.

Despite the potential benefits of gamification in education, there is still much to learn about its effectiveness in enhancing learning outcomes. As such, educators and researchers are continually exploring new ways to incorporate gamification into educational programmes, to identify the specific elements that work best for different learners, and to better understand its impact on learning and motivation.

In conclusion, while gamification has been embraced as a novel approach to education, it is still a relatively new concept that requires further exploration. Gamification and educational computer games offer a variety of ways to enhance learning outcomes at both the micro and macro levels of education. Nevertheless, educators and researchers need to continue to investigate and identify the most effective approaches to gamification and its potential benefits for learners of all ages.

4.6.1. Badges, self-assessment, quizzes, etc.

Assessment is a crucial aspect of any educational process, and it plays a significant role in determining the effectiveness of teaching and learning. Two types of assessments can be identified in education: normative referenced and criterion referenced. Normative referenced assessments compare a learner's achievement to other learners, while criterion referenced assessments evaluate the achievement of an individual student in relation to the set learning objectives. With the use of gamification elements, both normative and criterion referenced assessments can be realised. For example, badges and leaderboards can be used to facilitate normative assessment, while the use of points and badges to move to the next level can serve as a criterion referenced assessment.

Assessments in education can serve different purposes, such as establishing the entry level for learners, formative assessment, and summary assessment. In traditional education, assessments are typically carried out by a lecturer or instructor, but in e-learning environments, students can carry out self-assessment based on predetermined criteria or engage in peer assessment when working on an individual or group project.

With the advancement of technology, it is now possible to implement knowledge and skills assessment in e-learning environments through various collaborative activities such as wikis, blogs, and workshops. However, there have been concerns that students lack motivation and commitment when performing peer assessments in MOOCs (Massive Online Open Course). To address this issue, a gamified model for peer assessment could be implemented, which would make the assessment process more engaging and interactive, increasing student motivation and commitment.

Moodle is a Learning Management System (LMS) widely used in educational institutions for online learning. It has built-in gamification functionalities that allow for self-assessment and assessment in e-learning environments. Moodle's core functionality includes two categories of badges: site badges and course badges. Site badges are available to users' site-wide and are related to site-wide activities, while course badges are given to users enrolled in the course and are related to the activities within the course.

Badges are a form of digital credential that can be used to recognize learners' achievements and provide motivation. Learners can earn badges by completing specific tasks or achieving certain learning objectives. Badges can also be used as a tool for self-assessment, allowing learners to track their progress and identify areas where they need to improve.

Moodle's badge system can be customised to fit the needs of different learning environments. For example, instructors can create badges that are specific to their courses or create badges that are awarded for specific types of activities, such as completing a quiz or participating in a discussion forum. Badges can also be manually or automatically awarded to learners, depending on the instructor's preferences.

In addition to badges, Moodle also has other gamification functionalities built into its core, such as leaderboards, progress bars, and points systems. These tools can be used to motivate learners and provide feedback on their progress. For example, learners can earn points for completing activities or achieving learning objectives, and their progress can be tracked on a leaderboard. *(Image showing available badges in Moodle 2.5Dev)*
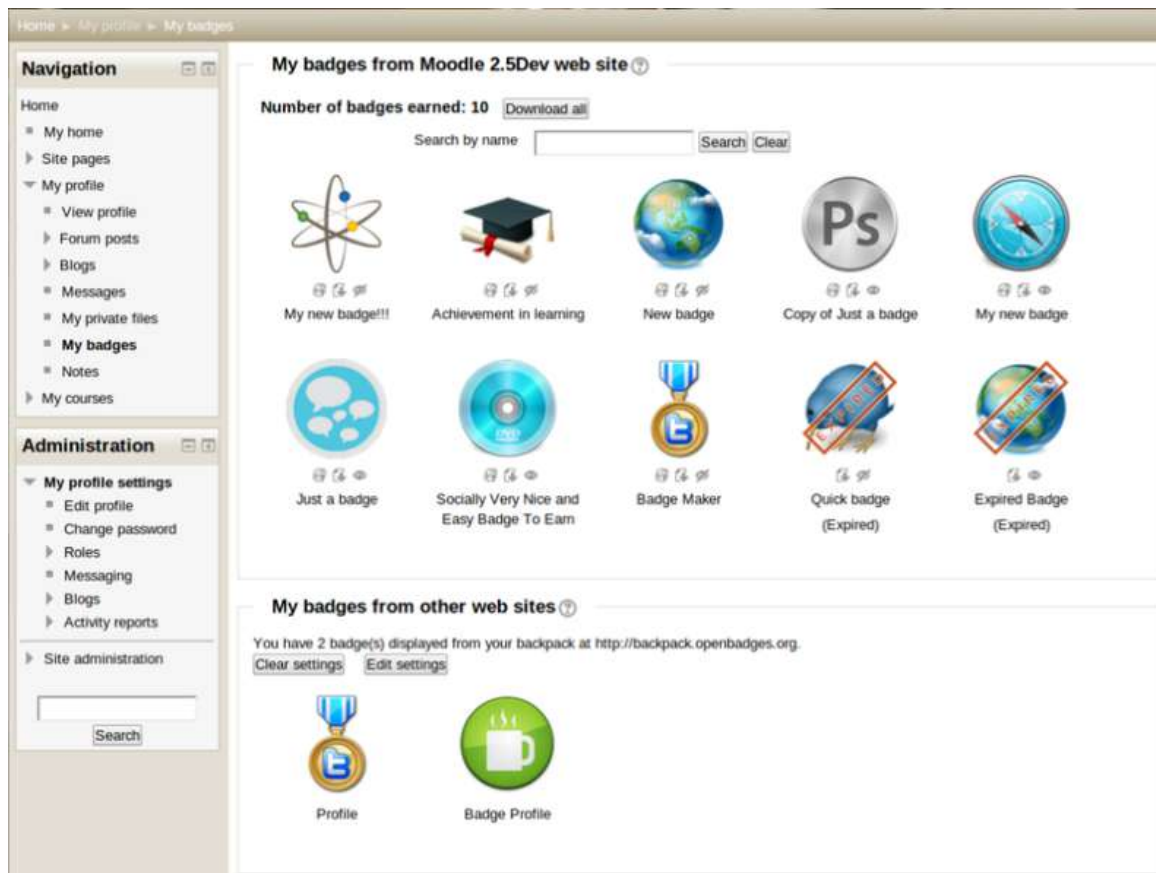
Overall, Moodle's gamification functionalities provide a range of tools for self-assessment and assessment in e-learning environments. These tools can help to motivate learners, track progress, and provide feedback, ultimately leading to more effective learning outcomes.

The implementation of self-assessment, peer assessment, and assessment in e-learning environments through gamification can be achieved through system-specific extensions or plugins developed for particular LMSs such as Moodle. These plugins provide extended gamification capabilities that are not included in the basic distribution of the LMSs. *(Image showing badges awarded by teachers or by completing tasks)*

Name	Badge status	Criteria	Recipients	Actions
Mindfulness	Available to users	• Awarded by: Teacher	0	
Positivity	Available to users	• Complete: **"Assignment - Task: Solutions to stress"**	2	
Teamwork for success	Available to users	• Awarded by: Teacher	0	

For example, the Level Up! plugin enables automatic points awarding, precise setting of the number of points that students receive for their actions, and a leaderboard to enhance competitiveness. It also displays students' current achievement according to the next level, levels, and points they require. Similarly, the Game plugin provides a set of games to be included as a course activity, including hangman, crossword, cryptex, millionaire, Sudoku, Snakes and Ladders, The hidden picture, and Book with questions. Quizventure is another plugin that displays quiz questions and possible answers as falling spaceships that learners have to shoot to select the correct answer. This plugin can be used for assessment and self-assessment.

Items

Items | Report

List of items

Add an item

Item name	Locations	Actions
Coin	Bottom of the river First coin Treasure cove	⚙ + ✕
Golden crown	Treasure island	⚙ + ✕
Golden sword	Treasure	⚙ + ✕

Report

Items | Report

First name / Surname	Stash	Actions
Bebe Stevens		↺
Butters Stotch	-	↺
Clyde Donovan		↺
Eric Cartman		↺
Jimmy Valmer	-	↺

Stash is another plugin directed at encouraging students' interactions with course activities by providing items as prizes they can collect. The plugin shows a block with the current student's collection. However, this plugin requires some code copy-paste to include items and is suitable only for self-assessment. *(Image showing student's current budget status and achievements)*

Mootivated (for schools) and Motrain (for corporate training) are mobile apps designed to boost student or employee engagement with learning in Moodle. Learners earn virtual coins or points when they complete activities and consume content. They can then use these coins within the app to enhance their personal avatars or make purchases from a virtual store. These plugins are suitable for self-assessment. *(Image showing Little Bridge's coins system (tokens) for acquiring upgrades for your avatar)*
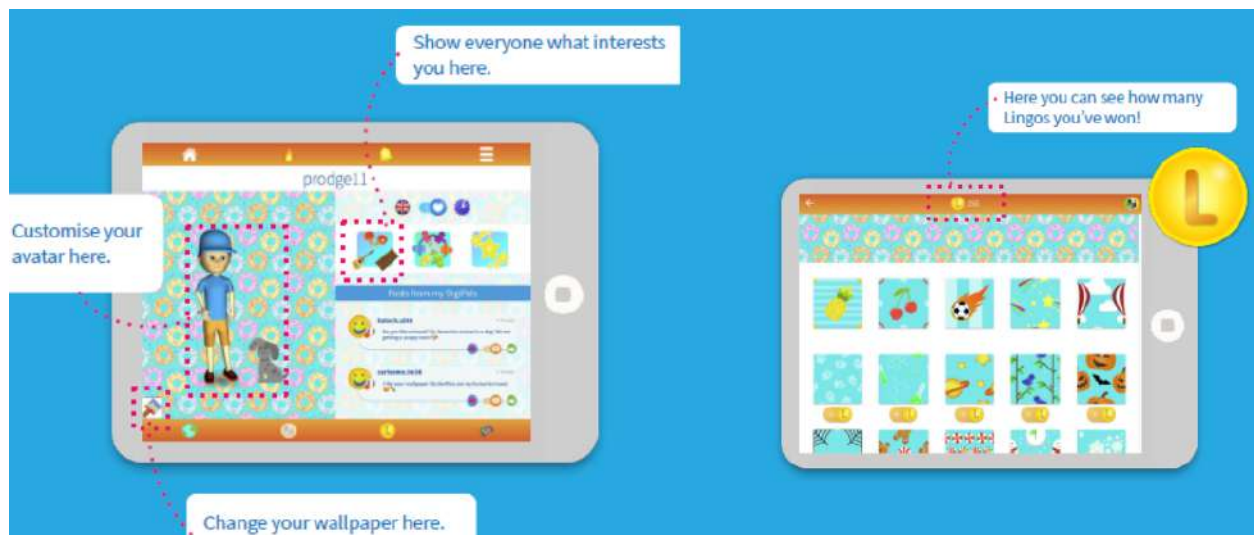
Finally, the Ranking block plugin tracks the completion events of activities and gives points according to the criteria that the teacher wants to monitor. This plugin can be used for self-assessment by creating a ranking between learners. These various plugins provide a range of gamification functionalities that can be used to enhance self-assessment and assessment in e-learning environments.

The use of plugins and extensions is essential to customise and enhance the functionality of a Learning Management System (LMS) like Moodle. Two types of extensions that can be used in Moodle are system-specific and standard-based. System-specific extensions are developed specifically for a particular LMS and cannot be used in another LMS. Moodle has a wide set of developed system-specific extensions named plugins grouped internally as blocks and activities. For instance, Level Up! is a free of charge plugin that enables extended gamification capabilities like automatic points awarding, precise setting of the number of points that students receive for their actions, leaderboard to enhance competitiveness, displaying students' current

achievement according to the next level, levels, and points they require. On the other hand, standard-based extensions are developed according to open and free specifications such as SCORM, xAPI, and LTI. These extensions grant interoperability between different LMS if they support these specifications.

SCORM is a specification created and maintained by ADL Initiative, which allows the creation of learning content that can include educational computer games or implement gamification functionalities. The learner's progress can be kept while the learner takes breaks during the learning process or during playing the game, and test scores achieved by the learners are reported to the LMS. *(Image showing the meaning behind the acronym SCORM)*
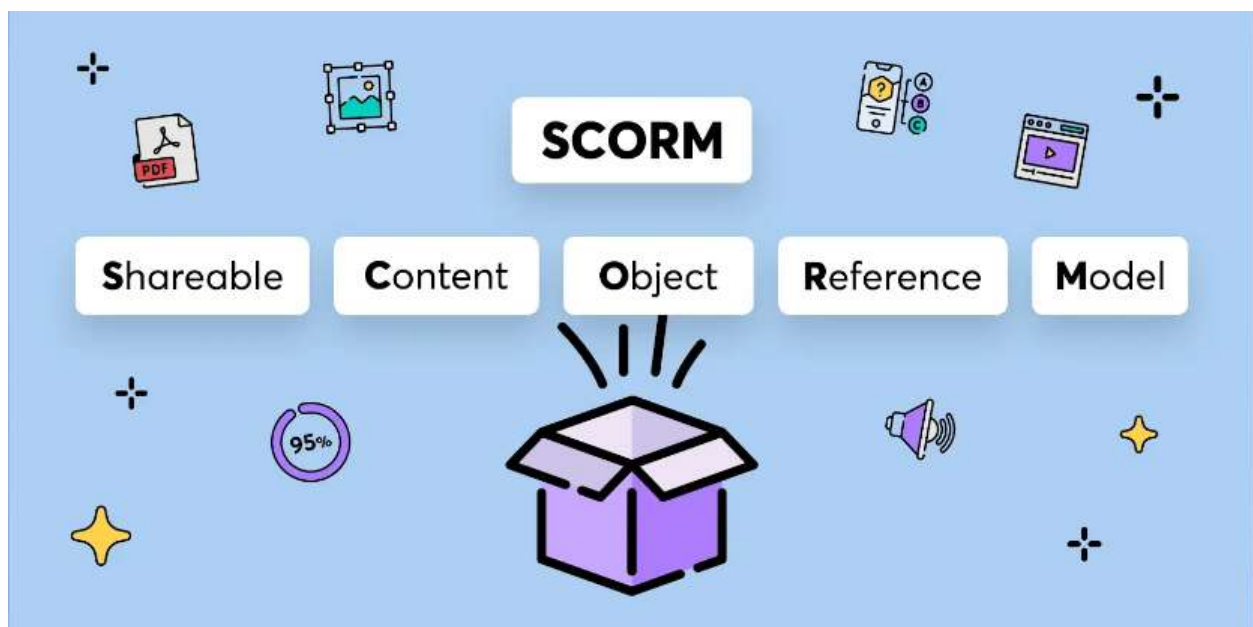
LTI is a specification created and maintained by the IMS Global Learning Consortium, which allows learning platforms like LMS or portals to securely connect with external learning applications and tools in a standard way. LMSs that implement LTI can use external content and services and receive assignments and grade data from external assessment tools.

xAPI is a specification maintained by the ADL Initiative that allows the creation of an e-learning ecosystem in which LMSs and different applications can share data about learner performance and store this data in a Learning Record Store (LRS). Instead of a wide variety of user actions in LMS, xApi can track activities in a simulation environment or mobile app and personal or team performance in educational computer games. Information stored in LRS can be returned to LMS for grading purposes.

In the context of peer assessment, a Tool for Awarding Badges could be used to implement a set of badges that could be awarded by students to students, supporting peer assessment of the

software projects. This approach provides a way to engage students in the assessment process and provide them with feedback from their peers.

The following is an example of a comprehensive learning activity on different self-assessment tools and evaluation methods. It's titled introduction to gamification, meant to last 4 hours and to include up to 30 participants. The facilitator will need the following materials, equipment and space: A4 paper, pens, computer, Moodle access, plugins, coloured markers, magazines, internet access, laptops/smartphones, projector/screen, a big space, tables (at least as many as the groups formed) and chairs.

The objectives of this activity are to introduce students to different assessment methods used in teaching and learning, to support participants in discovering new tools and software used for self-assessment and to practice using tools and software.

The session is divided into four parts. During the first part, Introduction to gamification and assessment, the facilitator will discuss the principles of testing and assessment with the students, as well as the purpose of assessment. Several videos will be shared and discussed. The aim is to introduce the students to gamification and self-assessment. In the following part, Gamification and educational computer games, the facilitator will lead a discussion about what gamification is and its role in educational computer games. The goal is to develop a set of examples to better understand differences in self-assessment.

In the third part, Assessment in Education and in E-Learning Environments, the facilitator will show assessment methods, and students will discuss them. The goal is to introduce assessment methods in education and in e-learning environments. The last part, Tools and Types of Self-Assessment, includes the following steps: first, the facilitator will introduce assessment tools and software in a presentation; second, each group will be given a method and will develop it; and last, each group will perform a small presentation introducing their method.

Some tips and recommendations for the trainer/facilitator are to be present and check to see if the participants are comfortable and have understood what they need to do. Provide additional materials, such as articles, YouTube videos, or guidebooks, if needed.

5. TRAINING OF TRAINERS TOOLBOX

In this chapter, we present a comprehensive example of a training programme focused on gamification within the framework of the GROW project. This programme is designed to provide a clear and structured outline for a gamification training event. It includes key topics, activities, resources and timelines, offering a valuable starting point for trainers. However, it is important to emphasise that the beauty of the GROW project training is its adaptability. Trainers have the flexibility to choose, modify, and adapt their training sessions according to the specific needs and preferences of their target groups.

Training Curriculum

To support the flexibility, we encourage trainers to explore and utilise the diverse set of activities provided in the Training Curriculum available on the project website. The curriculum is accessible in six different languages, including English, Italian, Greek, Spanish, Albanian, and Montenegrin, ensuring that trainers can effectively connect with their participants and deliver a tailored and engaging training experience.

The GROW project's comprehensive Training Curriculum covers a broad spectrum of topics, providing in-depth insights and guidance in six distinct modules. These modules are thoughtfully designed to equip trainers and educators with the knowledge and tools needed to effectively implement gamification in their youth work and non-formal education activities. They include:

Module 1: Introduction to Gamification

Module 2: Gamification in Youth Work and Non-Formal

Module 3: Gamification in youth work and non-formal education - specific examples and successful cases studies

Module 4: Gamification planning. How to effectively plan gamification activities (what, why, how?)

Module 5: Practical tools for creation of gamification activities

Module 6: Gamification assessment and evaluation methods (badges, self-assessment, quizzes, etc)

These modules collectively form a comprehensive training programme that empowers trainers to create dynamic, engaging, and effective learning experiences for their audiences. The flexible

curriculum allows trainers to adapt the content to meet the specific needs of their participants and deliver impactful gamification training.

Training Curriculum model: https://grow-project.eu/training-materials

We suggest the following training agenda, based on the materials provided by the GROW project, which covers gamification and includes an additional session on training methods and presentation skills. This agenda is built upon the foundations laid during the first international Training of Trainers, which was organised as part of the GROW project in Bologna, Italy, in March 2023. It also incorporates the collective experience and expertise of all partner organisations involved in the project. All necessary materials for this session are readily available on the project website.

The complete agenda is designed as a 5-day training programme, with each day structured to be adaptable for both in-person and online modes, allowing trainers to choose the format that best suits the needs of their specific target group. The practical tools sessions can be selected and tailored to match the participants' requirements and the training's objectives, with a more extensive array of tool examples available in the Training Curriculum.

Day 1

9.00 – 9.30	**Introduction of the training and ice breaking activity**
9.30 – 10.00	**Activity: Get to know each other**
10.00 – 10.30	**Expectations session**
10.30 – 11.00	Coffee-break
11.00 – 12.30	**Basic elements of training and training methods**
12.30 – 13.30	Lunch break
13.30 – 15.00	**Presentation skills part 1**
15.00 – 15.30	Coffee-break
15.30 – 16.30	**Presentation skills part 2**

Day 2

9.00 – 10.30	**Introduction to gamification: theory of gamification**
10.30 – 11.00	Coffee-break
11.00 – 12.30	**Gamification group work**
12.30 – 13.30	Lunch break
13.30 – 15.00	**Gamification planning: how to effectively plan gamification activities**
15.00 – 15.30	Coffee-break
15.30 – 16.30	**How to effectively plan gamification activities/group work**

Day 3

9.00 – 10.30	**Gamification in youth work and non-formal education: case studies**
10.30 – 11.00	Coffee-break
11.00 – 12.30	**Practical tools in gamification: Mentimeter**
12.30 – 13.30	Lunch break
13.30 – 15.00	**Practical tools in gamification: Virtual Escape Room part 1**
15.00 – 15.30	Coffee-break
15.30 – 16.30	**Practical tools in gamification: Virtual Escape Room part 2**

Day 4

9.00 – 11:00	**Practical tools in gamification: Actionbound part 1**
11:00 – 11.30	Coffee-break
11.30 – 12.30	**Practical tools in gamification: Actionbound part 2**
12.30 – 13.30	Lunch break

13.30 – 15.00	**Practical tools in gamification: Kahoot**
15.00 – 15.30	Coffee-break
15.30 – 16.30	**Practical tools in gamification: Baamboozle**

Day 5

9.00 – 10.30	**Gamification assessment and evaluation methods**
10.30 – 11.00	Coffee-break
11.00 – 12.30	**Group work: Gamification assessment and evaluation methods development**
12.30 – 13.30	Lunch break
13.30 – 15.00	**Importance of feedback**
15.00 – 15.30	Coffee-break
15.30 – 16.30	**Conclusion and evaluation session**

For specific guidance on facilitating these activities in both online and in-person settings, detailed information can be found in the Blended Training Course document, which is accessible on the project's website.

Blended Training course: https://grow-project.eu/training-materials

Presentations access on website

The GROW partnership has made a wealth of resources available on the project website, including presentations, workshop materials, and valuable tips. These resources are designed to be versatile and adaptable, offering trainers and educators a treasure trove of content that can be used in their own training sessions or tailored to meet the specific requirements of their target groups. Whether it is utilising insightful presentations to convey key concepts, accessing workshop materials for hands-on learning, or incorporating expert tips to enhance training delivery, these resources are a valuable addition to any trainer's toolbox. They empower trainers to continue spreading the knowledge and benefits of gamification effectively and in a manner that suits their audience's unique needs.

Link to resources: https://grow-project.eu/training-materials

Video tutorials

The GROW project website features valuable resources for trainers and participants alike. We offer a collection of video tutorials that correspond to each module of the Training Curriculum. For trainers, these videos offer an invaluable tool to enrich their training sessions with dynamic and visually engaging content. Additionally, participants can utilise these videos in their self-learning time to grasp the content and concepts at their own pace. With these video tutorials, we aim to make the learning experience not only informative but also engaging and accessible to all.
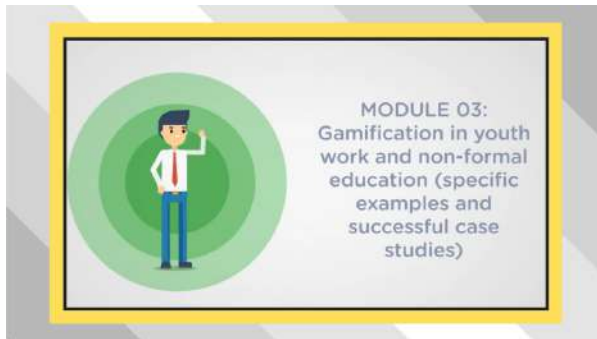

GROW Module 1: Introduction to gamification
Link: https://www.youtube.com/watch?v=nYAihKZVHxw

GROW Module 2: Gamification in youth work and non-formal education
Link: https://www.youtube.com/watch?v=lM-P6x5-xsU

GROW Module 3: Gamification in youth work and non-formal education
Link: https://www.youtube.com/watch?v=arWr_mdIyBM

GROW Module 4: Gamification planning. How to effectively plan gamification activities
Link: https://www.youtube.com/watch?v=BDIFZGgOs4w

GROW Module 5: Practical tools for the creation of gamification activities
Link: https://www.youtube.com/watch?v=XCHn048q0ZE
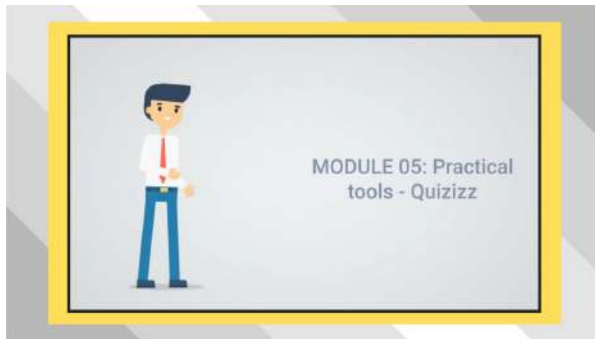
GROW Module 5: Practical tools for gamification activities - Quizizz

Link: https://www.youtube.com/watch?v=cO5GenUJavI

GROW Module 5: Practical tools for gamification activities - ActionBound

Link: https://www.youtube.com/watch?v=THefzHp7wWA

GROW Module 5: Practical tools for gamification activities - Mentimeter

Link: https://www.youtube.com/watch?v=8HryjGm8csw
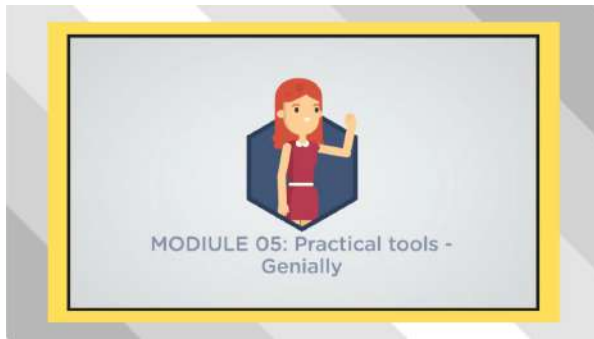
GROW Module 5: Practical tools for gamification activities - Genially
Link: https://www.youtube.com/watch?v=VeBLZLRX9lI

GROW Module 5: Practical tools for gamification activities - Pear Deck
Link: https://www.youtube.com/watch?v=nCNHiWtZz2U

GROW Module 5: Practical tools for gamification activities - H5P
Link: https://www.youtube.com/watch?v=1lcqNKiD-jo

GROW Module 5: Practical tools for gamification activities - Socrative
Link: https://www.youtube.com/watch?v=XC-sJbe6k8I

GROW Module 5: Practical tools for gamification activities - Quizlet
Link: https://www.youtube.com/watch?v=U-XYim_TkDE

GROW Module 5: Practical tools for gamification activities - Kahoot!
Link: https://www.youtube.com/watch?v=nA_CN0pGf_M

GROW Module 5: Practical tools for gamification activities - Baamboozle
Link: https://www.youtube.com/watch?v=0hCb1pHFqQU

GROW Module 6: Gamification assessment and evaluation methods
Link: https://www.youtube.com/watch?v=SIaY69iCPUo

All video tutorials are available on YouTube channel Project_Grow.

Link: https://www.youtube.com/@Project_Grow/videos

They can be found also on the project's website: www.grow-project.eu

Quizzes list

The GROW project website features a useful resource in the form of quizzes designed to help participants to evaluate and consolidate their newfound knowledge from each of the training modules. These quizzes offer a self-assessment opportunity, allowing participants to gauge their understanding of the gamification concepts and techniques covered in the training. By taking these quizzes, participants can pinpoint areas that may require further review, ensuring they grasp the content comprehensively. This self-paced assessment tool empowers participants to

take charge of their learning journey, enabling them to enhance their competencies in gamification effectively and with confidence.

Quizzes link: https://grow-project.eu/quiz

Online resources to use

To facilitate an engaging and interactive online training experience, we recommend using versatile platforms such as: Zoom (https://zoom.us/), Microsoft Teams (https://www.microsoft.com/en-us/microsoft-teams/group-chat-software), or Google Meet (https://meet.google.com/). These platforms offer robust features like breakout rooms, which enable trainers to divide participants into smaller groups for discussions and activities. Additionally, incorporating polls within your virtual sessions can gather quick feedback and foster participation.

To streamline resource sharing and collaboration, consider integrating Padlet (https://padlet.com/) into your training. Padlet allows you to create a collaborative board where you can effortlessly share essential resources, materials, and links with all participants.

For group activities, brainstorming, and presentations of results, Jamboard (https://jamboard.google.com/) can serve as a virtual whiteboard, enhancing the interactivity and visual engagement of your online training. These tools ensure that your virtual training sessions are not only informative but also dynamic and participant-friendly.

Template for certificate and recognition

Additionally, trainers following the GROW project can access a valuable resource on the project website—the template for the GROW certificate. This template enables trainers to easily create and personalise certificates for the participants who successfully complete the training. These certificates serve as an official recognition of the participants' commitment to enhancing their knowledge and skills in gamification. Trainers can customise the certificates with participant names, training dates, and other relevant details, making it a thoughtful way to acknowledge their dedication and accomplishment in the realm of gamification.

Certificate link: https://grow-project.eu/training-materials

6. TRAINING OF YOUTH IN GAMIFICATION ACROSS THE PROJECT PARTNER COUNTRIES

6.1. Albania

The local training course "Gamification in Youth Work" in Tirana, Albania was held on 14-17 June 2023 in situ at Europe House and online on 21 June 2023 via Zoom platform. A total of 19 participants took part in the local training. They were social workers in schools, academics, teachers, NGO representatives, human resource managers in companies, youth workers and students willing to become youth workers and engaged in civil society. Participants were encouraged through group works to put in practice the knowledge gained on gamification in non-formal education, its strategy, ICT tools,

assessment, and evaluation through gamification tools, etc. They said their knowledge and skills significantly improved, and the information gained will be put into practice in their work.

6.2. Greece

The training in Kalamata, Greece, held on 4-8 September, was a vibrant gathering primarily attended by teachers, all eager to collaborate and delve into innovative educational techniques. Over the course of five enriching days, participants fostered stronger connections among themselves, enhancing teamwork and unity.

The comprehensive agenda revolved around the captivating realms of gamification and game-based learning. The attendees explored many new IT tools and interactive online

platforms, gaining hands-on experience, and were introduced to the core principles of gamification. In addition to this, discussions centred on the practical application of gamification in both formal and non-formal education, enabling teachers to grasp its advantages and potential risks. The participants left the event with a holistic educational experience, imparting knowledge and skills that could significantly impact their teaching methods, fostering innovation and effectiveness in their classrooms.

6.3. Italy

From 11 to 22 September 2023, Bologna hosted the "GROW - Gamify Your Youth Work" training, uniting passionate individuals from diverse backgrounds in youth work, volunteering, and teaching. The blended course spanned five days, with three in-person and two online sessions. Participants delved into effective communication and innovative training techniques, explored the principles of gamification, and learned practical tools like Mentimeter, Google Form escape rooms, and Baamboozle. They also engaged in hands-on

activities to create gamified experiences and discovered how gamification could enhance the assessment of youth programs using tools like Ahaslides and Kahoot. The training aimed to foster creativity and innovation, equipping participants with new strategies to make their youth work more engaging and impactful.

6.4. Kosovo

The Local Training on Gamification for Youth Workers was held in Kosovo between 5 and 11 July 2023. The training consisted of five (5) days, with the format of the training being hybrid: two (2) days were held in person, and the remaining three (3) days were held online via Zoom. The
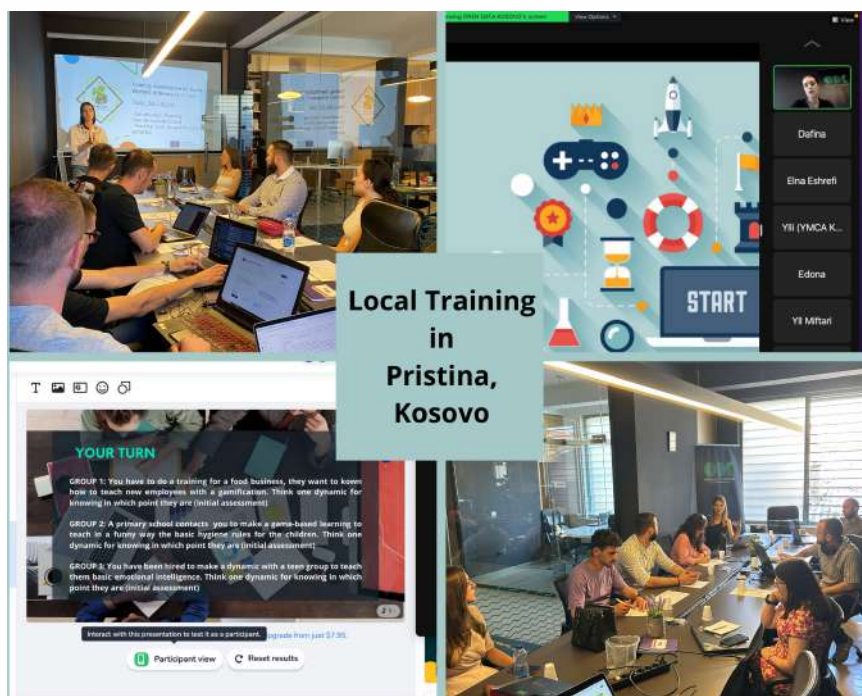
agenda of the training was adapted based on the topics that have been introduced on the Training of Trainers (ToT) that was held in Bologna in March 2023. The 5-day agenda for the Local Training in Kosovo has been outlined as in the following: Introduction to Gamification; Theory of gamification; Introducing gamification planning; Gamification planning in youth work and non-formal education; Practical tools for the creation of gamification activities; Gamification assessment and evaluation methods. The participants of the local training in Kosovo have been positive in terms of the training. As such, they appreciated the theme of the training, considering that the topic of gamification is an emerging concept in Kosovo. Getting familiar with the platforms and tools which enable planning based on gamification is the point which the participants in Kosovo have valued mostly.

6.5. Spain

The first edition of the local blended training, 'Gamificación,' took place from 3 to 7 July 2023. This course attracted participants from various educational backgrounds, including teachers and students. The period from 3 to 5 July featured online sessions, which enabled us to delve into the methodology and theory of gamification. These sessions also introduced various tools and strategies essential for implementing the practical aspects of the course. The remaining two days, 6-7 July, were dedicated to practising the lessons learned during the online sessions and applying the acquired knowledge and skills. As the program concluded, participants were eager to implement their newfound knowledge in their respective educational settings.

6.6. Montenegro

The local blended training, 'Gejmifikacija u omladinskom radu,' took place in Podgorica from 21 to 26 June 2023. The training spanned three days in person and two days online, engaging 20 participants, including youth workers, teachers, students, and NGO activists. The programme offered an opportunity to explore various topics related to gamification and provided hands-on experience, enabling participants to acquire skills in using different gamification tools within the context of youth work.

7. PROJECT EXPERIENCE

Best practices and lessons learned from the project implementation.

Albania:

During the local training in Tirana, the trainers identified some suggestions that can be evaluated as **lessons learned**:

- Throughout the training, the participants were actively engaged in learning new tools presented by the trainers. However, due to the training's duration, the volume of information presented was extensive, leaving insufficient time for a detailed explanation of all tools.
- The target group chosen to attend the training was diverse and included youth workers, academics, NGO representatives, social workers in schools, teachers etc. and we noticed that different target groups had specific needs in the regard of the topic. Selecting one target group per training would be more valuable and expand more knowledge focusing on their field of expertise.
- A total of 19 participants took part in our local training, and all of them were really engaged during all sessions of the training. It was observed that smaller groups, ranging from 12 to 15 participants, facilitate a better quality training experience.

- To practise the tools and knowledge gained, the participants engaged in group work. However, some individuals could not participate as much as desired due to various reasons. Implementing individual tasks during the training would encourage greater involvement by all participants.

Best practice identified in the training is:

- Giving peer to peer feedback

During the training, the feedback of the participants was constantly encouraged. This mechanism gave the possibility to identify the strengths and weaknesses of the group projects. This approach motivated participants to be more attentive and focused, actively listening to each other's contributions. Moreover, it significantly helped in assessing how well the participants absorbed the information provided to them.

Montenegro:

The main conclusions, best practices and lessons learned at the training session that was held on 21-26 June 2023 in Podgorica are as follows:

- Having a good command of English is advisable when doing activities related to the gamification, considering the numerous materials that are available online or in international magazines;
- Despite this, presenting activities in one's native language is more comfortable and leads to more intensive communication than in a foreign language, including English;
- Planning gamification activities for a heterogeneous group can be very demanding and challenging to deal with, so trainers need to maintain high concentration throughout;
- The gamification concept, although relatively new, includes elements that are familiar to each age category and that is the plus sign for choosing it in the youth work;
- While the participants evaluated the training positively, they expressed the need for additional and more focused training tailored to their specific everyday work needs;
- The tools presented were unfamiliar to the majority of the participants. However, they expressed hope that with further exploration, they would be able to incorporate these tools into their daily tasks;
- Overall, the participants evaluated the training positively and suggested that such training programmes should be continued and expanded beyond youth work to include other relevant aspects.

Italy:

The best practices and lessons learned in Italy:

- The participants found that hands-on experience with practical tools was crucial for a deeper understanding of how to effectively implement gamification in their youth work. There should be more time dedicated to these practical aspects to enable participants to explore various gamification tools, test their applications, and refine their skills in creating engaging gamified activities.
- Another valuable insight gathered was the need for more individual activities dedicated to practicing the tools. While the participants highlighted the benefits of group activities for collaboration and idea-sharing, they emphasised that individual exercises were vital for honing their skills with gamification tools. These solo activities provide a platform for participants to experiment, innovate, and gain a deeper understanding of the tools on a personal level.
- Another important observation made during the activities focused on exploring practical tools was the need to involve multiple trainers or individuals available for individual explanations. While the tools were initially explained, participants often encountered questions and challenges when using them in smaller groups. Having more trainers or knowledgeable individuals on hand to provide one-on-one guidance and support proved to be extremely beneficial.

Greece:

Best Practices from these days:

- The training's focus on fostering collaboration and exploring innovative educational techniques aligns with best practices in creating a dynamic and interactive learning environment. The participants had the opportunity to build strong team bonds, emphasising the importance of interpersonal connections as an essential foundation for collaborative projects. Furthermore, the event effectively introduced diverse topics, particularly gamification and game-based learning, which reflect best practices in addressing current educational trends and embracing technology. The use of interactive educational tools like Padlet, Kahoot, AhaSlides, Socrative, and Mentimeter reinforces practical applications in a gamified learning context. A part that should be considered as a best practice too is the self-evaluation and the assessment of training techniques. This aligns in promoting continuous improvement and enabling attendees to enhance their educational practices.

Lessons Learned from Kalamata's Training:

- Firstly, the successful exploration of innovative techniques highlights the importance of incorporating dynamic and engaging elements into educational events to maintain participants' interest and enthusiasm. The event's deep dive into gamification and game-based learning lessons demonstrates the effectiveness of a focused and structured approach to emerging educational methodologies. Furthermore, the practical demonstrations of popular educational tools highlight the importance of showcasing technology's role in enhancing the learning experience, and such experiences are valuable for attendees to grasp the potential of these tools. The event's attention to self-evaluation and the assessment of training techniques as central themes underscores the importance of reflection and continuous improvement. By incorporating these lessons, future educational events can better foster collaboration and provide attendees with inspiring and practical takeaways for their educational practices.

Spain:

- During the we had the opportunity **to connect with individuals involved in various educational areas**, including teachers, master's students, social workers, and others engaged in young learning environments. This diverse participation greatly enriched the course experience.

- Using a blended learning approach, we encountered a challenge: while online lessons were highly participatory, with nearly 20 participants in each meeting, the in-person classes experienced a significant decrease in attendance.
- Despite the immense number of tools available, we observed that **the use or preference for some tools varied enormously** depending on each attendee's goal in gamification. But despite this difference, it was evident that tools like Bamboozle and Action Bound notably contributed the most to the attendees. During the practical in-person segment, although fewer in number, the session was dynamic and participative. Participants expressed high engagement and feedback indicated that two tools, Action Bound and Bamboozle, were particularly useful in their professional lives.
- **The course allowed us to see a real application of the knowledge** and practices carried out during the sessions. The feedback from the attendees allowed us to see how people from different work environments applied what they learned in the course.

Kosovo:

- During the project implementation, and specifically the local training in the context of Kosovo, the best practices and lessons learned are as follows:

- The project has a specific goal in terms of its work theme, which is to enhance the youth work by enriching their experience with gamification practices. While the primary goal centers on youth work enrichment, the training encompassed a diverse audience, including youth workers, NGO representatives, social workers in schools, teachers, and other officials. It became evident that each target group had unique needs related to the topic of the project, especially during the local training. This diversity was especially apparent in the context of Kosovo, providing participants with a valuable platform to exchange experiences and knowledge concerning the training's topic."

- While conducting the local training in Kosovo, the participants were actively engaged in learning the new tools presented. The only noted challenge was the format of the training, and perhaps the time of the training which was organised during the months of: July-August, and not a high volume of participants applied (compared to other training experiences of the organisation).

- To enhance the engagement of the participants, group work activities were employed during the training, and this made the activity highly attractive for them. This is a very good practice that ODK aims to promote in other activities, in order to keep the audiences engaged.

8. SPREADING THE WORD ABOUT GAMIFICATION

Communication Channels:

- **Website:** https://grow-project.eu/

- **Facebook page:** https://www.facebook.com/Gamifyyouryouthwork

- **YouTube Channel:** https://www.youtube.com/channel/UCALmiLU6-6xXnBnhIe6unUA

- **Community of Practice:** https://www.facebook.com/groups/693209439099646