



FEMALE LEGENDS

YOUTH INNOVATION & ENTREPRENEURSHIP



FLYie

Game-based education and activities
for fostering gender equality

**METHODOLOGICAL
GUIDE**

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CHAPTER I: The essence of game-based approach

When it comes to education there is not only one way to reach the pedagogical objectives.

For the past decades, literature and case studies have demonstrated that using gamification could provide a relevant response to the shortcomings of traditional education. Indeed, in traditional settings, learners are more often passive, and they do not necessarily have the opportunity to put their knowledge into practice. To tackle this, active learning and gamification can be contemplated to connect the students with the topic and turn him/her into an active participant and sometimes even a co-creator of the activity rather than a spectator. In addition to putting the knowledge into practice, using games can add a sense of freedom for both students and teachers/trainers. This concept has been developed by Scot Osterweill (Osterweil, S., & Klopfer, E. (2011). Are Games All Child's Play?) as the four freedoms of play:

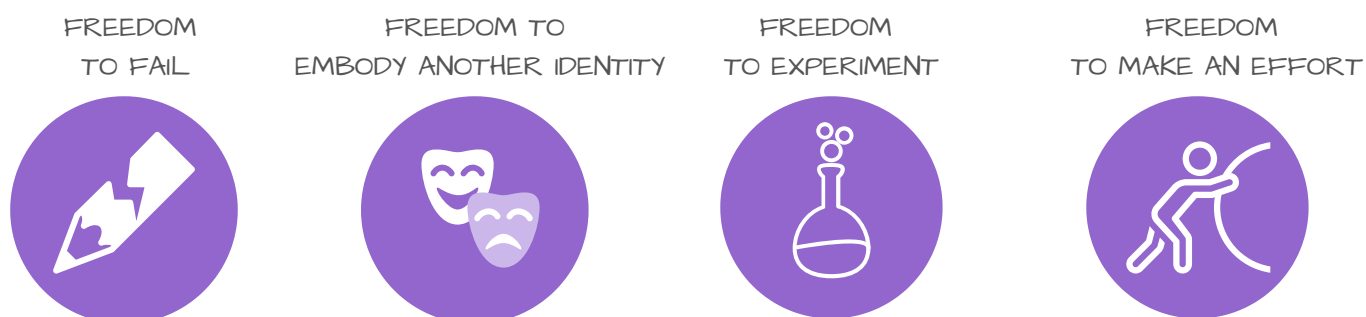


Image 1: Created based on <https://www.plushnuggets.com/2019/02/19/the-4-freedoms-of-play/>

Before getting to the heart of the matter of gamified approach, it is important to come back on some definitions and distinguish the difference between gamification and game-based learning (GBL).

Gamification means integrating elements and mechanisms that come from the world of games into an off-games context, i.e. in a lesson or a learning module the following elements can be implemented: levels, points, badges, a dashboard. The objective is to motivate and engage the learners with easy gamified elements. For example, in a MOOC, it is possible to win points or stars or seeds whenever you interact or submit an assignment.

EXAMPLE

Course Networking (CN) is a platform that organizes online variety of online learning courses. It uses a system called Anar Seeds. Anar is the Persian (Iranian) name for pomegranate, considered as a symbol of prosperity and ambition. It is used as a motivation engine on CN to track participation and encourage positive competition.

Members receive points when they: create a post, answer and create a pool, visit links etc.

There are 2 types of Anar Seeds which CN members collect - the points they collect during the course and the total (sum of all the courses)



Game - based learning, on the other hand, is an innovative educational paradigm that utilizes games as a mode for transferring learning (tan, Ling et al., 2007). It consists in elaborating and developing a game (or using existing one) to teach a specific subject, a skill or to reach a learning result clearly defined beforehand. GBL means that the training or the lesson is the game itself.

EXAMPLE

Minecraft is a popular video game that revolves around the simple tasks of mining resources and crafting new objects. Players have almost unlimited opportunity to create whole worlds and explore existing ones. Because of its open possibilities and potential it is widely used in classrooms where teachers have been experimenting with different ways.

One of the example is to use it to show historical places that no longer exist. On the game website there are many types lessons. In one of them students can explore a medieval village, built in Minecraft, to find out what it was like to live in Britain during medieval times.



Source: <https://education.minecraft.net/lessons/medieval-minecraft>

1.1. Game based learning in education setting

When a teacher or a trainer chooses to implement a GBL method to teach a lesson, encourage skill development or knowledge acquirement it is essential to identify the levels and mechanisms that are adapted to the pedagogical objectives, the space configuration, the number of students. To identify the best GBL approach it is worth knowing the different game classification of this project.



Physical games:


include traditional board games, construction games and cards. Physical games can be either tailor-made to address a topic or develop a skill or it can be diverted with new rules and new mechanisms to emphasize the pedagogical objective. They provide hands-on and heads-on skills and knowledge development, inspire learning, encourage communication, collaboration, competition, and risk taking. They can be played alone or with teams and help organize information to make it more concrete.

Digital games:

The theoretical digital games are mainly based on missions that users have to solve through the progressive acquisition of knowledge during the game. The practical digital game is more likely to be a simulation game which gives the learner the opportunity to gain experience, acquire and test knowledge according to the trial and error principle. Both games are based on a mobile learning approach and require digital equipment. Digital games can be played collaboratively or one-on-one.

Unformal activities (sensorial activities, role playing, performing, escape games)

these games are the most flexible and effective one when it comes to developing social and behavioural skills. Indeed, since they require interaction and moderation, they favour communication which is beneficial for critical thinking stimulation and shy students.



In this guide and project, we will mainly focus on GBL to promote gender equity in entrepreneurship and motivate young girls and women to embrace entrepreneurship careers.

For the FLYie project, the objective is to identify the GBL approach that favours the development of competences and skills to encourage female entrepreneurship. Indeed, in today's societies, the proportion of women who choose to follow an entrepreneurial career path (run her own business or reach top positions in their industry) is still much lower than the men's proportion.

The Global Entrepreneurship Monitor (GEM) Women's report of 2017 (Kelley, et al, 2017) stated that women's confidence was lower in countries with more developed economies and less than 35% of women in these economies feel capable of starting a business considering the opportunities they see. To counterbalance this trend, it is necessary to stimulate and encourage girls and young women (from 16 to 24 years old) to perceive entrepreneurship accessible/attainable for all. The main obstacles that women perceive about entrepreneurship include (among other) the fear of failure, the lack of daring, the lack of knowledge (financial literacy, resources and management competences, etc.) lack of role models to set an example and be inspired by. For this reason, it seems necessary to put in place educational programs and trainings starting in primary and secondary schools and continuing in high school - training centres in order to develop and inculcate entrepreneurial attitudes through well designed courses that build confidence through behavioural games and serious games. It is important that these programs are addressed before high school otherwise they would never reach girls who are not encouraged to pursue higher education.

To design a GBL approach, it is necessary to set a framework and identify a couple of factors. The studies of University of Science and Technology in Trondheim, Norway (Tahir,R., & Wang, A.I 2020) presents a framework called LEAGUÉ that focuses on:



Learning

the learning results, learner motivation and learner experience



Environment

about the context, the technical aspects to favour the best learning experience as possible



Affective and Cognitive reactions

how fun and entertaining the game is to reach engagement and motivation



Game Factors

is all about the game design, the narratives, the mechanics, the aesthetics, if it is adapted to the target audience



Usability

mainly about the interface and game design, if it is an accessible game and provides satisfaction to the users



User

identification of the target group to reach their psychological and cognitive needs

With this framework in mind, it is then possible to identify what objectives can be reached thanks to a GBL approach. For the FLYie project, the starting point is to establish what learning outcomes the target audience needs to develop (girls and young women) to feel more confident and attracted by entrepreneurship. Then see what game format fits the best. Of course, several games can develop the same skills, this is the reason why the LEAGUE framework also highlights other important indicators.

1.2 Objectives of using game-based approach in education

This approach is already tested in practice. A study from the University of Limerick (Costin et al, 2018) developed a case study about using simulation to develop entrepreneurial skills and mind-set. The starting point is that traditional teaching methods to teach entrepreneurship is outdated and inappropriate. Thereupon, the analysis focuses on using business simulation and serious games because they represent real world systems, contains rules and strategies that allow flexible and variable simulation activity to evolve. In this context, participants dare to initiate operations without fear of failure or severe consequences of mistakes. The result of this study showed that a large number of participants felt that the game helped them developing their decision making skills and their problem solving capacities, which were identified as essential skill for entrepreneurs (Antonaci et al, 2015). Participants also realized that the game had led them to develop their communication and teamwork skills and they have been able to experience various risk strategies and evaluate the outcomes.

This study really shows that GBL approach is beneficial and allows the learner to be projected in a corporate or business world.


Additionally, game simulations give the opportunity to quickly gain experience without risking destroying a real company. Another thing is an opportunity to embody another identity given by using variety of role-playing activities. It allows to create a persona that might let participants diverge from their normal self-imposed limitations or boundaries and apply content in a relevant, real world context.

Also, the emotional excitement and involvement provided by playing provides a longer-lasting effect. The only complexity for evaluating the benefits of a game or a simulation is that it is not possible to know precisely if and what skills have been acquired thanks to the game. Indeed, it would require evaluating the skills before the participants undertake the simulation, and even by doing this, one cannot rule out the importance of personality traits or gender. Lastly, the study from University of Limerick also showed that in a female-only environment, women tended to perform better than in a male environment, where they may be more withdrawn for fear of not being up to the job.

TO SUMMARIZE:

GAME BASED LEARNING APPROACH CAN:

- 1 Encourage students into more active participation
- 2 Reinforce the fact that failure is not a setback nor an outcome but indication that more skill building is needed
- 3 Help students become more confident, independent thinkers who are more prepared to take on large projects and carry them through to completion
- 4 Experience various strategies and evaluate the outcomes in a safe environment
- 5 Foster communication skills and team work
- 6 Allow to explore a task from different angles without a fear



1.3 Using Game based learning approach in advocating importance of gender

Talking about gender, raising awareness on the importance of this subject can be easily adaptable with GBL approach. Indeed, since gender equity should not just be women's business, it is very useful and relevant to address it in mixed settings. Should it be through board games, cards, unformal activities or even video games, the subject is always worth having a course on it. GBL approach provides a structure for interactions, reward students for collaborating and promote cooperative learning. Teachers and trainers have a vested interest in creating heterogeneous groups with different gender, background, opinions, and interests, which will bring social benefits for all the participants. Feedback from other students can show that participating with the material in the field is acceptable, and also provides positive reinforcement for working with others to accomplish the goal of the activity.

Both genders can be brought to collaborate, to listen to each other, to understand each other's view which will for sure have a positive impact in their mutual lives and in the entire society in general especially on aspects such as inclusion, empowerment, respect, equality. Of course, it is not only a matter of gender and the same positive effects can apply for various minorities. Beyond the heterogeneous groups and collaboration, it is also the duty of the teacher or trainer to explain, moderate, supervise and debrief the games. Indeed, one cannot reach the expected results and objectives if the instructions or objectives are not clear.

EXAMPLE

One of the benefits of applying GBL is freedom to look at certain challenges (in this case social: promoting gender equality) from different angles. "Queeng Playing Cards" combines this in a game idea. It is a family project (designed by a young girl with a cooperation with her father) that was launched with a big success (over 400 thousand € raised) on crowdfunding platform Indiegogo. It aims to create gender equal deck of cards. It started with a very simple question: "Why is the King always worth more than the Queen?". The rules stay the same but the cards have been improved.

- Monarch Cards = King Cards
- Duchess or Duke Cards = Queen Cards
- Prince or Princess Cards = Jack Cards



Source : <https://www.indiegogo.com/projects/queeng-playing-cards#/>

Since the hierarchy is set according to the old cards and that allows to play all the games.

We believe that the game-based learning approach is very effective in developing soft skills and interpersonal skills: how we behave with others, how do we perceive others and how we are perceived by others based on our behaviours. However, when it comes to soft skills development or social aptitudes, it is also a challenge to evaluate and quantify the results. It can nevertheless be considered that since these skills have been developed during an experiment, they will remain significant for the personal development of participant.

These skills are critical for building positive rapport, trust, and opportunity, with other and oneself. We all want school to train future citizens who are fulfilled, respectful and high performing, regardless of their gender, social background, religion... In today's societies for some professions, some soft skills are becoming more important than hard skills.

Indeed, the assumption of recent years has been that knowledge and learning can be easily acquired versus soft skills. And the reason for that is because GBL approach is proving to be very widespread and effective: learning management systems, mobile learning. Of course, here we are talking about hard skills linked to the entrepreneurial world (like finance, business model, negotiation...) and not any highly technical, engineer or medical skills.



CHAPTER II: Developing an entrepreneurial mindset through playing

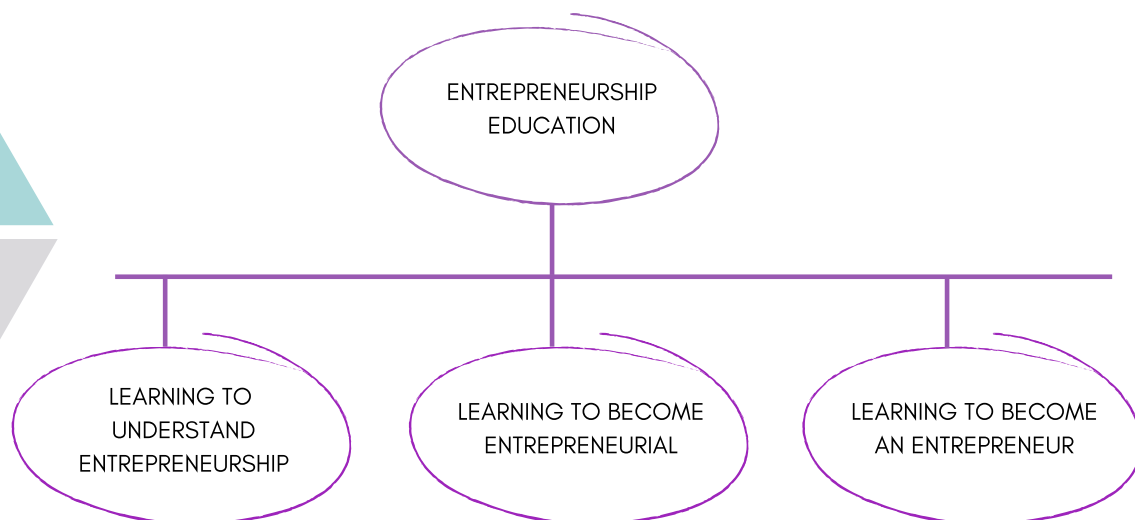
Generally speaking, GBL is a very positive and effective way of approaching and teaching specific topics, skills and competences in a playful way. When it comes to developing soft skills, the objective of the game is sometimes less important than the way the game is played and the resulting interactions between learners. The final important result is to create engagement, stimulate creativity and encourage critical thinking in learners' discourse. When GBL is more hard skills oriented then peer learning, reflexional, analytical skills and rewarding schemes are more likely to be activated. For social issues like gender equity or promoting female entrepreneurship GBL seems to have the potential to encourage each learner to discover personality traits that they are unaware of and that they can develop to acquire new skills and competences that can be very helpful in the entrepreneurship world.

There are a couple of studies that explain the relationship of games to entrepreneurial learning and mainly on the digital, computer and video-based simulation and games and how these tools may assist in acquiring the necessary knowledge in business and management (Adobor & Daneshfar, 2006). For secondary schools it seems then more consistent to invest in serious games that develop soft skills rather than hard skills that might rapidly become outdated or can discourage the students. Indeed, a learner is more likely to learn and feel motivated by some hard skills (like finance, business administration, cost accounting, client service, marketing...) if he/she is already in a positive mindset with a disposition to take an interest in entrepreneurship. In other words, when a student boy or girl shows some interest in entrepreneurship, he/she is will feel more acquainted and concerned about the means of their goal (means being the hard skills and goal being initiating a business). On the contrary, in higher education, for learners who are in willing to become entrepreneurs, serious games developing both soft and hard skills make more sense.

A study called GBL in Entrepreneurship: the Academic Business Planner (Xinaris, et al. 2011) proposed a game that instead of being a classic business venture supporting the financial calculations, profit, sensitivity analysis and risk analysis, proposes an online platform enabling blended learning and which promotes and supports simultaneous collaboration of groups and tutors from different department and universities.

This format has a lot of potential for a well targeted and educated audience and it accommodates the future development of curricular entrepreneurial courses, online courses to the public and to also support the encouragement of youth entrepreneurship through the career services of the university.

According to Hytti who received the European Entrepreneurship Education Award, entrepreneurship education can be investigated with reference to three different goals:



Depending on the goals and objectives, the right GBL format must be implemented. We have seen that digital games, simulations, and informal activities can encourage the development of certain skills. About physical games like board games they have been used for years but it is very recently that they tend to be designed and conceptualized to answer pedagogical topics. Of course, when one plays the Monopoly he/she will learn some elements of strategy, develop social relationship, money management which are extremely valuable for in the entrepreneurship education. In addition, boardgames are inexpensive, flexible or are easily adapted, and sustainable. They can be re-played by the same player over and over again. Compared to digital based, computer and video-based games, board games are easily implementable, affordable and adaptable depending on the age, environment, and needs.

Before getting to the heart of the matter, it is important to ask ourselves some, not always so simple questions:


Who is an entrepreneur?

What does it mean?

Who claim to have entrepreneurial skills or have an entrepreneurship spirit?

Who and what indicates that a person is or is not an entrepreneur?





For a couple of years, being an entrepreneur is considered as trendy and with the rise of start-up culture it almost turned to a caricature of itself. We have been able to ascertain that a large number of entrepreneurial clubs and networks have been formed but still there is no clear definition of the term. What is the difference between someone who launches an app, someone who creates an association or someone who targets senior management positions? Are they all considered as entrepreneurs? Even though none of them can be defined / characterized with the same attributes as the other two.

According to the Cambridge Dictionary, an entrepreneur is **“someone who starts his/her own business, especially when this involves risks”**. And the definition of entrepreneurship is **“skill in starting a new business, especially when this involves seeing new opportunities”**.

Therefore, rather than focusing on who is an entrepreneur / what is an entrepreneur, perhaps it is more relevant to focus on what are the assets/competences and skills that make someone become/ likely to become an entrepreneur. Or what are the competences that every entrepreneur should have to be able to be successful? If clear competences of entrepreneur spirit can be identified, then what is very useful is to know how to teach them and transmit them to the next generation?



2.1 Competences of an entrepreneur

In this section of the guide, we will try to understand what can be taught thanks to games. To do that, we will use the Entrepreneurship Competence Framework study (EntreComp) (Bacigalupo, et al. 2016) developed by the European Commission and launched by the JRC on behalf of the Directorate General for Employment, Social Affairs and Inclusion (DG EMPL) in January 2016.

The EnrepComp Framework is to define and describe all the components about knowledge, skills and attitudes that could constitute a mutual vision in terms of entrepreneurial competences. Once these competences have been identified, the objective is to develop appropriate and relevant tools and methods to enable these competences transmissions to the European citizens.

The EntreComp is taking into account a broad definition of entrepreneurship including the creation of cultural, social or economic value. Hence, several profiles of entrepreneurship are being considered that is to say: social entrepreneurship, green (or environmental entrepreneurship), digital entrepreneurship and even intrapreneurship. This scope is also applicable to different constructions like individuals, groups (teams or organisation) and it refers to value creation in the private, public and third sector in any hybrid combination of the three.

EntreComp proposes to define entrepreneurship as a set of transversal competences that can be applied by all the citizens in any domain: personal development, initiate social or solidarity actions for the society, development of networks, (re)entering the job market as an employee or as a self-employed person, starting up ventures (cultural, social or commercial)... Again, there not one single path nor one way to become an entrepreneur or develop entrepreneurial skills.

The chart below shows the EntreComp Framework with its 3 competences areas and 15 competences.

INTO ACTION

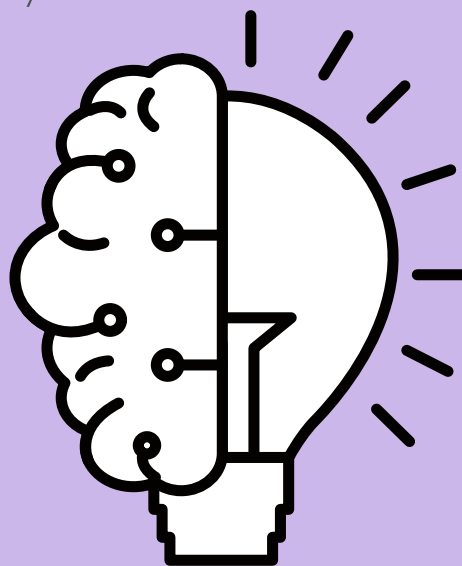
- Taking the initiative
- Planning & management
- Coping with ambiguity, uncertainty & risk
- Working with others
- Learning through experience

RESOURCE

- Self-awareness & self-efficacy
- Motivation & perseverance
- Mobilizing resources
- Financial & economic literacy
- Mobilising others

IDEAS & OPPORTUNITIES

- Spotting opportunities
- Creativity
- Vision
- Valuing ideas
- Ethical & sustainable thinking



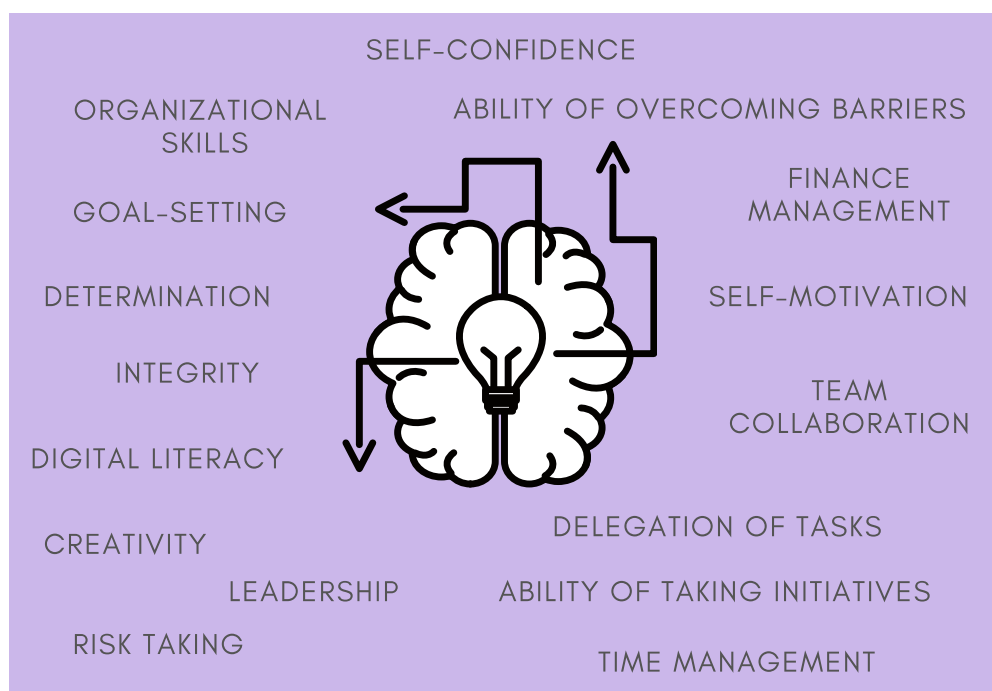
It is showed that GBL in general can help develop knowledge (facts), cognitive skills (understanding, problem solving), social skills (cooperation, competition, leadership), attitudes (empathy, compliance, risk-taking), physical fitness (coordination, endurance, flexibility).

Taking this framework into consideration, is very interesting and useful in order to implement GBL approach to teach and train entrepreneurship skills.

In the category “into action”, the 5th competence is about learning through experience. The GBL approach is, per definition a way to learn while playing i.e. while experiencing. Indeed, GBL consists of teaching and acquiring learning outcomes that have been clearly defined and are an integral part of the development of the game. Having said that and being aware of the competences that can be developed thanks to GBL approach it seems that entrepreneurship as a set of competences defined by the EntreComp framework is fully approachable with game-based learning.

2.2. FLYIE workshop findings

During the FLYie project, all the partners, from Greece, Cyprus, Poland, and Belgium have organized a workshop with young girls and women (aged 16-24) being the target audience of the project. Participants were interviewed and kindly asked to share their opinion about game-based learning with the scope of entrepreneurship. When asked what skills linked to entrepreneurship should be developed through game-based learning, most of the participants answered:



More about the competences you can find in another project publication (IO2) "Guide on Role-model education for promoting gender equality in Business and Entrepreneurship". It is therefore interesting to note that without knowing the EntreComp Framework, the participants of these workshops confirmed the different competences that make up the entrepreneur's skill set and consider that these skills can be acquired through games.

It makes a lot of sense to use GBL to help participants develop some skills and it appears to be handy to use this approach with the EntreComp framework so it is possible to develop relevant, consistent and efficient games connected with consistent learning outcomes that encourage participants to gain skills, competences and knowledge about entrepreneurship.

In the EntreComp Framework, all the competences are divided into 4 levels of proficiency (foundation, intermediate, advanced, expert). Two of them, called Mobilising others and Work with others have also been identified as essential for the participants of the project's workshop. Indeed, unformal activities like role-playing, putting oneself into the shoes of or simulations are proven to be good technics to foster empathy, respect, consideration as well as interpersonal capacities which are essential to socialization. The third level (advanced) of the competence Mobilising Other from the EntreComp mentions: "Learners can inspire others and get them on board for value-creating activities." and for working with others' competence : "Learners can build a team and networks based on the needs of their value-creating activity." The participants of the workshops and several studies point out that interpersonal skills such as the ability to create a network, connect with others and communication in general is essential. In studies and interviews addressed to women entrepreneurs or women wishing to become entrepreneurs, recurring obstacles are identified. Among them, women often point out loneliness, lack of supportive structures but also the inadequacy of their personal network, which can discourage them. On the contrary, a well-supported, encouraged and accompanied female or male entrepreneur will certainly encounter other obstacles but will be less likely to lose confidence in him/her. Building a professional network is crucial for novel entrepreneurs even though it takes time, energy and requires some social skills. A study called "Building Social Communities as a Foundation for Entrepreneurship a Game-Based Approach" (Tamayo, J. S. Z., & Zapata-Jaramillo, C. M. 2015) illustrates how to use a game to develop the social skill to create communities i.e networks. In this game, participants are asked to solve a puzzle and each round has some new rules. The different rounds of the game illustrate that several factors are affecting the social community building, e.g., cooperation, communication, teamwork. Indeed, in the first round of the game those who act in isolation have more difficulties while the last round of the game clearly shows that collaborative work is the way to make all the group and players success.

Hence we see that it can be very useful to design games that are in synch with what entrepreneurs need as competences, and it is very convenient to be capable to refer to a well explained and developed framework like the EntreComp one to clearly set the pedagogical objectives.

¹ "Building social communities as a foundation for entrepreneurship: a game-based approach" by Juan Sebastián Zapata-Tamayo, Universidad EAFIT, Colombia and Carlos Mario Zapata-Jaramillo, Universidad Nacional de Colombia, Colombia <https://absel-ojs-ttu.tdl.org/absel/index.php/absel/article/view/2920/2871>

2.3. FLYIE – the game

The objective of the FLYIE project is to develop a board game that will encourage young women and girls to consider entrepreneurs career or high-level positions. The GBL approach makes it easier to tackle gender stereotype, open participant's mind and take them to perform on an unknown terrain (entrepreneurship) through the prism of the game. With the EntreComp competences in mind and the results of the workshops, the consortium can define the learning outcomes of the game and identify which are the key competences that the game should help develop.

Among the obstacles that we have identified that prevent women from becoming entrepreneurs, is the lack of role model. The GBL will therefore focus on providing local and accessible examples so participants can identify themselves and consider that if others have done so, it's possible for them to consider it as well. These models should be inspiring for both men and women and show both that committed, successful and daring women do exist. It is very important that this message is not only addressed to girls and young women but also to boys and men so they can also change their mind, be aware and recognize that there are influential, resilient women who evolve in spheres that are sometimes very masculine.

Through this game we aim at inspiring participants and encourage them to dare. To develop this game we will call on all the skills we have mentioned and developed above (Self-awareness and self-efficacy - Mobilising resources - Mobilising others - Working with others and Learning through experience) To encourage these competences to be developed, we will encourage and base the mechanisms of the game on collaboration and cooperation. Ideally to encourage such skills, the idea is to prompt all the teams or participants to collaborate together to win. It requires participants to listen to each other, communicate and share their thoughts so it can benefit all the participants. The conclusion is either all the participants win either they all lose if they are not capable of sharing their knowledge, exchanging their ideas, and valuing each other's propositions.

With a game-based learning approach like the one described, the learners will improve their interpersonal abilities, gain confidence and knowledge about inspiring women. Thanks to the mechanism and subject of the game, the participants would be able to identify new female representatives who are active and influential in the entrepreneurship world in their countries and at reachable scale.



CHAPTER III: Examples of games/activities/tools

In the previous section of this guide we have demonstrated that a GBL approach can be implemented with any types of games. The classification that we have decided to follow is in three categories: the physical games, the digital games, and the unformal activities.

Any kind of game, as long as it is thought out in a pedagogical logic can lead players to develop skills and competences. Some games encourage the motor skill development, other target memory and critical thinking, other can be interpersonal competences oriented. As long as the rules and the learning outcome is clear, with a correct balance between luck, reflexion and fun, there is no reason why participants (as long as they enjoy the game) should not benefit from its positive effects.



**Between March and April 2020,
42 women aged 19-35 took part
in the research workshop
in 4 partners countries.**

One of the important part of research phase of the project was to hear from the young women themselves and learn about their experience with role models and game-based education that helped to create IO2 and IO3. As we mentioned before each partner was responsible for organizing a workshop. Due to the restrictions caused by COVID-19 pandemic that took place in first part of 2020 the workshops had diverse forms:

Citizens in Power organized an online workshop with 10 participants, young girls and women who were interested in the topic, and/or had background in youth work. During the workshop the trainers and the participants discussed the competences young girls considered relevant for entrepreneurship education, as well as the competences they themselves wanted to develop. The participants shared their experiences with game-based learning activities where the whole group came to conclusion that the approach is very efficient and promising, while it is not very common and can only be observed through NFE activities and events. The workshop was followed up with a survey where the participants provided us with more informations regarding the specific tools and activities on GBL.

Challedu implemented a physical workshop (before COVID-19) with 12 participants during which we presented FLYie project, what entrepreneurship means, the approach of our project. During the presentation we discussed with the participants the obstacles they considered more important, the competences they would like to enhance, their view to entrepreneurship and to game based learning. We also played a game with Female scientists and then we asked participants to complete some sheets about what means role model for them. Finally, we gave computers to participants (some used their smartphones) to search role models and game-based activities either for entrepreneurship or gender equality. Afterwards we also implemented an online session and send to more participants the 2 templates (for game-based activities and tools and for role-models) and we gathered more answers.

CWEP - The workshop was organized in Rzeszów, at the Hubertus Hotel just before the COVID 19 pandemic. 10 participants took part in the workshop. The workshop participants reacted very positively to the results that are being created within the FLYie project. They believe that this is a much-needed project, which will bring a lot of value to other people's lives. They were very eager to answer questions that were previously prepared by the project partners. The participants shared their experiences with game-based learning and gave many examples of games that are used in education. They agreed that this approach is innovative and can teach us a lot.

Logopsycom (Belgium) organized an online meeting with 10 young women where the team presented the project and made a brainstorm session. The diversity of participants from different backgrounds (students, start-up employees, independent workers) allowed to collect an interesting overview of what is perceived as female role model and how game-based learning can help to promote them. The meeting was followed by survey where participants could share their experience and provide examples.

Despite the challenges we managed to gather valuable insights. During the workshop, participants were kindly requested to share their vision of suitable and instructive games that could be developed and implemented to promote entrepreneurship and or raise awareness about gender equity. They were also asked to explain if they have already participated to such games and explain what the mobilized skills and learning outcomes were. Lastly, the question about using game-based learning in each countries of the partnership what raised in order to understand local operations and practices. Findings from those meetings and additional research conducted by partners allowed us collect interesting examples of game-based learning in real life.

3.1. What kind of games could be implemented?

During our research, it was almost impossible to find a game that would meet with our expectations in terms of learning outcomes. In other words, many of the games and approaches we have found only focus to the one of the two thematic fields and we have not been able to find a game that involves both the entrepreneurial aspect and the gender equality / women empowerment dimension.

To tackle this shortcoming, we have asked the workshop participants to think about some games and mechanics that could fill that gap. We collected various valuable propositions that definitely inspired us for our final project, i.e. design a board game to promote women entrepreneurship.

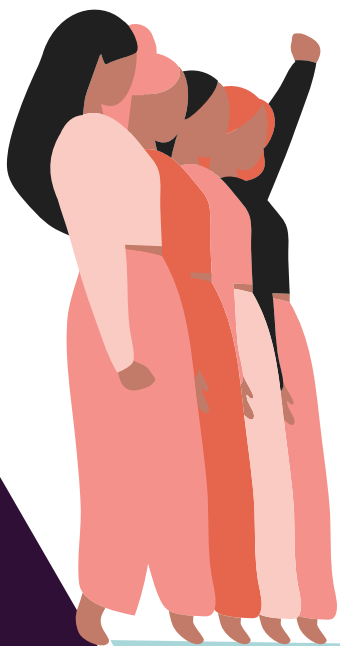
Among the following activities for fostering gender equality in entrepreneurship the participants have proposed to:

- Develop a context based game on entrepreneurship simulations from various cultural contexts, with real life conditions, that is to say a series of obstacles and solutions that are not necessarily linked to gender factors in order to inspire women and show them what are the opportunities and possibilities.
- Develop a team game. The stake would be the awareness that there should be no obstacle for a woman to imagine a life as an entrepreneur by showing several real examples of inspiring women who have succeeded regardless of their social background, gender, religion...The game should also display men who have contributed to gender equality in their profession, business ... In this game no specific knowledge or skills should be required to play, the objective is to encourage critical thinking, and open mindedness.
- Reach a young audience and raise awareness of entrepreneurship among them. For this, the idea could be a team game where little knowledge is required. The challenge would be to raise funds for openness. The teams should compete but the rule is to avoid the man versus woman fight, on the contrary, the aim is to encourage debate between mixed team members on issues related to entrepreneurship in general with practical questions (administrative, specific vocabulary, institutions, and key people etc.) And also, on questions such as "who is who or who has done what". And "did you know" type questions with gender differences. The correct answers would give the teams some credits and at the end, the team who gained a maximum of point would be the team that manages to raise funds for openness.



- Develop a board game where participants embody a business leader who as to take up challenges to have a functioning/successful business. The game should be strategy oriented with a fictitious company to manage. It could be mix of Monopoly and Pay Day with some principles of negotiation, investment, finance, networks, and some gender cards that can be a boost or a break. The objective would be to run the business and develop the company in the best possible way.
- Use role playing game: “putting yourself in the shoes of...” the goal would be that women as well as men should climb the social ladder and be confronted with a lot of social / gender / sex problems. The objective is to shed light on certain actions linked to gender constraints and general facts that can be penalizing or blocking in certain situations
- create a course game that could be played with mixed teams and that would simulate all the stages of business creation (idea, bank, crowdfunding or bank loans, potential financial aid or support ...) to demystify it and make it more accessible for all the players.

Among all these propositions (the list is not exhaustive) all the workshop’s participants came up with ideas of games in the three categories, video games, unformal activities or physical games and for each game they have identified what would be the ideal learning outcome. Should it be acquiring knowledge, feeling more confident/advised, or gain some practical experiences, all the games are meant for participants to have a good time so that the information that was given during that moment remains intact and allows later to rely on it in a consistent and constructive way.



3.2. Examples of existing games provided by young women

During the workshop, participants shared their experience about games they have played to promote women empowerment about entrepreneurship or gender equity, and we conducted some research to identify which games could be played to approach these topics. In this section, we have shortlisted some of these games and we propose a brief description of what they can teach and help develop in the domain of gender equity, entrepreneurship and we will share some examples of European founded projects, campaigns or platforms that have targeted these subjects as well.

A. Gender equity

The question of gender, unlike entrepreneurship, is one of the subjects that is addressed very early on, at school, in children's structures, in training centres, etc. In today's societies, gender inequality is a very recurrent subject that governments, associations, and NGOs are constantly addressing. Therefore, there are a multitude of ways to address this topic and partly through game-based learning.

AKWARD MOMENT AT WORK

Recently, a couple of academic papers have suggested that playing easy and simple games like flashcard games could help to tackle the sexist stereotypes. Talking about flashcards games, a company called tiltfactor has developed a card game called Awkward Moment at work. It is an adaptation of a game called Awkward Moment which was awarded a Top Game Award in 2019. The game is for middle and high school students (3-8 players ages 12 and up). During the game of Awkward Moment, a series of very embarrassing or stressful social situations is presented, participants need to submit a reaction card and the "Decider" player selects which reaction card is the winning one. The aim is to free up young people's speech on subjects that can be sensitive or complicated while having a fun and a relaxed approach.

The game Awkward Moment at Work has more or less the same goal but in a different framework: the professional world with gender relations at work. It targets young adults and adults male and female who may encounter difficult situations at work. Awkward Moment at Work was developed as part of a National Science Foundation-funded project called “Transforming Science, Technology, Engineering, and Math (STEM) For Women and Girls: Reworking Stereotypes & Bias”. It is a game that is mainly for companies and some researches on the game suggest that it has a great impact on players’ motivation to acknowledge and overcome bias when it “intermixes” bias-related and neutral moments, but arouses psychological resistance (and thus has the least efficacy) when it presents an imbalanced majority of bias-related moments.

In terms of competences, Awkward Moment at Work, encourages communication skills, critical thinking, listening and understanding skills which are very often neglected when someone is confronted with gender stereotyping or gender abuse. This game helps to realize that certain situations are real, and happen, and that man as well as woman we should not remain passive or mute.



Source: [awkward-work](http://awkward-work.com)

DETAILS:

Game type

It is a card game and it contains Moment cards, Reaction cards and Decider cards. The game can be purchased online .

Scope of activity

Talk about gender relations in the professional world. It targets young adults and adults male and female who may encounter difficult situations at work.

Number of participants

A minimum of three players and no maximum. The game can be played individually or in teams

Participant selection

Since the game is about professional world it is suitable for teens and adults

Description of activity

"Players each receive five Reaction Cards. The first Decider flips one Moment Card and one Decider Card and reads them to the group. Each player submits a face down Reaction Card in response to the Moment and Decider Card on the table. The Decider shuffles the submitted cards, reads them to the group, and picks a winner by interpreting the Decider Card's rule. The winner keeps this round's Moment Card. Each player draws a new Reaction Card and the player to the Decider's left becomes the next Decider."

Source: <https://tiltfactor.org/game/awkward-work/>

Specific material needed

No material needed, only the cards from the game

Evaluation sheets

There is no proper evaluation, the aim is to open discussion and address some subjects that might be complicated to talk about outside of a game situation.

This game serves as an ice-breaker to encourage people / colleagues to raise their voice about difficult situations at work.

BREAKAWAY

In the category of digital game, the game Breakaway is a video game for kids (mainly boys) from 8 to 15 years old. It has been created by a group of 150 students and teachers from the US (Champlain College) with the support of the UN population Fund.

The game recalls on soccer to illustrate and tackle violence and gender discrimination. Here the methodology used is close to the Sabido Methodology which is a methodology that consists of designing and broadcasting serialized dramas on radio and television for the general public to tackle sensitive subject. These shows often deal with social dramas or important social issues and the aim is for people to identify themselves and then act accordingly. It is a kind of subliminal training/teaching.

The game Breakaway uses the world of football and presents a young boy joining a football team. To become a great soccer player. The player must make several choices such as responding politely to a woman team member or comforting a female player who has been subjected to discriminatory reflections by the captain. The game calls for positive reinforcement and encourages players to be gender equity sensitive. The game also focuses on soccer skills and it is only when the player has joined the team and discovered the other team member that the issue of gender initiates. The reason for that is to avoid having a too long narrative and display an environment that is immediately accepted and validated by the target audience (boys between 8 and 15 years old).

In terms of competences, players are encouraged to develop teamwork and be aware of gender equality. It encourages critical thinking, open mindedness, and respect. Indeed, throughout the game, they are challenged to develop ethical decisions about gender-based violence in a meaningful and thoughtful way and at the same time the objective of the game for them is to become a great soccer player. It shows that personal choices and decisions in life, jobs, and any other domain can affect themselves and other and the goal is to change their attitude in a more gender equal and respectful way.

To have a look at the trailer: <https://youtu.be/iVpmu9ssJA4>



DETAILS:

Game type

It is a video game.

Source: breakaway-video-game

Scope of activity

The game recalls on soccer to illustrate and tackle violence and gender discrimination. The game calls for positive reinforcement and encourages players to be gender equity sensitive.

Number of participants

For individual players

Participant selection

The game is designed for kids (mainly boys) from 8 to 15 years old

Description of activity

To become a great soccer player. The player must make several choices such as responding politely to a woman team member or comforting a female player who has been subjected to discriminatory reflections by the captain.

Specific material needed

No material needed as it's a video game you would need a computer.

Evaluation sheets

There is no proper evaluation, the game shows that personal choices and decisions in life, jobs, and any other domain can affect themselves and other and the goal is to change their attitude in a more gender equal and respectful way.

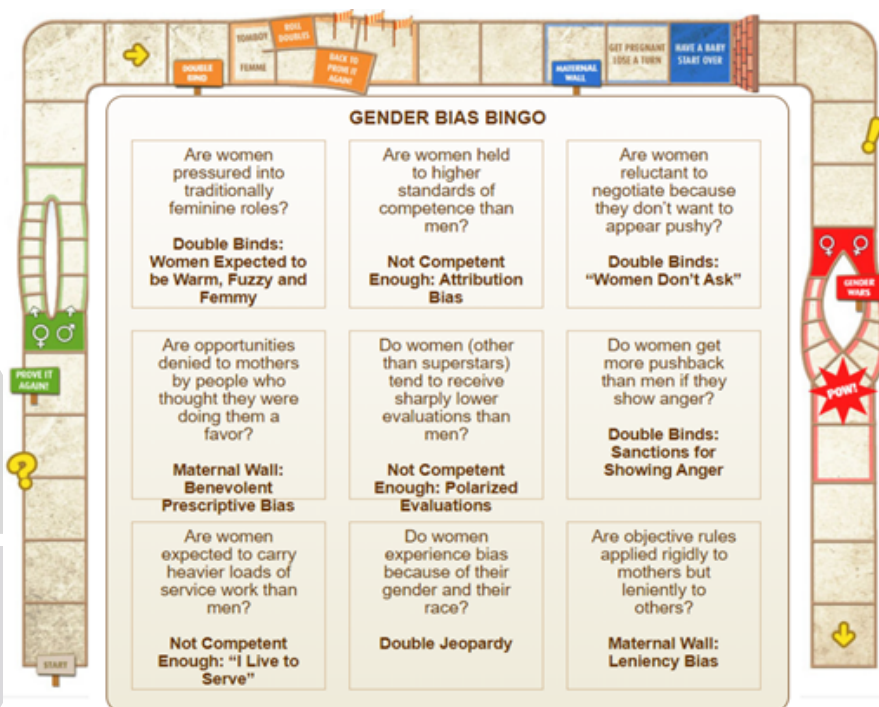
Teacher can open a debate or a talk to understand what are boys feelings towards gender discrimination, it can be an ice breaking tool to discuss this topic.

BINGO GAMES

During the workshop we figured out that the Bingo game is a game that can be easily adapted to illustrate gender issues or social issues in general. Bingo can be a digital game (an app or website but also an activity or a card game) We have discovered two bingo games called Gender Bias Bingo and Gender Balance Bingo.

GENDER BIAS LEARNING PROJECT

The first one: Gender Bias Learning Project is housed within the Center for WorkLife Law at EC Hastings College of the Law in California. It is a website that is entirely dedicated to gender bias. The idea is that identifying gender bias is the first step to make sure that gender bias do not impact negatively yours or someone else's career, by acknowledging it, it enables men and women to develop strategies to face and tackle the bias. On the first page there are several bingo cards with the name of a gender bias pattern on it. Participants have to click on the square to explain an anecdote or a personal experience (or someone else's experience). The patterns of Gender Bias are divided into four categories: Prove it Again!, Maternal Wall, Double Bind and Gender Wars. There are also several videos in which gender bias experts discuss general survival strategies and how to address the bias. The project also proposes teaching and training gender bias modules to learn how to discuss about gender bias in meetings, classrooms trainings, etc.



Source : genderbiasbingo.com

DETAILS:

Game type

It is a website displaying a digital board game that presents the different gender biases that women can face in their life and career.

Scope of activity

The principle of the bingo game is used to encourage participants to click and consult some gender bias card that are divided into four categories : Prove it Again!, Maternal Wall, Double Binds and Gender Wars.

The idea is to illustrate the gender bias with real situations that have occurred to a woman. It is a mix between testimonies that have been shared online and a call for anyone to think about it and express the feelings linked to gender discrimination and bias.

Number of participants

Can be played individually or in a group. The more person, the more opinion, testimonies, and discussion.

Participant selection

The website is mainly addressed to women, but it is very interesting to play and challenge men with this kind of material.

Indeed, it provides a forum for discussion and encourages both genders to express their thoughts, feelings, and the stereotypes they have struggled with in their lives.

Description of activity

Initially participants are requested to click on the gender bias bingo card they feel related with and submit their experience. In the classroom or groups or workshop the game can be played with a moderator giving cards to participants or reading the cards and participants can share their cards and experience.

The project's website also offers a lot of resources that calls for witnesses and provide constructive informative content on how to fight stereotypes in the four and more categories.

Specific material needed

The game can be displayed on the screen and the discussion can be free or it is also possible to download a printable version : https://genderbiasbingo.com/wp-content/uploads/2013/12/gbb_laminate_card.pdf

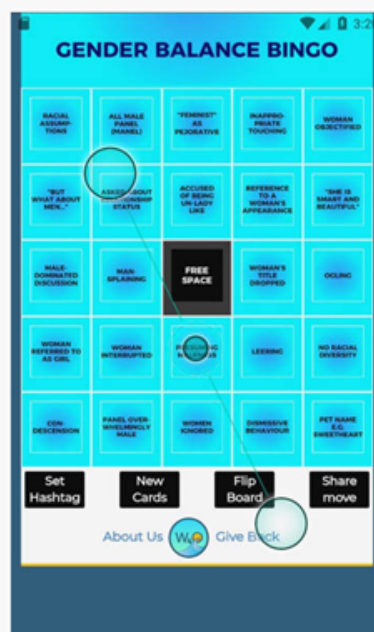
Evaluation sheets

There is no proper evaluation sheet since the game is more debate oriented and can be considered as an icebreaker to discuss and tackle gender bias in our daily societies.

GENDER BALANCE BINGO

The second bingo related game: **Gender Balance Bingo** is developed by Women4Oceans (W4O) an association of women who are raising awareness about oceans' health and situation through the lens of women working to protect it. They have developed a game app (Gender Equality Bingo) that can be downloaded on application stores. The goal of the App is to shed light and challenge sexism, exclusion, and gender stereotypes at any event: conferences, meetings, trainings, everywhere. The app is composed of two boards, one to track positive behaviour and one to highlight negative behaviour in order to identify what needs to be changed (Panel all male? Woman interrupted? Moderator does not call on women in the audience with questions?)

Both games are online adaptations of the classic bingo game and these two games use classic gamification mechanisms to identify and combat behaviour considered stereotypical, discriminatory, or unfair. In terms of competences, these games highlight the need to respect each other and to become aware of the gender bias in any environment. Again, it is a way to turn sensitive subjects into a playful way and help participants to develop critical thinking, open mindedness, acceptance, and respect for others. Which are fundamental to creating an egalitarian and fair society.



Source: [gender-balance-bingo](https://gender-balance-bingo.com/)

DETAILS:

Game type

It is a game app that can be downloaded on apple store or google store.

Scope of activity

The goal of the App is to shed light and challenge sexism, exclusion, and gender stereotypes at any event: conferences, meetings, trainings, everywhere.

It is designed to answer a specific need in the event industry where gender stereotypes are still present.

Number of participants

The app can be used and downloaded by as many people as possible.

There is no limited amount of participant, the more numerous, the funnier

Participant selection

Participants can freely download the app and play bingo with their friends or colleagues

Description of activity

The app is composed of two boards, one to track positive behaviour and one to highlight negative behaviour in order to identify what needs to be changed (Panel all male? Woman interrupted? Moderator does not call on women in the audience with questions?)

When positive or negative gender balance behaviours occur, participants can fill their bingo grid. It is a way to use classic gamification mechanisms in order to identify and counteract behaviour considered stereotypical, discriminatory, or unfair in events and raise awareness among participants.

Specific material needed

There is no specific material needed, only the app to download

Evaluation sheets

There is no proper evaluation sheet since the game is more to raise awareness to participants and people organizing events. The aim is to tackle these stereotyped behaviours and offer more gender equal events and meetings.

GLOBAL IMPACT GAMES

When it comes to unformal activities, the range of possibilities for addressing gender issues is endless. With creativity and imagination, any kind of activity can be gender equity education oriented. One organisation called Global Goals Impact Games is dedicated to teachers, coaches, trainers and players who want to address the 17 UN Global Goals through the lens of football. One of the global goals is Gender Equality (goal n°5) hence the platform proposes a series of activities to achieve gender equality and empowerment for all women and girls through games that can be played with a football ball. All the activities are described and explained so trainers can get the maximum benefit out of it. As an example, proposed activities are called the Fair Game or Warm-up & Speak Up. In both cases, the platform develops the setting up and organisation of the game, the course of the game with rules and then the ideas for discussion. In these two cases, ideas are: “do we all have equal voices in society” “how can we create more opportunities for everyone to participate in sport and society”. The project also encourages trainers to contribute and share their games, ideas, and advice in the wrap up and share section.

The more game with impact there will be, the more likely the global goal number 5 will be reached. In terms of competence, it is worth mentioning that this kind of game activity foster solidarity, fair play, team spirit, organization, creativity, communication, the sense of effort and responsibility, strategy, daring, supporting each other and many more competences that are essential for the youth to acquire and develop to become fulfilled adults. This platform is only one example of unformal activity that can be implemented, of course, there are a lot of possibilities in this field.



Source: [play/goal-5/](#)

DETAILS:

Game type

It is a platform that proposes several activities to be played outside with a football ball. It is dedicated to teachers, coaches, trainers, and players who want to address the 17th UN Global Goals through the lens of football.

Scope of activity

The platform proposes a series of activities to achieve gender equality and empowerment for all women and girls through games that can be played with a football ball

Number of participants

Depending on the activity, it can be minimum two players or two teams of 10 players

Participant selection

Participants can be either male or female, since the objective is to bring the two genders to play together and learn how to communicate, collaborate and work as team members.

Description of activity

The activities are very diverse, depending on the number of participants. The games called Fair Game or Warm-up & Speak Up are both related to personal questions about gender like: "do we all have equal voices in society" "how can we create more opportunities for everyone to participate in sport and society". The project also encourages trainers to contribute and share their games, ideas, and advice in the conclusion and share section.

Specific material needed

A playground, a football ball, some motivation and imagination!

Evaluation sheets

All the activities are described and explained so trainers can get the most out of it. The platform develops the setting up and organisation of the game, the course of the game, with rules and then the ideas for discussion.

MS MONOPOLY

The last example we will display makes the links with the upcoming games since it addresses both the topic of entrepreneurship and gender equality. This game is a diversion of a world-famous game the Monopoly. The game we will describe now is called Ms. Monopoly; it is the same classic real estate board game developed by Hasbro but some rules have been changed to give more advantage to women. Instead of buying streets and building houses on it, players are building business headquarters. In this game, the pay gap is reversed, women start with more money than men and they get more money when they pass the go (square one on the board). It claims to be “the first game where women make more than men” In terms of skills and competences, the game remains a strategy game that encourages participants to learn some basics of money management, budgeting, exploiting resources... but at the same time it highlights the inequalities that exist in the real life that is to say the pay gap between men and women. It challenges some of the stereotypes for women entrepreneurs and their role as inventors and investors.



[Source:ms-monopoly-hasbro-board_game](#)

DETAILS:

Game type

It is a board game, similar to the well-known Monopoly game but with slightly different rules

Scope of activity

The game is about building business headquarters and learning the basics of money management and project monitoring but with an important element: in this game, the pay gap is reversed.

Number of participants

From 2 to 6 participants

Participant selection

Participants should be from both genders and the game can be played by kids, teens and adults

Description of activity

The traditional Monopoly game but women start with more money than men and they get more money when they pass the go (square one on the board). It claims to be “the first game where women make more than men”

The objective is to reverse the usual pay gap situation and illustrate in an easy way that pay gap is unfair, regardless of if it is addressed to men or women.

Specific material needed

The boardgame

Evaluation sheets

The aim of the game is to awaken the players and make them aware that certain aspects of society are unequal and unfair.

For teachers and trainers, playing Ms Monopoly with students can help them deliver a powerful message.

B. Games about entrepreneurship

Let's continue with the entrepreneur-oriented games. Same as for gender equality, there are several games that exist in this domain: physical games, unformal activities, and digital games.

Thanks to the EntreComp Framework, we can say that games promoting entrepreneurship are probably easier to implement than games that favour gender equity. Indeed, the EntreComp Framework lists a serie of learning outcomes and competences that are relevant in the entrepreneurship world. It makes the evaluation of the game more consistent and accurate and illustrates which levels and indicators are working or not.

Among the games proposed by participants there has been a lot more game proposals about unformal activities and physical games than digital games. This can certainly be explained by the fact that physical games and unformal activities are more likely to help developing communication skills and collaboration than digital games. However, there are several serious games based on digital games that are implemented in schools that appear to be effective and appropriate for entrepreneurship education programs. These serious games refer to the "computer-based learning simulations that engage players in realistic activities designed to increase knowledge, improve skills, and enable positive learning outcomes" such as players' problem-solving. However, these serious games are dedicated to higher education and were not mentioned by the participants of our workshop. Indeed, the FLYie project is oriented towards an audience of girls and young women who are not already acquainted with entrepreneurship and as a result they are unfamiliar with the curricula of some higher education schools.

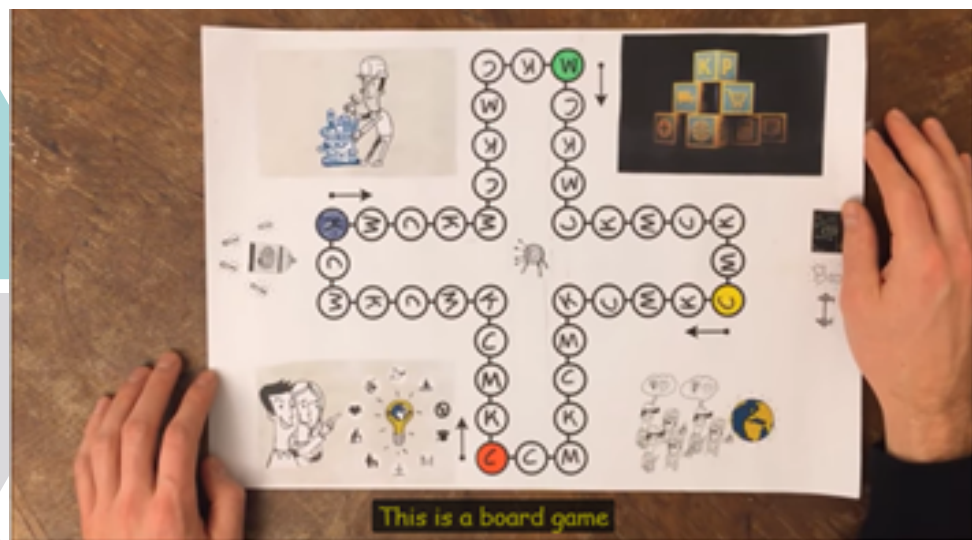
Last but not least, even though some very high-performance serious digital games can be implemented, they appear to be less appropriate than unformal activities or board games for interpersonal skills.

In the category of board games there are many examples to be mentioned.

BRAIN VERSUS CAPITAL

The first game we will talk about is a board game called Brain Versus Capital. It has been developed by the Stiftung Entrepreneurship Campus of Germany. Brain Versus Capital is a board game that aims at teaching the topic of entrepreneurship in an interactive way and with joy, it is an interactive transcript of the book "Brain vs Capital". It is a team games (with at least 2 and maximum 4 players) Each team is assigned to a mission: develop a business thanks to brainstorming sessions in a set time. After 20-30 minutes, all the teams must create a draft business model canvas. Then each team has 5 minutes to prepare a proper presentation of their idea and concept and they will share this presentation with the elevator pitch framework (one minute maximum) to the other team.

In terms of skills, this game aims at developing teamwork, encourage their creativity as well as acquire presentation skills used for the elevator pitch. In addition, participants learn very valuable knowledge about entrepreneurship such as designing a business model canvas, receiving feedback, challenging other's project and find opportunities.



[Source: free-entrepreneurship-game/](https://www.free-entrepreneurship-game/)

DETAILS:

Game type

A board game. It can be downloaded here : <https://www.entrepreneurship-campus.org/free-entrepreneurship-game/>

Scope of activity

It is a board game that aims at teaching the topic of entrepreneurship in an interactive way and with joy, it is an interactive transcript of the book "Brain vs Capital".

Number of participants

The game is played in teams (with at least 2 and maximum 4 players)

The game tables could play against each other (tables 1 against tables 2, 3...). But all players at one table play together in the team.

Participant selection

The game is suitable for teens with some knowledge on entrepreneurship or corporate world and adults.

Description of activity

Participants allocate the different missions to each other (CEO - CTO)

To start, each team draws a mission card (red). This is the initial idea that will be developed during the game into a viable concept with components.

Each team will have to develop a project and construct it according to several phases and stages.

At the end of the time, each team must pitch their project in 1 minute and all the other tables must vote and chose which project they would bote for. The project with the most votes wins. (Instructions : <https://www.entrepreneurship.de/wp-content/uploads/2018/07/Instructions.pdf>)

Specific material needed

The material needs to be printed: the game board, the playing cards, game sheet,

Elements: two dices, one piece / counter per player

Other material: post-its, pencils, timer

Evaluation sheets

The concept and project are evaluated by the other teams or by the teacher.

The project is evaluated according to indicators and questions such as: What is the concept? Which components are used? What is offered? How much does it cost?

GOVENTURE

Another board game that has proven some success is called GoVenture. It has been developed by Media Spark Inc. The game targets both students and adults and it offers education business skills in a recreational context. It immerses players into a business context in which they have to run their own business and compete, collaborate, negotiate among each other. The game offers a fairly comprehensive and complex approach to the world of entrepreneurship, its challenges and opportunities. In terms of competences, players can acquire managerial skills, negotiation skills, self-management and wellbeing. The game claims to be “The most authentic business simulation in the world for gaining real-world business and employment skills.”

Indeed, participants are exposed to the very essential skills of entrepreneurship when running a business that is to say: buying, pricing and selling, HR management, Cash flow management, balancing work and life, evaluating their decisions; preparing of Balance Sheet and Profit and Loss statements...This game is very interesting and gives a first glimpse of what rest on the shoulders of an entrepreneur who creates and runs his company. The game also exists in the format of digital, customizable version. It is said to be a versatile business simulation that can be used for management strategy in courses or corporate trainings.



Source: goventure.net/

DETAILS:

Game type

Board game but it also exists online.

Scope of activity

It focuses on running a business where participants can compete, collaborate and negotiate with other players. It recreates a business context with fun and playful rules and goals.

Number of participants

From 2 to 6. The more participants, the longer it takes.

Participant selection

The game is suitable for teens and adults.

It requires to establish a product strategy and acquire money management.

Description of activity

The objective of the game is to go through the calendar month and accumulate the most profit by selling products.

All the players play at the same time, in each round, players must do an action, compete for customers, exchange money, give money to the bank or play challenge cards.

Players have to set up a product strategy in order to sell their products to customers.

(Instructions: [https://www.goventure.net/videos?wix-vod-video-](https://www.goventure.net/videos?wix-vod-video-id=342c08f2b34b4585b23141e94d271e2a&wix-vod-comp-id=comp-k5smzljjo)

[id=342c08f2b34b4585b23141e94d271e2a&wix-vod-comp-id=comp-k5smzljjo](https://www.goventure.net/videos?wix-vod-video-id=342c08f2b34b4585b23141e94d271e2a&wix-vod-comp-id=comp-k5smzljjo))

Specific material needed

Only the board game is needed.

Evaluation sheets

The winner of the game is the one who has managed to sell the most product. Exactly like Monopoly, the winner is the one who has been able to set up the correct business strategy to defeat the other players.

VIRTONOMICS

Talking about digital games, the company Simformer Inc, has developed a game called Virtonomics – it is a serious business game simulation. The game is an online serious game which main purpose is to simulate a market environment in which entrepreneurs create virtual prototypes of her/his future company. Participants can learn by doing, learn from their failure in simulated company and not in real business which help them develop practical business skills.

Throughout the game play, participants can reduce the risk of committing typical fatal business mistakes and eliminate fears and feeling of insecurities linked to starting a business.

It is also said to increase the probability of successful strategy and encourage the development of small business activities. The game is designed to expose participants to competitive environment, so they have to develop risk management strategies, adapt themselves. They can explore an already conceived business idea in a simulated environment to model their future start-up, test the market strategy or economy models, discover unprecedented risks and learn to overcome them. The game is available in more than 20 languages.

Source: virtonomics.com



DETAILS:

Game type

It is a serious business simulation digital game

Scope of activity

Learn how to develop a company in a virtual world.

Number of participants

Unlimited

Participant selection

It is suitable for teens and adults.

Description of activity

The purpose is to simulate a market environment in which entrepreneurs create virtual prototypes of her/his future company.

The game is designed to expose participants to competitive environment, they must develop risk management strategies, adapt themselves. They can explore an already conceived business idea in a simulated environment to model their future start-up, test the market strategy or economy models, discover unprecedented risks and learn to overcome them.

Specific material needed

No material is needed, only a laptop and an internet connexion

Evaluation sheets

Participants can learn by doing, learn from their failure in simulated company and not in real business which help them develop practical business skills.

THE WISH GAME

Activities (unformal activities) to promote entrepreneurship can be easily implemented.

Indeed, since we saw with the EntreComp Framework all the different competences that are linked to entrepreneurship, any activity that encourages or develops competences such as communication, teamwork or interpersonal skills are meaningful and relevant for the entrepreneurship scope. To give an example of an activity that can be implemented in class, we have analysed the game called The Wish Game, developed by Rebeca Hwang who conducted it in Stanford Entrepreneurship course. The objective is to foster the class and teach the students some entrepreneurial skills through a basic class game. For the wish list, each student is required to write down big specific wishes. The teacher chooses one person to be the wish grantee and the rest of the class will work on this wish all the week in order to be able to deliver the wish for the next session. The game has several steps and tips that Rebeca Hwang develops that is to say: normalizing failure, receiving feedback, developing their customer care skills, set up objectives... In terms of competences this GBL approach helps students develop their creativity, imagination, collaboration. The students can acquire the basics of entrepreneurship skills like ideation, customer interviewing, prototyping, selling, mobilizing resources and much more!

Source: <https://www.teachingentrepreneurship.org/changing-your-students-lives/>

What Are We Doing? *Playing The Wish Game*

- Step 1: Pick a Wish
- Step 2: Pick a Leader
- Step 3: Interview the wish grantee
- Step 4: Wish grantee is excused for the week
- Step 4: Class works all week on delivering the wish
- Step 5: Deliver the wish the following Tuesday
- Step 6: Turn in weekly reflection (wish grantors)
- Step 7: Debrief, rinse & repeat

Source: [teachingentrepreneurship.org](https://www.teachingentrepreneurship.org)

DETAILS:

Game type

Class activity developed by Rebeca Hwang, teacher in Stanford Entrepreneurship course.

Scope of activity

The objective is to foster the class and teach the students some entrepreneurial skills through a basic class game. The Wish Game helps students thinking about the resources and assets they have, which encourages them to share those with peers. It is a good and positive way for students to build solid and lasting relationship and see the positive impact they can have on each other.

Number of participants

A class from 10 to 25 students. It is better to keep the number of participants small, so engagement and motivation can be maintained.

Participant selection

This activity is organized in the frame of entrepreneurship courses, so participants are studying entrepreneurship and start to be aware of methods, knowledge and have notions about entrepreneurship. This game can also be implemented as a preliminary game to introduce the class.

Description of activity

Each student is required to write down big specific wishes. It can be anything like walking on the moon or having a chat with Steve Jobs (after he passed away) or getting a job at Google...these kind of wishes. The teacher chooses one person to be the wish grantee and the rest of the class will work on this wish all the week in order to be able to deliver the wish for the next session. The game has several steps and tips that Rebeca Hwang helps students to develop that is to say: normalizing failure, receiving feedback, developing their customer care skills, set up objectives...It encourages students to develop their creativity, imagination and collaboration skills.

Specific material needed

Depending on the wish, some material may be needed, like audio-visual, flyers or posters or any other element that can fulfil the wish.

Evaluation sheets

After the game, teachers or trainers can ask students to fill a survey or share their feedback about what the game taught them, how they felt with the instructions, how they managed to collaborate, what they have memorized and appreciated. The feedback part is essential in this kind of activity because it. [Source: teachingentrepreneurship.org/changing-your-students-lives/](https://teachingentrepreneurship.org/changing-your-students-lives/)

VENTURE WELL

Lastly, we have found on the VentureWell whose mission is to encourage inventors, innovators and entrepreneurs to solve the world's biggest challenge and to create a lasting impact. VentureWell organisation proposes a set of tailor-made activities to stimulate inventor entrepreneurs. Through a collection of 8 class activities, the goal is to prepare students to their early stage innovators in taking the first step towards transforming their ideas into impactful inventions and ventures. The activities focus on specific aspects of entrepreneurship and/or business development. Among the activities proposed some target the development of critical thinking, other are more creativity and imagination oriented while some require students to become problem solver or play the role of the customer care department. Throughout these activities, participants can learn about value proposition, customer segments, customer relationship (get out of the building) and acquire new knowledge in a specific field (investment, customer, finding the issue to identify the solution...)



Source: [/venturewell.org/class-activities-inventor-entrepreneurs/](https://venturewell.org/class-activities-inventor-entrepreneurs/)

DETAILS:

Game type

8 class activities to stimulate inventor entrepreneurs.

Scope of activity

VentureWell is an organisation aiming at supporting faculty in developing programs addressed to innovators students and that can favour institutional changes through group activities like workshops, grants, training and conferences. The goal is to prepare students to feel at confident about the early stage innovators and take the first step towards transforming their ideas into impactful inventions and ventures

Number of participants

The group can be a class but again, the bigger the class is, the more likely students might lose engagement and motivation.

Participant selection

Students in their first years of higher education, they can be studying entrepreneurship or management. The idea is to foster students by proving them that they have potential and a role to play in the society.

Description of activity

The program develops 8 activities about specific topics: the "If I knew..." exercise, the Envelop Exercise, the Defining Problems Exercises, The Business Thesis Exercises... The activities focus on specific aspects of entrepreneurship and/or business development. Among the activities proposed some target the development of critical thinking, other are more creativity and imagination oriented while some require students to become problem solver or play the role of the customer care department.

Specific material needed

Flip board, post-its, pencils, whatever is necessary to brainstorm, share thoughts, present ideas in a workshop

Evaluation sheets

After each exercise, a feedback or debriefing session is essential to help students get the big picture or make the links with what they have developed and what entrepreneurship is. Indeed, the debriefing phase aims at explaining that this specific game, method or knowledge is about acquiring a competence in a precise field: value proposition, customer segments, customer relationship, investment, finding the issue to identify the solution...

CHAPTER IV: How to create an efficient game-based approach and implement relevant indicators?

Now that we have seen and understood the advantages and the possibilities a GLB approach can offer it is worth understanding how to implement such an approach. In other words, the idea is to figure out how to create an efficient GBL approach and how to implement relevant indicators. What are the unavoidable steps and essential points to put in place to ensure the effectiveness of the approach?

4.1 Game design and environment

In 2002, Phil Orbanes wrote in the Harvard Business Review an article entitled: “Everything I know about business I learned from Monopoly”, (Orbanes, P. 2002). Phil Orbanes is a famous American board game designer; he is also an author and one of the founding partner and former president of Winning Moves Games in the USA. Winning Moves Games is a maker of classic games (board, cards, puzzles, action games...) In this article, the author presents how game designers strive to engage people in the game and how important it is to set clear structure and create good settings in which people can challenge each other without fighting/arguing. He claims that the overall objective is for people to enjoy the game and get the best out of it. Thanks to his experience as a game designer and executive, the author shares his principles to create a great game design.

His first and most important principle is that the game should deliver a very well-structured entertainment experience. That is to say to make sure a game will deliver pleasurable emotions to the players; the game designer or trainer must provide a well-defined and organized environment and ensure that this specific environment is pleasant for participants. Indeed, when the rules of the game lack precision and there is confusion, it often leaves room for interpretations and likely conflicts that make the game less fun to play.

The other principles make perfect sense and are consistent with his first consideration:

- make the rules simple and unambiguous
- don't frustrate the casual player with too many information
- establish a rhythm
- focus on what is happening off the board
- give players a chance to get back in the game: set a right balance between skills and luck
- provide opportunities for inexperienced or initiated players to enjoy the game

4.2 Indicators and objectives

These principles can apply in the three categories of games i.e. physical, digital, and informal activities. It is essential to keep them in mind so it allows to develop and establish games that will be generally well received and appreciated by players. However, beyond the principles of the game in itself, when trying to set up a GBL it is important to also establish the pedagogical objectives and learning outcomes that the game should develop. Indeed, we have mentioned earlier that the GBL approach turns a lesson, a course or an experience into a game but then besides the core principles of games, what are the indicators and elements that need to be considered when developing a GBL approach?



First of all, it is important to define clear pedagogical objectives and make sure the mechanisms of the game can reach them. Indeed, when one wants to help participants develop interpersonal skills through a game, it is necessary that the game requires participants to interact with each other. For the objective to be reached, it is worth setting up some indicators that are aligned with the pedagogical objective or game strategy. They should help design the action plan and identify the qualitative or quantitative outputs of the game. Indicators can be established following the SMART methodology:



SPECIFIC
must focus on specific topic

MEASURABLE
in quality or quantity. For games, this one is difficult because one can never totally disregard the personality traits of each person and therefore it is more difficult to evaluate what has actually been acquired or retained.

ACHIEVABLE
(attainable or realistic): the game and its objective must remain feasible and achievable with the means at disposal

RELEVANT
the game and its objective must make sense with the lesson and course that it is supposed to cover/approach

TIME-RELATED
specify what its the time frame

When indicators are set with this SMART framework it is very likely that the game's objectives can be easily reached. In the FLYie project, a couple of indicators that have been seriously taken into consideration are:

- the quality education material
- overcoming the cultural/gender barrier
- the complexity of rules
- fun and benevolent atmosphere
- focus on collaboration

4.3. Feedback and debriefing

When the design and mechanisms of the game as well as the objectives of the GBL approach and the indicators are clearly settled, it is time to play the game (and learn the lesson) for real!

At this stage, it is necessary to be able to evaluate and judge the progress of the game, how participants react, what should be changed and modified, taken into consideration to make sure the approach is inclusive and reaching the final objectives. To be sure that the GBL approach is delivering valuable outcomes and is beneficial to the player, the following actions must be put in place, at least for the first experiments of the game: get the feedback of participants, identify what they have learned, acknowledged or remembered. It is also important to collect the feelings of the participants afterwards, that is to say, what they have liked, disliked, found difficult, entertaining, or boring.



This phase as well as the debriefing phase are crucial. Indeed, a GBL methodology without debriefing phase does not make sense and does not serve the objectives of the approach. For instance in serious games or learning activities like pedagogical escape games or any other game, the pedagogical outcomes cannot be reached if there are no clear debriefing phases explaining participants what they have been through, what was the purpose of the game about so they can link their experience and transform it into knowledge.

Another example, if the game is about tackling gender stereotypes and there is no debriefing phase explaining that gender stereotypes exist and are prevalent in our day to day lives participants will probably not make the connection with identical situations and therefore act accordingly. Similarly, when some games deal with certain complicated topics and issues or require participants to get out of their comfort zone, it is imperative to be able to discuss, debate and take note of and relate to the topic approached.

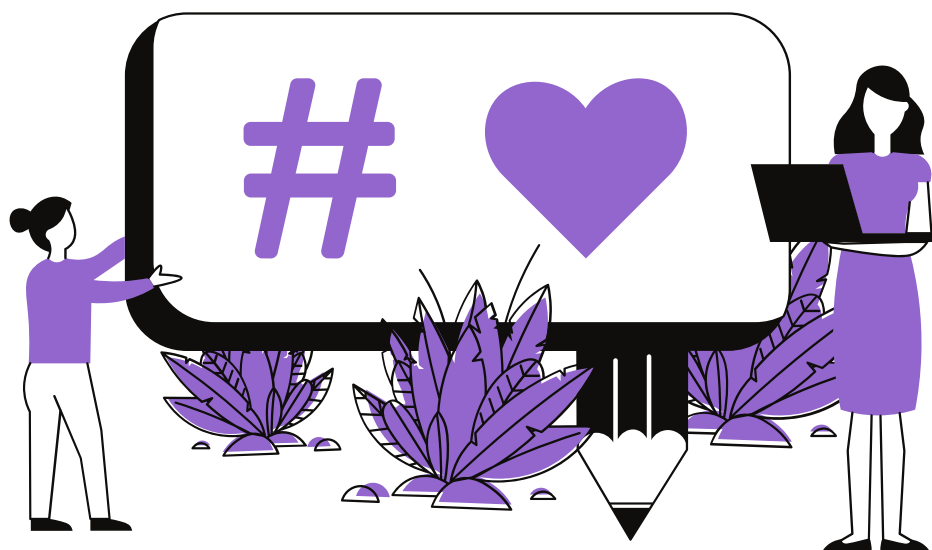
Therefore, being able to adapt the game according to the participants' feedback so it is really relevant to the audience and implementing debriefing phase is key to develop successful GBL approach. This is not necessarily a general truth, but a game for which there is no debriefing time set up is likely to have less repercussion and impact on the participants. As with any lesson, the introduction as well as the conclusion and the questions and answers phases are essential to ensure that the participants have integrated the different elements and concepts of the game and the lesson and above all that they have enjoyed learning while playing!

Conclusion

This guide serves as an overview of many opportunities that game-based education can bring to the topic of gender equality. Even though there are many types of games and activities the ones that would combine the merge entrepreneurship skills with promoting female initiatives is very hard to find. But that brings opportunities and a space for innovation which we see in the game that this partnership is developing.

In addition, in an educational setting it is important to pay attention to the way games and activities show – or do not show – categories of people. For example, if you role playing games in which female characters are only in the type of companies that are considered female (for ex. beauty, care giving, education), it can alienate students who do not identify with this trope, and it gives a reducing image of gender roles. We suggested ways to analyse the content of the materials you use as well as a few titles that deal with topics that are not always among the most tackled.

We hope this provides you enough food for thought to support you on your journey to apply more gender inclusive activities!



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- Brain versus capital : <https://www.entrepreneurship-campus.org/free-entrepreneurship-game/>
- VentureWell : <https://venturewell.org/class-activities-inventor-entrepreneurs/>
- Ms. Monopoly: <https://www.cbc.ca/news/business/hasbro-introduces-ms-monopoly-1.5279264>



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