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State of the Art of Adult Education Trainers on Gaming and Gamification

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Abstract

Nowadays, gaming and gamification are significant teaching tools in digital learning environments. The concepts *Game-Based Learning* and *Gamification*, their approaches at European level, and the differences between them are described in this paper. The aim of the article is to identify the perceptions of EU adult education trainers about *Game-Based Learning* and *Gamification* and to find out what these trainers know about *Game-Based Learning* and *Gamification* and their use as scenarios of pedagogical innovation. To achieve these objectives, a survey was distributed to 128 instructors of adult education in Portugal (30), Turkey (30), Greece (32) and Romania (36). The paper presents the analysis of the results for the study conducted in the four countries.

Keywords: gamification, game-based learning, digital learning

Introduction

Having fun while learning is a good thing. This statement is based on the evidence that pleasure increases engagement and retention (Israel, 2017; Steinkuehler, Squire and Barab, 2012). Much because of this element of pleasure for fun, gaming and gamification have become powerful teaching tools in digital learning environments. These two pedagogical models combine everything that is engaging, "from internal rewards to teamwork and collegial support, the occasional tangible gift once the skill is achieved. The combination of these benefits successfully builds knowledge and skills that influence productivity." (Israel, 2017, p. 2).

However, using games for learning is not an easy task, as they have to be successful both as enjoyable and exciting games and in supporting learning. So, having an adequate balance between design for engagement and design for learning is not simple (Moreno-Ger, Burgos, Martínez-Ortiz, Sierra, e Fernández-Manjón, 2008). Game-Based Learning (GBL) and gamification should be carefully designed, based on "the psychology of play and its usefulness as a learning strategy" (Isarael, 2017, p. 2). Accordingly, adult education training can leverage expertise for counselling and guidance on GBL and gamification.

This article, written as a report of the Erasmus+ Gaming in Action project, sought to identify the perceptions of EU adult education trainers about GBL and Gamification. The objectives were to find out what these trainers know about GBL and Gamification and their use as scenarios of pedagogical innovation. To achieve these objectives, a survey was distributed to 128 instructors of adult education in Portugal (30), Turkey (30), Greece (32) and Romania (36).

Game-Based Learning & Gamification

There is a difference between GBL and gamification. GBL is the integration of real games into the learning process, usually to work a specific competency or achieve a learning objective (Lencastre, Bento & Magalhães, 2016, p.166). This approach allows learners to become immersed in the learning process and to have fun while doing so (Israel, 2017, p. 3). Gamification is the concept of applying game-based mechanics and dynamics to non-game situations to foster learners to engage in an activity (Lencastre, Bento & Magalhães, 2016, p.168).

a. Game-Based Learning

Informal evidence supports an argument that using digital games bring more than just motivation and can be very powerful learning tools (Girard, Ecalle, & Magnan, 2013; Chang, Wu, Weng e Sung, 2012; Virvou, Katsionis, & Manos, 2005). James Paul Gee (2003) has long highlighted the potential of video games in learning processes, taking advantages of the fact that learners are spending more time playing videogames than reading. Gee bolsters the fact that games help doing, make decisions, solving problems and interacting. This author asserts that "Gamers do not just do things and make decisions. They must learn things and even master them. If they don't, they don't leave the first level of a game" (Gee, 2017, p. xvii).

Papert (2008), quoted by Bento and Lencastre (2014, p. 454), considers that digital games, when adequately planned, can serve as mobilising elements in the teaching and learning processes, as they enable: (i) to absorb the student intensely; (ii) emotional involvement; (iii) an atmosphere of spontaneity and creativity; (iv) a clear notion of time and space limits; (v) the possibility of repetition and recovery from an error; (vi) the existence of clear and objective rules; (vii) imagination, self-expression and autonomy; and (viii) cooperative work and group work. The 21st Century literacy skills involved in GBL allow ICT to become increasingly social and user-centric, with Internet users no longer sole consumers of information but also producers of information (Simões, Redondo, & Vilas, 2013).

Most existing digital games have strong visual elements (Annetta & Bronack, 2008), making them suitable for almost all types of learners. Many digital games require quick responses that represent a focus for many learners, making the game more interesting and exciting. The best digital games allow users to accomplish the task(s) or achieve the learning goals, with effectiveness and satisfaction.

b. Gamification

Gamification may involve the trainer gamifying an activity or teaching a concept by including mechanics, such as missions, milestones, points, levels, and feedback (Lencastre, Bento, & Magalhães, 2016), increasing student engagement without linking to any particular game. Thus, learners learn, not by playing specific games but they learn as if they were playing a game (Simões et al., 2013). According to Bunchball (2010), and as shown in Table 1, in game mechanics, we consider the mechanisms used to "gamify" an activity defined with the intention of evoking certain emotions in the student/player. In turn, the game dynamics are the motivations that lead the player to these emotions.

Table 1 : Game elements (adapted from Bunchball, 2010)

Game mechanics		Game dynamics
Points		Reward
Levels		Status
Challenges		Achievement
Virtual goods and spaces		Self-expression
Leaderboards		Competition
Gifts and charity		Altruism

Education is an area with high potential for applying gamification, as it seeks to promote student motivation and involvement. Learners are, therefore, learning content as if they were playing a game, making the educational experience both challenging and fun (Vassileva, 2008). So, gamification offers the opportunity to combine content, teaching, digital literacy and 21st Century learning skills in a surrounding learning environment (Kingley & Grabner-Hagen, 2015). Intuitively, gamification has a great potential to motivate learners and make school more attractive (Lee & Hammer, 2011). The trainer will be able to provide specific content with a process of gamification adapted to a learning context and the learners' profiles. According to Simões, et al. (2013), gamification will help trainers to:

- Create challenges tailored to the student's level of knowledge, increasing the difficulty of these challenges as the student acquires new skills.
- Set up multiple ways to successfully achieve an objective, allowing learners to overcome intermediate goals.
- Set goals with simple objectives, providing feed-back or an immediate reward that allows progress to a new task, usually with a higher degree of difficulty.
- Choose the proper game mechanics to be applied in specific activities, projects or learning processes.
- Consider the failure as part of the learning process: a task can be completed successfully after several failed attempts without penalizing the student.
- Enable learners to assume different identities and different roles allowing them to explore other aspects of their personality in a controlled environment.
- Enable recognition of the student's progress by peers, trainers and parents promoting student's social status.
- Use competition to promote valuable behaviours.

The Method of Data Collection

As a method of data collection, one used an online questionnaire adapted from Silva, Lencastre, Bento and Osório (2018). The questionnaire was divided into six sections and consisted of 20 closed-ended questions and two open-ended questions.

With this questionnaire one intended:

- To understand trainer's knowledge regarding GBL and gamification.
- To understand the use of innovative pedagogical scenarios in their training contexts.
- To identify trainer's positioning in relation to the pedagogical use of GBL and gamification.

Data collected from the participants were evaluated and interpreted to produce a clear picture of the situation that is being tackled and also the common/shared characteristics. In the analysis of the data, the frequency technique was used for the production of quantitative data. On the other hand, a descriptive analysis method was used for the formation of qualitative data. Data obtained in this way were classified and thoroughly interpreted.

Validation of the data collection tool

Firstly, the questionnaire was reviewed by an expert with the following profile: 53 years old, Male, PhD in Education, lecturer of Educational Technology in a public university, 27 years of experience. The expert reflected on all questions, and the questions 9, 10, 11, 20, and 23, were slightly modified.

Then, a usability pilot-test was applied to an adult trainer with similar profile to the target audience. The trainer's profile: male, 45 years old, graduation in engineering with more than 15 years of training practice with adult learners. The trainer responded the questionnaire under the same conditions as the proposed target audience. After the trainer completed the questionnaire, the following questions were asked to him (Hill & Hill, 2005):

1. How long did it take to complete the questionnaire?
2. Were the instructions clear?
3. Did you find any ambiguous question? If so, what and why?
4. Does the list of closed questions cover all the options?
5. Does any question influence the answer?
6. Did you deny to answer any questions?
7. In your opinion, was an important topic omitted?
8. Did you consider the format of the questionnaire clear/attractive?
9. Would you like to add any comments?

The trainer suggested some minor changes and that changes were made in questions 9 and 10 (deleted "in terms of learning"); question 11 (set "games" in the plural); question 20 (was removed because it didn't add new info to the questionnaire); and question 23 (the words "at your will" have been deleted).

Participants

The questionnaire was self-administered to 128 adult education trainers: 30 from Portugal, 30 from Turkey, 32 from Greece and 36 from Romania.

Regarding the age group of the learners they teach, in Portugal the majority (90%) teach learners aged more than 30 years old. There are then 16 trainers (53,3%) who teach trainees aged less than 18 years old. It is also verified that 16 trainers (53,3%) work with trainees aged 19-25 and another 18 trainers (60%) who work with learners aged 26-30.

In Turkey it is observed that most of the respondents, 52% say they are working with the trainees between the age of 19-25. 11% say 26-30, 22% say18, and 15% are more than 30.

We can conclude that, in Romania, more than half of respondents (52,8 %) works with the trainees between the age of 19-25, 19,4% respondents said they teach trainees aged less than 18 years old, and the same percentage of them (13,9%) has the training activities with learners aged 26-30, and more than 30.
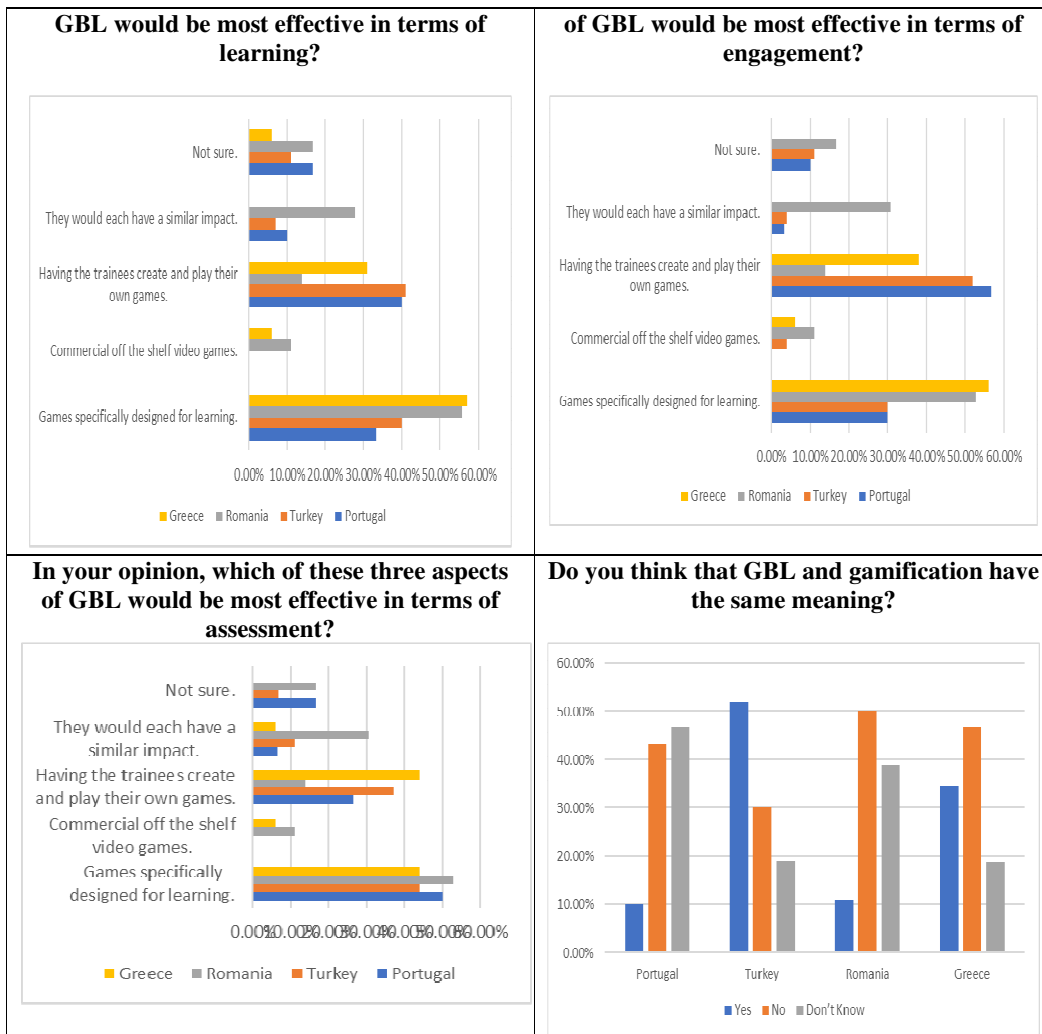
A summary of respondents from Greece noted that most trainers (56%) work with trainees aged over 30, 38% work with students aged 26-30 and another 6% work with trainees between aged 19-25.

Data Analysis/Results and Discussions

These numbers point to a total of 128 responses, higher than the number of applicants (120), which translates into something natural in adult education, in which a trainer ensures more than one level of education. The questions and graphical representations of the results are presented in table 2.

Table 2 : The questions and the graphs.

Do you know what game-based learning is?

Do you know what gamification is?

How often do you play video/mobile phone games in your leisure time?

How often do you think games should be incorporated in the learning process?

How often do you incorporate games into your teaching?

Have you ever integrated games into the learning process through the use of?

In your opinion, which of these aspects of

In your opinion, which of these three aspects

GBL would be most effective in terms of learning?

of GBL would be most effective in terms of engagement?

In your opinion, which of these three aspects of GBL would be most effective in terms of assessment?

Do you think that GBL and gamification have the same meaning?

When asked ``*Do you know what game-based learning is?*``, in Portugal 80% trainers responded affirmatively, and 20% responded negatively. When this question is examined in Turkey, it is clear that 70% of the respondents know what game-based learning is. In Romania, 83.3% of respondents know the concept, while in Greece, 75% of respondents do not know what gaming-based learning is.

Regarding the question ``*Do you know what gamification is?*``, in Portugal 60% trainers answered YES and 40% said NO. In Turkey, it is clear that 72% of the respondents know what gamification is. In Romania, 55.6% of trainers know the concept, while in Greece, 75% of respondents do not know what gamification is.

Regarding the frequency in which trainers play (using video games or mobile phones) during their leisure time, in Portugal 46,6% state that they do it frequently or occasionally, while 40% say that they do it rarely and 13,3% never do it. It can be seen that 86,6% of the adult trainers have playing habits, whether video games or on the mobile phone, although with different frequency. In Turkey it is observed that most of the respondents 37% say they play video/mobile phone games rarely, 33% say sometimes, 4% say often, but 26% say they never play. In Romania, it is noticed that most of the respondents (50%) say sometimes, 38.9% say they play video/mobile phone games rarely, 8.3 % say often, and 2.8% say they never play. Comparing the result of this question from Greece with the

answers from the above mentioned countries, we can conclude that the situation is slightly different, a large majority (87%) often play video / phone games and 13% say sometimes.

Regarding the use of games in the learning process, 86,7% of respondents from Portugal considered that they should be incorporated "in some sessions" and 3,3% "most of the time". 10% said "rarely" but no-one answered "never". It is verified, therefore, that all trainers have a favourable opinion to gaming integration in learning. In Turkey, it is observed that most of the respondents, 41% say most of the time, 33% say sometimes, 15% always, and 11% say rarely. In Romania, it is seen that 11,1% say most of the time, 33.3% say sometimes, 15% always, and 11% say rarely. In Greece, it is observed that most of the respondents, 6% say most of the time, 37% say sometimes, 44% always, and 13% say rarely.

On the regularity of the use of games in their training process, in Portugal 56% choose to say "sometimes", but there are 33% who answered "rarely". Almost 10% said ("never"). In Turkey, it is observed that most of the respondents, 45% say sometimes, 22% say most of the time and 22% rarely, but 11% say never.

When asked if they have already integrated games in the training process that were specially designed for educational use, in Portugal 73,3% answered affirmatively. According to the responses to this question, 9 trainers (30%) also used software that allows learners to build their own games, another 3 trainers used commercial games (such as Minecraft). In Turkey, it is seen that most of the respondents, 59% say games designed for teaching and learning, 14% say software allowing children to build their games and 27% indicates other options. On the other hand, no one chose the commercial off the shelf video games. Concerning the type of game integrated in the learning process, most trainers in Romania (72.2%) often use games specially designed for didactic activities, but only 19.4% use commercial games. Comparing the Romanian result, in Greece (13%) use games specially designed for didactic activities, and 78% use commercial games.

Regarding the aspects of GBL that are most effective for learning, according to the results obtained in the Portuguese survey were: having the learners create and play their own games (40%); games specifically designed for learning (33,3%); they would each have a similar impact (10%).

In Portugal, 16.7% of respondents said they were not sure of what aspects of GBL are most effective for learning. In Turkey, it is seen that 41% say games designed for learning, 41% report having the trainees create and play their games and 7% assume that they would each have a similar impact, 11% say that they are not sure. On the other hand, no one chose the commercial off the shelf video games. In Romania, 55,6% say games designed for learning, and only 11,1% create and play their games. In Greece, the results show that 57 % use games designed for learning, and 31% create and play their games.

Regarding learner involvement, in Portugal the answers are almost identical to the previous question, but 10% are not sure about this issue. Trainers highlighted the following aspects: having the learners create and play their own games (56,7%); games specifically designed for learning (30%); not sure (10%); they would each have a similar impact (3,3%).

In Turkey, it is observed that most of the respondents, 52% say having the students create and play their games, 30% games designed for learning, 4% assume that they would each have a similar impact, and 4% say the commercial off the shelf video games, but 11% say that they are not sure.

Concerning the aspects of game-based learning that would be effective in terms of engagement, in Romania it come out that 52,8% respondents agree that the games specifically designed for learning would be most effective, and 11,1% considers the commercial games are useless. In Greece, 56% agrees that the games specifically designed for learning are most effective, and 6% thinks the commercial games are unusable.

Regarding student assessment, in Portugal the answers were as follows: games specifically designed for learning (50%); having the learners create and play their own games (26,7%); not sure (16,7%); they would each have a similar impact (6,6%);

In Turkey, it is observed that most of the respondents, 44% say games designed for learning, 37% having the students create and play their games, 11% say that they would each have a similar impact, and 7% say that they are not sure. But no one chose the commercial off the shelf video games. In Greece, trainers think the games specifically designed for learning and the games created by students have the same impact for assessment.

Assessing the effectiveness of game-based learning

The appraisal proceeded with a request to rate the effectiveness of GBL in the following statements:

(Q12) encouraging pupils to take a responsible attitude to their own work and study;
(Q13) helping trainers to be aware of pupils' capabilities;
(Q14) helping trainers to be aware of pupils' prior knowledge;
(Q15) guiding pupils to reflect on the progress they have made;
(Q16) guiding pupils to reflect on their emerging needs;
(Q17) supporting pupils' education at different stages of development;
(Q18) engaging and motivating pupils;
(Q19) being used to make accurate assessment;
(Q20) being used to make a productive use of assessment.

The evaluation was done to measuring attitudes on a Likert Rating Scale of five points, considering that 1 represents low effectiveness and 5 great effectiveness (or very effective). The results to these nine questions are in the table below, with trainers' answers by question, and by level. The average evaluation in each question in Portugal is presented in table 3.

Table 3: The average evaluation in each question in Portugal

Questions	Level 1	Level 2	Level 3	Level 4	Level 5	Average
Q12 – encouraging pupils to take a responsible attitude to their own work and study	0	1 (3.3%)	9 (30%)	14 (46.7%)	6 (20%)	3.83
Q13- helping trainers to be aware of pupils' capabilities	0	0	9 (30%)	14 (46.7%)	7 (23.3%)	3.93
Q14- helping trainers to be aware of pupils' prior knowledge	0	0	11 (36.7%)	11 (36.7%)	8 (26.7%)	3.9
Q15- guiding pupils to reflect on the progress they have made	0	0	8 (26.7%)	15 (50%)	7 (23.3%)	3.97
Q16- guiding pupils to reflect on their emerging needs	0	1 (3.3%)	12 (40%)	12 (40%)	5 (16.7%)	3.7
Q17- supporting pupils' education at different stages of development	0	1 (3.3%)	10 (33.3%)	14 (46.7%)	5 (16.7%)	3.77
Q18 - engaging and motivating pupils	0	0	6 (20%)	7 (23.3%)	17 (56.7%)	4.37
Q19- being used to make accurate assessment	0	1 (3.3%)	13 (43.3%)	10 (33.3%)	6 (20%)	3.7

Data analysis from Portugal allows us to attest that all trainers in each of the eight questions assess with level 2 or higher. Therefore, level 1 was never considered. The best scores, with 17 trainers choosing level 5 (maximum), and with a mean of 4.37 (in 5 points), are related to the learners' engagement and motivation (Q18).

The average evaluation in each question in Turkey is presented in table 4.

Table 4: The average evaluation in each question in Turkey

Questions	Level 1	Level 2	Level 3	Level 4	Level 5	Average
Q12 – encouraging pupils to take a responsible attitude to their own work and study	1 (4%)	2 (7%)	8 (26%)	12 (41%)	7 (22%)	3.73
Q13- helping trainers to be aware of pupils' capabilities	0 (0%)	2 (7%)	7 (22%)	12 (41%)	9 (30%)	3.93
Q14- helping trainers to be aware of pupils' prior knowledge	0 (0%)	2 (7%)	11 (37%)	11 (37%)	6 (19%)	3.7
Q15- guiding pupils to reflect on the progress they have made	0 (0%)	3 (11%)	7 (22%)	13 (44%)	7 (23%)	3.80
Q16- guiding pupils to reflect on their emerging needs	0 (0%)	1 (3%)	9 (30%)	14 (48%)	6 (19%)	3.83
Q17- supporting pupils' education at different stages of development	0 (0%)	3 (7%)	8 (26%)	11 (37%)	9 (30%)	3.84
Q18 - engaging and motivating pupils	0 (0%)	1 (4%)	6 (19%)	14 (46%)	9 (31%)	4.03
Q19- being used to make accurate assessment	0 (0%)	1 (4%)	13 (44%)	12 (41%)	4 (11%)	3.63

In Turkey, the best scores, with 14 trainers choosing level 4 and with a mean of 4.03 (in 5 points), are related to the learners' engagement and motivation (Q18).

The average evaluation in each question in Romania is presented in table 5.

Table 5 : The average evaluation in each question Romania

Questions	Level 1	Level 2	Level 3	Level 4	Level 5	Average
Q12 – encouraging pupils to take a responsible attitude to their own work and study	1 (2.8%)	6 (16.7%)	8 (22.2%)	15 (41.7%)	6 (16.7%)	3.53
Q13- helping trainers to be aware of pupils' capabilities	1 (2.8%)	10 (27.8%)	8 (22,2%)	12 (33.3%)	3 (8.3%)	3.18
Q14- helping trainers to be aware of pupils' prior knowledge	1 (2.8%)	11 (30.6%)	10 (27.8%)	6 (16.7%)	8 (22.2%)	3.25
Q15- guiding pupils to reflect on the progress they have made	1 (2.8%)	3 (8.3%)	10 (27.8%)	8 (22.2%)	14 (38.9%)	3.86
Q16- guiding pupils to reflect on their emerging needs	5 (13.9%)	10 (27.8%)	8 (22,2%)	10 (27.8%)	3 (8.3%)	2.89
Q17- supporting pupils' education at different stages of development	3 (8.3%)	10 (27.8%)	7 (19.4%)	10 (27.8%)	6 (16.7%)	3.17
Q18 - engaging and motivating pupils	1 (2.8%)	3 (8.3%)	5 (13.9%)	8 (22.2%)	19 (52,8%)	4.14
Q19- being used to make accurate assessment	10 (27.8%)	7 (19.4%)	5 (13.9%)	10 (27.8%)	4 (11.1%)	2.75

Also In Romania, the best scores, with 19 trainers choosing level 5 and with a mean of 4.14 (in 5 points), are related to the learners' engagement and motivation (Q18).

The average evaluation in each question in Greece is presented in table 6.

Table 6: the average evaluation in each question Greece

Questions	Level 1	Level 2	Level 3	Level 4	Level 5	Average
Q12 – encouraging pupils to take a responsible attitude to their own work and study	0 (0%)	0 (0%)	10 (31.25%)	10 (31.25%)	12 (37.5%)	4.06
Q13- helping trainers to be aware of pupils' capabilities	0 (0%)	0 (0%)	12 (37.5%)	12 (37.5%)	8 (25%)	3.88
Q14- helping trainers to be aware of pupils' prior knowledge	0 (0%)	0 (0%)	12 (37.5%)	11 (34.37%)	9 (28.13%)	3.91
Q15- guiding pupils to reflect on the progress they have made	0 (0%)	0 (0%)	14 (43.75%)	8 (25%)	10 (31.25%)	3.88
Q16- guiding pupils to reflect on their emerging needs	0 (0%)	0 (0%)	8 (25%)	10 (31.25%)	14 (43.75%)	4.19
Q17- supporting pupils' education at different stages of development	0 (0%)	0 (0%)	13 (42.62%)	13 (42.62%)	6 (18.76%)	3.78
Q18 - engaging and motivating pupils	0 (0%)	0 (0%)	15 (46.87%)	9 (28.13%)	8 (25%)	3.78
Q19- being used to make accurate assessment	0 (0%)	4 (12.5%)	18 (56.25%)	6 (18.75%)	4 (12.5%)	3.31

In Greece, the best scores, with 14 trainers choosing level 5 and with a mean of 4.19 (in 5 points), are related to guiding pupils to reflect on their emerging needs (Q16).

In summary, the trainers' evaluation of the effectiveness of the games for the learners' learning reveals very positive visions. Several benefits are identified for different aspects of teaching and learning processes. Some contributions include the learners' involvement and motivation by encouraging them to study, supporting learning, and helping trainers to balance learners' prior knowledge and practice a more accurate assessment.

It can be perceived that trainers know that there are two methodologies, but most of these trainers do not know if there are differences between these methodologies.

To clarify this issue, trainers were asked to mention some differences or similarities concerning GBL and Gamification. We only receive 15 responses. From these 15 answers, five were saying that they do not have a clue on the differences or similarities between game-based learning and gamification.

Regarding the differences

S1. "Game-based learning based has not necessarily an assignment of points, as in gamification."
S2. "Games involve a creative interaction to motivate the curiosity to know, and gamification involves game dynamics but based on the reward, so that the learner feel progress."
S3. "I think the difference lies in the expected reward."
S4. "I think that game-based learning is less creative and less flexible. It consists of a predefined game with clear rules, and it is not specific to the target group. I see gamification as a methodology that allows working content in a ludic, flexible and creative way. Games are created according to the learning needs that will emerge, with the motivation and ideas of everyone involved (learners/trainers)."
S5. "Gamification is the use of games in real situations, while games may not reflect reality."

S6. "Game-based learning is the use of games in learning. Gamification is the use of typical elements of games, scenarios, scores, etc ... in learning situations."

S6. "Game-based learning refers to the use of games to enhance learning. Gamification involves adding typical elements of a game to non-game situations."

Concerning Similarities

Regarding similarities, a trainer wrote that "in essence, they resemble each other. They are strategic challenges to learning". Another trainer refers to "motivation and the development of playful skills"; and other reports that "both refer to the use of game thinking in learning".

In addition, an open-ended question asked the trainers to express their views on GBL and Gamification freely. We got the following answers:

S1. "Gambling-based learning and gamification involve motivating."

S2. "In my view, these methodologies allow the trainees to be much more involved in learning and to arouse their interest throughout the sessions."

S3. "Concerning game-based learning, I think it will be a more primitive form of motivation, since we have learned from games since childhood, so it will be a natural process of pedagogy and knowledge."

S4. "I think the game is something that is not planned. In turn, gamification is designed with a learning objective."

S5. "Gameplay can be a useful technique as long as it is used sparingly."

S6. "The use of game-based learning and / or gamification is a means to a higher purpose that is developing an intellectually fruitful teaching-learning relationship."

S7. "It can be an excellent strategy for motivating learners and consolidating knowledge."

S8. "Game-based learning and gamification help to better understand the learning topics."

S9. "I believe that both can coexist according to the learning goals and the different learning moments."

S10. "Gamification involves, motivates to participation."

Conclusion

This paper addresses the views of a group of 128 adult education trainers from Portugal, Turkey, Greece and Romania on their perceptions about GBL and Gamification.

It turns out that most trainers report that they know what GBL is and gamification. It was verified that some trainers know what GBL is, but could not define gamification, not establishing a relationship between the two concepts.

The last question of the survey approaches the relation between GBL and gamification, reason why we will occupy more ahead on this report.

In all three dimensions – students' learning, involvement and assessment - there is a definite option for the use of games designed for educational and learning purposes since these are the ones that best support learning, involvement and assessment.

It is also worth mentioning the use of software for learners to create their games. Concerning evaluation, there is uncertainty, or lack of knowledge, about how games can contribute to this educational dimension.

As a final remark, the results of this research constitute the base of the development of a Training Course for Trainers regarding Game-Based Learning & Gamification.

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