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## **The list of stakeholders formed based on the group work**

1. Primary school teachers
2. secondary school teachers
3. students (of the programs being modernized in the project)
4. parents
5. Pedagogical Institute (applicable for Bosnia and Herzegovina; don't know if other countries have these)
6. Ministry of Education (Tunisian Universities differentiate between Ministry of Education and Ministry of Higher Education; then there will be 2 stakeholders in their case)
7. IT industry / game developers
8. School administration

Two suggestions mentioned during the group work (language centers and medical authorities) are said to be considered for sustainability and dissemination.

## Survey of stakeholders on serious games and opportunities to apply game-based learning

### TEACHERS

I am:

- ☐ Female
- ☐ Male

My area of expertise is:

- ☐ Classroom teaching
- ☐ Social sciences
- ☐ Humanities
- ☐ ICT
- ☐ Other (please write)

How long have you worked in education sector?

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-10 years
- ☐ more than 10 years

### COMPONENT 1: knowledge & skills

I use available digital materials in my work. YES/NO

I create digital content for my work. YES/NO

I know how to create and edit videos. YES/NO

I know how to add sounds, graphics and narration to videos using simple and effective tools like Microsoft Photos, Weebly or Canva. YES/NO

I know how to create Infographics templates (charts, tables and charts). YES/NO

If you use other tools (not mentioned here), please write.

I am already familiar with the term 'game-based learning'. YES/NO

I use game-based learning in my work simply as means of creating games for students to play (e.g. as a warm-up activity).

I use game-based learning to combine the fun of games with specific learning goals.

I use game-based learning to present new course content in my subject.

I turn my students into co-designers of game-like activities.

I can determine what content is being taught through a game.

I can repurpose an existing game for educational use.

I can find relevant pedagogical solutions in serious game design, e.g. aligning the game's learning objective(s) with the curriculum.

I can adapt my teaching style to different learners in a game-based learning classroom.

I am comfortable with using digital games in my classroom.

## COMPONENT 2: Opinions and attitudes

Digital technology is simply a new tool to be used with traditional teaching methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Innovative digital technologies will fundamentally change literacy teaching (information literacy, visual literacy, media literacy, technological literacy).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

It is important to adapt the choice of digital materials according to the simplicity, i.e. the level of the students (classroom teaching, subject teaching, high school).

- ☐ Strongly Disagree

- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching increases students' interest in exploring new ideas.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in class facilitates discussions on topics.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Using digital materials in class makes abstract or conceptual content more understandable.

- ☐ Strongly Disagree
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- ☐ Strongly Agree

The use of digital materials in teaching improves the interest, attention and motivation of the "digital generation".

- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Strongly Agree

The use of digital materials in teaching improves problem-solving skills.

- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Strongly Agree

The inertia of changes in our teaching practice is an obstacle to the use of digital technologies.

- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Agree
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Professional training would contribute to my knowledge and greatly help me to use some of the digital tools to facilitate the achievement of educational outcomes for students.

- ☐ Strongly Disagree
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Game-based learning is an effective educational approach .

- ☐ Strongly Disagree
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The development of “serious games” is challenging educators to rethink the role of information, tools, and aesthetics in a digital age.

- ☐ Strongly Disagree
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Game-based learning can enhance learner's creativity.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based learning can enhance learner's digital literacy.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based learning can enhance learner's critical thinking.

- ☐ Strongly Disagree
- ☐ Disagree
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Game-based learning can enhance learner's problem-solving skills.

- ☐ Strongly Disagree
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Game-based learning can enhance learner's social and emotional skills.

- ☐ Strongly Disagree
- ☐ Disagree
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Game-based learning can enhance learner's factual and procedural knowledge.

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Outdated and non-flexible curriculum is an obstacle to applying game-based learning in my work.

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Limited funding is an obstacle to applying game-based learning in my work.

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Inadequate facilities is an obstacle to applying game-based learning in my work.

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Limited access to technology and internet is an obstacle to applying game-based learning in my work.

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Shortage of qualified trainers is an obstacle to applying game-based learning in my work.

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Lack of technology skills is an obstacle to applying game-based learning in my work.

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Lack of professional development on current trends in education (such as game-based learning) is an obstacle to applying game-based learning in my work.

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Limited access to specialized game-based learning software is an obstacle to applying game-based learning in my work.

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Inadequate support and supervision is an obstacle to applying game-based learning in my work.

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- Strongly Agree

Lack of student motivation to participate is an obstacle to applying game-based learning in my work.

- Strongly Disagree
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**Open-ended questions:**

What are possible obstacles of using digital technologies in your work? What would be possible solutions to overcoming these? *(please write)*

The content of my course is suitable for a game-based assessment. *(please write)*

If the game is simple enough to play (without questioning its effectiveness to test the learning objective), would you incorporate it in your course? *(please write)*

Would further strengthening of your IT skills make you more comfortable in incorporating game-based learning in your work? *(please write)*



**Survey of stakeholders on serious games and opportunities  
to apply game-based learning**

**A school administration**

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**COMPONENT 1: knowledge & skills (of technology, game-based learning)**

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## **COMPONENT 2: Opinions and attitudes**

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The use of digital materials in teacher training improves overall skills (presentation skills, reflection skills, language skills, higher level thinking skills, social skills and artistic skills)

- ☐ Strongly Disagree

- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
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The use of digital materials in teacher training suits students with different learning styles.

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The use of digital materials in teacher training encourages cooperation when working in groups.

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The use of digital materials in teacher training provides a strong foundation for many different types of literacy, including information literacy, visual literacy, technology literacy, and media literacy.

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High-quality trainings in game-based learning would encourage experimentation and foster collaboration within my institution to integrate technology into the curriculum.

- ☐ Strongly Disagree
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The current curriculum does not integrate technology enough to improve future teachers' ability to effectively use digital tools and resources to support teaching and learning.

- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Agree
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I believe that game-based learning in higher education will be an important teaching tool in years to come.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Mastering the strategies of game-based teaching would make future teachers more competitive on labour market.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Serious games would help promote human rights, democracy, and social cohesion in my institution.

- ☐ Strongly Disagree
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## Survey of stakeholders on serious games and opportunities to apply game-based learning

### university professors

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## **COMPONENT 2: Opinions and attitudes**

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- ☐ Disagree
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- ☐ Agree
- ☐ Strongly Agree

The current curriculum does not integrate technology enough to improve future teachers' ability to effectively use digital tools and resources to support teaching and learning.

- ☐ Strongly Disagree
- ☐ Disagree

- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

I believe that game-based learning in higher education will be an important teaching tool in years to come.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Mastering the strategies of game-based teaching would make future teachers more competitive on labour market.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Serious games would help promote human rights, democracy, and social cohesion in my institution.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

### Open-ended questions:

What are possible obstacles of using digital technologies in your work? What would be possible solutions to overcoming these? *(please write)*

The content of my course is suitable for a game-based assessment. *(please write)*

If the game is simple enough to play (without questioning its effectiveness to test the learning objective), would you incorporate it in your course? *(please write)*

Would further strengthening of your IT skills make you more comfortable in incorporating game-based learning in your work? *(please write)*



## Survey of stakeholders on serious games and opportunities to apply game-based learning

### STUDENTS

I am:

- ☐ Female
- ☐ Male

I am a student of:

- ☐ Classroom teaching
- ☐ Social sciences
- ☐ Humanities
- ☐ ICT
- ☐ Other (please write)

### COMPONENT 1: knowledge & skills (of technology, game-based learning)

I use available digital materials in my work. YES/NO

I create digital content for my work. YES/NO

I know how to create and edit videos. YES/NO

I know how to add sounds, graphics and narration to videos using simple and effective tools like Microsoft Photos, Weebly or Canva. YES/NO

I know how to create Infographics templates (charts, tables and charts). YES/NO

If you use other tools (not mentioned here), please write.

I am already familiar with the term 'game-based learning'. YES/NO

### COMPONENT 2: Opinions and attitudes

I understand the content of an academic course better when the professor presents it using digital materials.

- ☐ Strongly Disagree
- ☐ Disagree

- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

I create game-like activities or game-based learning apps as part of my course assignments.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

I wish I have (more) opportunities to learn using game approach.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

As a future teacher, I would feel more confident if I learned to design digital projects using effective techniques and methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Improved digital skills increase employment opportunities, improve competitiveness on the job market and career prospects.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based activities would increase my motivation and creativity in classes.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based activities would improve my social and emotional skills through group work.

- ☐ Strongly Disagree
- ☐ Disagree

- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Educational games could help me to think critically.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Points-based incentive system in games would be a contributing factor to continuous learning.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

It is necessary for future teachers to prepare their own project during the academic course in order to be ready for the effective application of innovative digital techniques in their work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

### Open-ended questions:

What are possible obstacles of using digital technologies in your work? What would be possible solutions to overcoming these? *(please write)*

The content of my course is suitable for a game-based assessment. *(please write)*

If the game is simple enough to play (without questioning its effectiveness to test the learning objective), would you incorporate it in your course? *(please write)*

Would further strengthening of your IT skills make you more comfortable in incorporating game-based learning in your work? *(please write)*



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## Survey of stakeholders on serious games and opportunities to apply game-based learning

### PARENTS

I am already familiar with the term 'game-based learning'. YES/NO

I am comfortable with children using digital technologies in classrooms. (*please write*)

Digital technology is simply a new tool to be used with traditional teaching methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Innovative digital technologies will fundamentally change literacy teaching (information literacy, visual literacy, media literacy, technological literacy).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching increases students' interest in exploring new ideas.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves the interest, attention and motivation of the "digital generation".

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves problem-solving skills.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree

- Strongly Agree

Game-based learning is an effective educational approach .

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's creativity.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's digital literacy.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's critical thinking.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's problem-solving skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's social and emotional skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Improved digital skills increase employment opportunities, improve competitiveness on the job market and career prospects.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Using digital technologies would improve my child's motivation for learning.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Using digital technologies would enable my child to acquire knowledge more quickly.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

It would be easy for my child to become skillful in using AI for school tasks. *(please write)*

Using serious games would improve my child's performance in school. *(please write)*



## Survey of stakeholders on serious games and opportunities to apply game-based learning

### Pedagogical Institute

I am:

- ☐ Female
- ☐ Male

My area of expertise is:

- ☐ Classroom teaching
- ☐ Social sciences
- ☐ Humanities
- ☐ ICT
- ☐ Other (please write)

How long have you worked in education sector?

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-10 years
- ☐ more than 10 years

### COMPONENT 1: knowledge & skills (of technology, game-based learning)

I use available digital materials in my work. YES/NO

I create digital content for my work. YES/NO

I know how to create and edit videos. YES/NO

I know how to add sounds, graphics and narration to videos using simple and effective tools like Microsoft Photos, Weebly or Canva. YES/NO

I know how to create Infographics templates (charts, tables and charts). YES/NO



If you use other tools (not mentioned here), please write.

I am already familiar with the term 'game-based learning'. YES/NO

## **COMPONENT 2: Opinions and attitudes**

Digital technology is simply a new tool to be used with traditional teaching methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Innovative digital technologies will fundamentally change literacy teaching (information literacy, visual literacy, media literacy, technological literacy).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

It is important to adapt the choice of digital materials according to the simplicity, i.e. the level of the students (classroom teaching, subject teaching, high school).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching increases students' interest in exploring new ideas.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in class facilitates discussions on topics.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Using digital materials in class makes abstract or conceptual content more understandable.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves the interest, attention and motivation of the "digital generation".

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves problem-solving skills.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The inertia of changes in our teaching practice is an obstacle to the use of digital technologies.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Professional training would contribute to my knowledge and greatly help me to use some of the digital tools to facilitate the achievement of educational outcomes for students.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based learning is an effective educational approach .

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The development of “serious games” is challenging educators to rethink the role of information, tools, and aesthetics in a digital age.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's creativity.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's digital literacy.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's critical thinking.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's problem-solving skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's social and emotional skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's factual and procedural knowledge.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Outdated and non-flexible curriculum is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited funding is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate facilities is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited access to technology and internet is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Shortage of qualified trainers is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of technology skills is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of professional development on current trends in education (such as game-based learning) is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited access to specialized game-based learning software is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate support and supervision is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of student motivation to participate is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teacher training improves overall skills (presentation skills, reflection skills, language skills, higher level thinking skills, social skills and artistic skills)

- ☐ Strongly Disagree

- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teacher training suits students with different learning styles.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teacher training encourages cooperation when working in groups.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teacher training increases students' interest in researching new ideas.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teacher training provides a strong foundation for many different types of literacy, including information literacy, visual literacy, technology literacy, and media literacy.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

High-quality trainings in game-based learning would encourage experimentation and foster collaboration within my institution to integrate technology into the curriculum.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The current curriculum does not integrate technology enough to improve future teachers' ability to effectively use digital tools and resources to support teaching and learning.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

I believe that game-based learning in higher education will be an important teaching tool in years to come.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
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Mastering the strategies of game-based teaching would make future teachers more competitive on labour market.

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- ☐ Disagree
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Serious games would help promote human rights, democracy, and social cohesion in my institution.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

## **Survey of stakeholders on serious games and opportunities to apply game-based learning**

### **Ministry of Education representatives**

I am:

- ☐ Female
- ☐ Male

My area of expertise is:

- ☐ Classroom teaching
- ☐ Social sciences
- ☐ Humanities
- ☐ ICT
- ☐ Other (please write)

How long have you worked in education sector?

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-10 years
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### **COMPONENT 1: knowledge & skills (of technology, game-based learning)**

I use available digital materials in my work. YES/NO

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If you use other tools (not mentioned here), please write.

I am already familiar with the term 'game-based learning'. YES/NO

## **COMPONENT 2: Opinions and attitudes**

Digital technology is simply a new tool to be used with traditional teaching methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
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- ☐ Agree
- ☐ Strongly Agree

It is important to adapt the choice of digital materials according to the simplicity, i.e. the level of the students (classroom teaching, subject teaching, high school).

- ☐ Strongly Disagree
- ☐ Disagree
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The use of digital materials in teaching increases students' interest in exploring new ideas.

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- ☐ Disagree
- ☐ Neither Agree nor Disagree
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- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Agree
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The inertia of changes in our teaching practice is an obstacle to the use of digital technologies.

- ☐ Strongly Disagree
- ☐ Disagree
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- ☐ Strongly Disagree
- ☐ Disagree
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Game-based learning is an effective educational approach .

- ☐ Strongly Disagree
- ☐ Disagree
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The development of “serious games” is challenging educators to rethink the role of information, tools, and aesthetics in a digital age.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
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- ☐ Strongly Agree

Game-based learning can enhance learner's creativity.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based learning can enhance learner's digital literacy.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
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Game-based learning can enhance learner's critical thinking.

- ☐ Strongly Disagree
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- ☐ Disagree
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Game-based learning can enhance learner's factual and procedural knowledge.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Outdated and non-flexible curriculum is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited funding is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate facilities is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited access to technology and internet is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
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Shortage of qualified trainers is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of technology skills is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
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Limited access to specialized game-based learning software is an obstacle to applying game-based learning in my work.

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- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate support and supervision is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of student motivation to participate is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
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The use of digital materials in teacher training improves overall skills (presentation skills, reflection skills, language skills, higher level thinking skills, social skills and artistic skills)

- ☐ Strongly Disagree
- ☐ Disagree
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The use of digital materials in teacher training suits students with different learning styles.

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- ☐ Strongly Agree

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- ☐ Strongly Agree

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- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

High-quality trainings in game-based learning would encourage experimentation and foster collaboration within my institution to integrate technology into the curriculum.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree

- Strongly Agree

The current curriculum does not integrate technology enough to improve future teachers' ability to effectively use digital tools and resources to support teaching and learning.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

I believe that game-based learning in higher education will be an important teaching tool in years to come.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Mastering the strategies of game-based teaching would make future teachers more competitive on labour market.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Serious games would help promote human rights, democracy, and social cohesion in my institution.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

## Survey of stakeholders on serious games and opportunities to apply game-based learning

IT industry / game developers

I am:

- ☐ Female
- ☐ Male

How long have you worked in the ICT sector?

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-10 years
- ☐ more than 10 years

I am already familiar with the term 'game-based learning'. YES/NO

I create game-like activities or game-based learning apps as part of my course assignments.  
YES/NO

### COMPONENT 2: Opinions and attitudes

Digital technology is simply a new tool to be used with traditional teaching methods.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Innovative digital technologies will fundamentally change literacy teaching (information literacy, visual literacy, media literacy, technological literacy).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree



It is important to adapt the choice of digital materials according to the simplicity, i.e. the level of the students (classroom teaching, subject teaching, high school).

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching increases students' interest in exploring new ideas.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in class facilitates discussions on topics.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Using digital materials in class makes abstract or conceptual content more understandable.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves the interest, attention and motivation of the "digital generation".

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

The use of digital materials in teaching improves problem-solving skills.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Game-based learning is an effective educational approach .

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's creativity.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's digital literacy.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's critical thinking.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's problem-solving skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's social and emotional skills.

- Strongly Disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

Game-based learning can enhance learner's factual and procedural knowledge.

- Strongly Disagree

- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Outdated and non-flexible curriculum is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited funding is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate facilities is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited access to technology and internet is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Shortage of qualified trainers is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of technology skills is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree

- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of professional development on current trends in education (such as game-based learning) is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Limited access to specialized game-based learning software is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Inadequate support and supervision is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Lack of student motivation to participate is an obstacle to applying game-based learning in my work.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

I believe that game-based learning in higher education will be an important teaching tool in years to come.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Mastering the strategies of game-based teaching would make future teachers more competitive on labour market.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Serious games would help promote human rights, democracy, and social cohesion in my institution.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

Improved digital skills increase employment opportunities, improve competitiveness on the job market and career prospects.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neither Agree nor Disagree
- ☐ Agree
- ☐ Strongly Agree

### **Open-ended questions:**

Using serious games would improve my child's performance in school. *(please write)*

What are possible obstacles of using digital technologies in educational purposes? What would be possible solutions to overcoming these? *(please write)*

The content of what course is best suitable for a game-based assessment? *(please write)*