ByDefault – Project Outcomes – Pilot Education and Assessment

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Head of Research

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Phases of pilot education

- **Phase A**: Training teachers
- **Phase B:** “Playing” in the classrooms
- Evaluation of the educational activity

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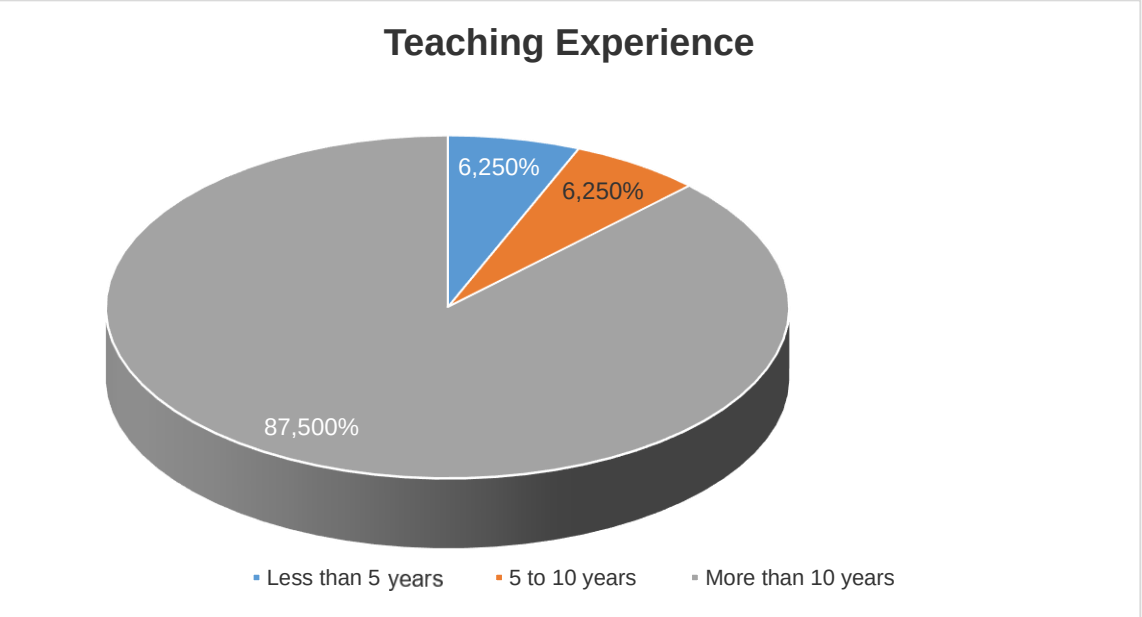
Pilot education - Phase A (February 2024)

Training teachers

- Participants: 16 schools (teachers)
- February 15th, 2024: A four-hour online workshop aimed at familiarizing teachers with key aspects:
  - Introduction to good practices for personal data protection.
  - Introduction to the Tzimanious game
  - Discussion of organizational considerations for implementing the game in the classroom.

The workshop also included a dedicated session for questions and answers.



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Effectiveness of the training

What the teachers said about the training

Statement	1	2	3	4	5
How useful are the new knowledge and skills you have acquired from your participation in the seminar?	0,00%	0,00%	18,75%	12,50%	68,75%
How enlightening were the tools used by the trainers (slides--examples)?	0,00%	0,00%	12,50%	18,75%	68,75%
To what extent were the trainers able to communicate their knowledge?	0,00%	0,00%	12,50%	6,25%	81,25%
Was the digital infrastructure (platform) used for the seminar satisfactory?	0,00%	6,25%	6,25%	0,00%	87,50%
How appropriate was the duration of the training seminar?	6,25%	0,00%	12,50%	25,00%	56,25%
Did the individual modules complement each other?	0,00%	0,00%	6,25%	25,00%	68,75%
Was the content of the training seminar appropriate for achieving its objectives?	0,00%	0,00%	12,50%	6,25%	81,25%
How clear were the objectives of the training seminar?	0,00%	0,00%	6,25%	12,50%	81,25%

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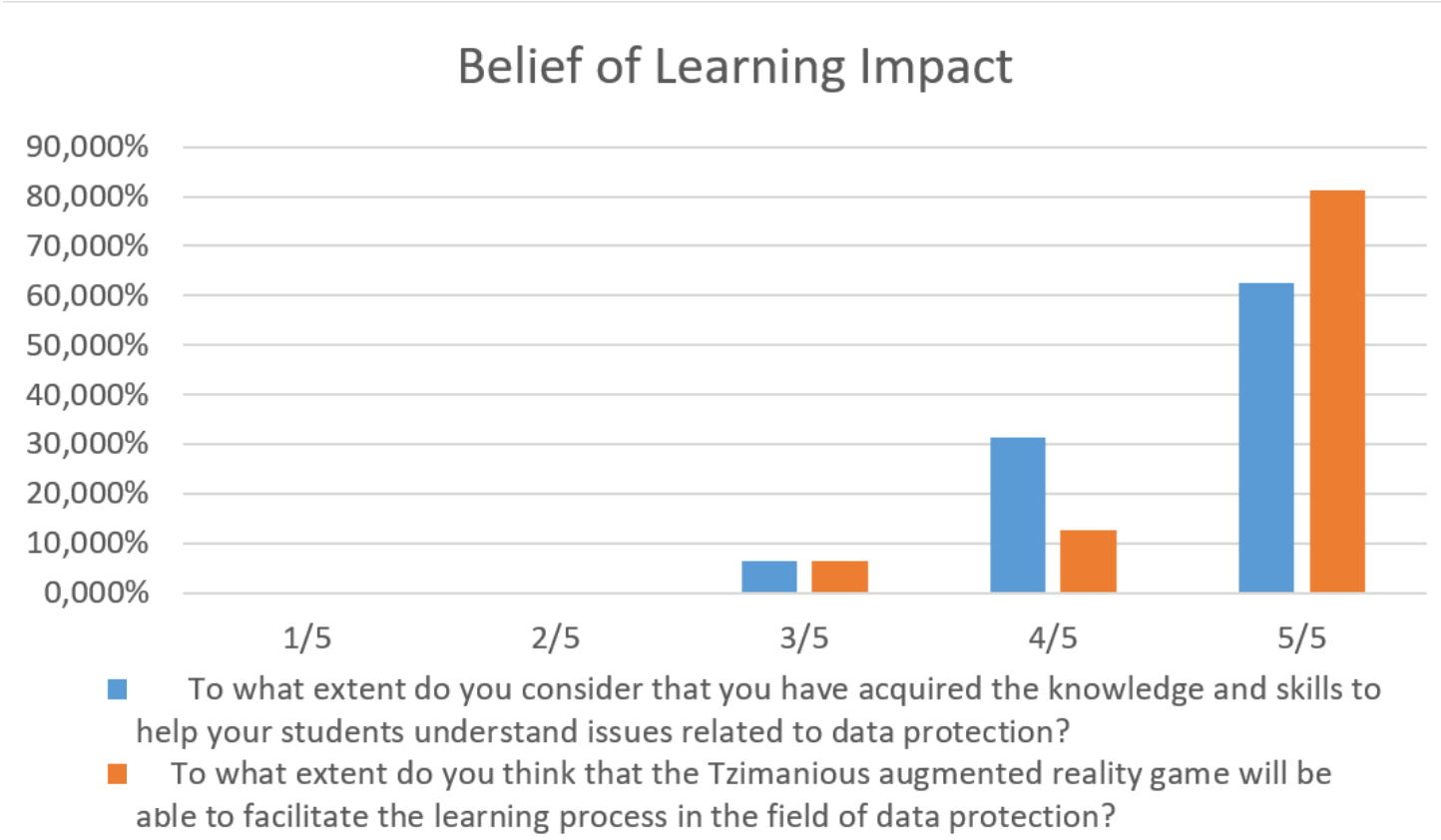
Effectiveness of the training

What the teachers believe on the learning impact



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Effectiveness of the training

What the teachers believe on quality dimensions of the Tzimanious

	1	2	3	4	5	6	7	8	9	10
Purpose and objectives of the game	0,0%	0,0%	0,0%	7,14%	0,0%	0,0%	0,0%	35,71%	14,29%	42,86%
Content of the game	0,0%	0,0%	0,0%	7,14%	0,0%	0,0%	0,0%	21,43%	28,57%	42,86%
Duration of the game play	0,0%	0,0%	0,0%	7,14%	0,0%	0,0%	0,0%	21,43%	21,43%	50,00%
Organisation of the game and supportive material	0,0%	0,0%	0,0%	7,14%	0,0%	0,0%	0,0%	7,14%	0,00%	85,71%

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Pilot education – Phase B (March 2024)

In the classrooms…
How many? Which type?

- An open call addressed to public and private schools throughout the Hellenic territory
- Initially: 11 schools
- 2 schools withdrew their corresponding applications due to internal organizational issues
- Finally: 9 schools
  - 7 in the public sector
  - 2 in the private sector

Actual Implemetation (Grade)				
	STUDENTS	CLASSROOMS	STUDENTS (%)	CLASSROOMS (%)
Primary School	114	6	21,39%	25,00%
Secondary School	298	13	55,91%	54,17%
High School - Lyceum	121	5	22,70%	20,83%
Total	533	24		

Actual Implemetation (Public/ Private)				
	STUDENTS	CLASSROOMS	STUDENTS (%)	CLASSROOMS (%)
Public	458	21	85,93%	87,50%
Private	75	3	14,07%	12,50%
Totals	533	24		

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Pilot education – Phase B (March 2024)

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How many? Which type? Where?

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Actual Implemetation (region)				
	STUDENTS	CLASSROOMS	STUDENTS (%)	CLASSROOMS (%)
Attica	271	12	50,84%	50,00%
Southern Greece	169	7	31,71%	29,17%
Nothern Greece	67	3	12,57%	12,50%
Islands	26	2	4,88%	8,33%
Totals	533	24		

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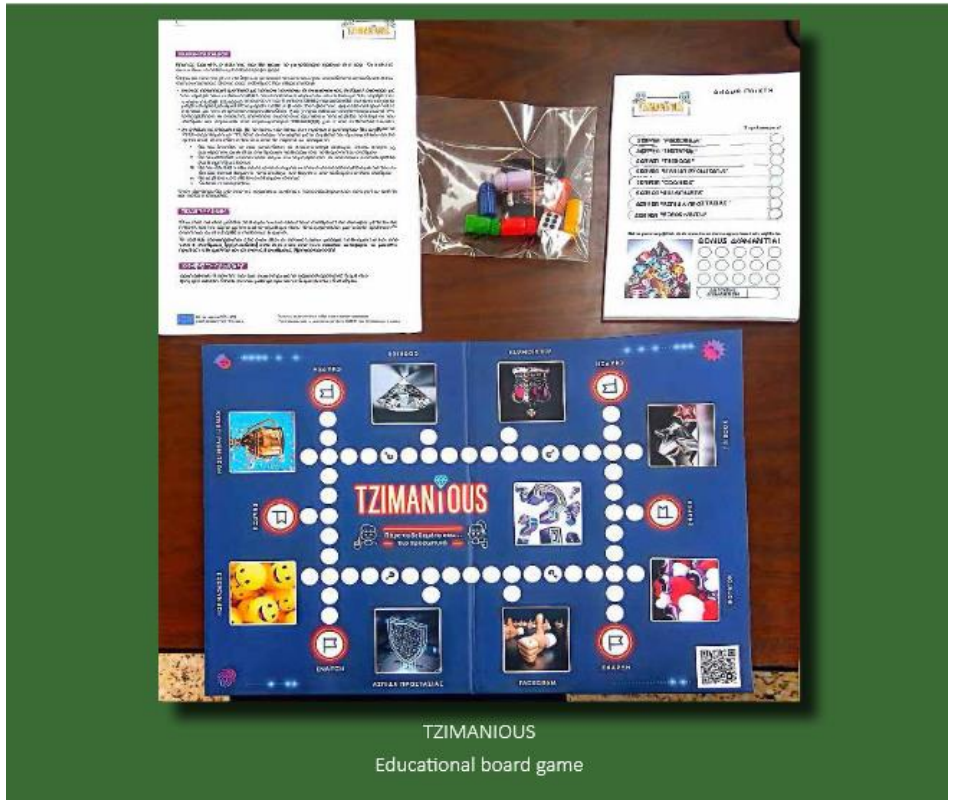
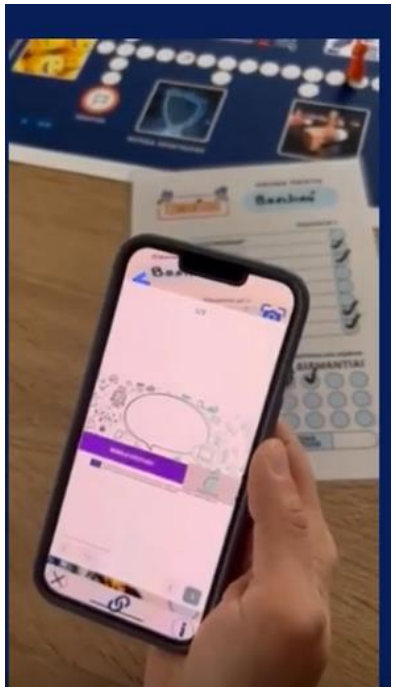
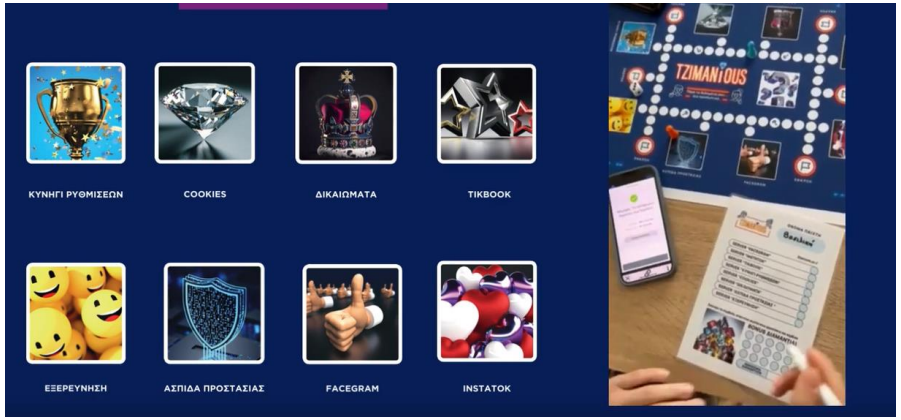
In the classrooms…



TZIMANIOUS
Educational board game



Mid-end March 2024…



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After the classrooms…

What the students said about the Tzimanious (responses from 440 students – 8 schools)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I felt confident that I could play the augmented reality game Tzimanious, without help.	5,23%	10,00%	19,55%	25,45%	39,77%
I needed help to understand the scenarios presented about data protection and privacy.	38,64%	25,45%	15,68%	10,23%	10,00%
I needed help to understand the instructions and functions of the game.	19,32%	29,09%	19,32%	20,91%	11,36%
I only needed a short time to learn and familiarize myself with the educational game.	2,73%	7,95%	16,14%	31,82%	41,36%
I found the Tzimanious augmented reality game easy to use.	2,73%	7,73%	17,05%	34,32%	38,18%

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After the classrooms…

What the students said about its practical value as an educational tool

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I feel like I gained a lot of knowledge by playing Tzimanious.	12,50%	12,05%	24,55%	25,45%	25,45%
I can, if asked, explain what I have learned about data protection and privacy.	6,82%	7,05%	15,91%	34,09%	36,14%
It was important to have the educational experience with the Tzimanious game.	6,82%	7,95%	25,45%	25,45%	34,32%
I understand the practical value of the educational game (i.e. that it is useful in our life issues).	7,05%	5,00%	15,23%	25,91%	46,82%

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After the classrooms…

What the students said about the learning experience

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I would like to use augmented reality games like Tzimanious in other courses.	7,73%	5,91%	14,32%	18,41%	53,64%
I would recommend the Tzimanious game to a classmate who wants to learn about data protection and privacy.	10,45%	9,32%	15,68%	23,64%	40,91%
I feel that this game can be useful for many students.	7,05%	5,23%	15,91%	25,00%	46,82%
Understanding issues about data protection and privacy through the Tzimanious scenarios was valuable for me.	7,05%	10,23%	24,55%	27,27%	30,91%
The Tzimanious augmented reality game helped me understand issues related to online data protection and privacy.	6,36%	7,27%	19,77%	30,00%	36,59%

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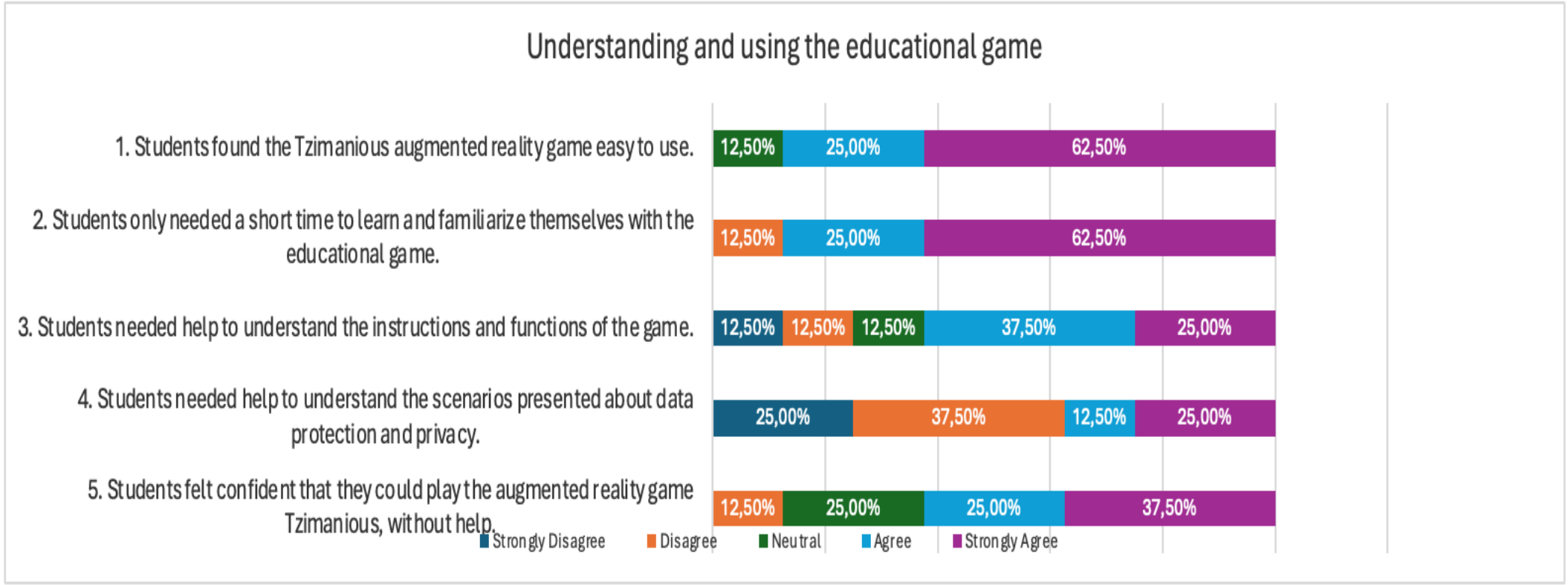
After the classrooms…

What the teachers said on the understanding and use of Tzimanious



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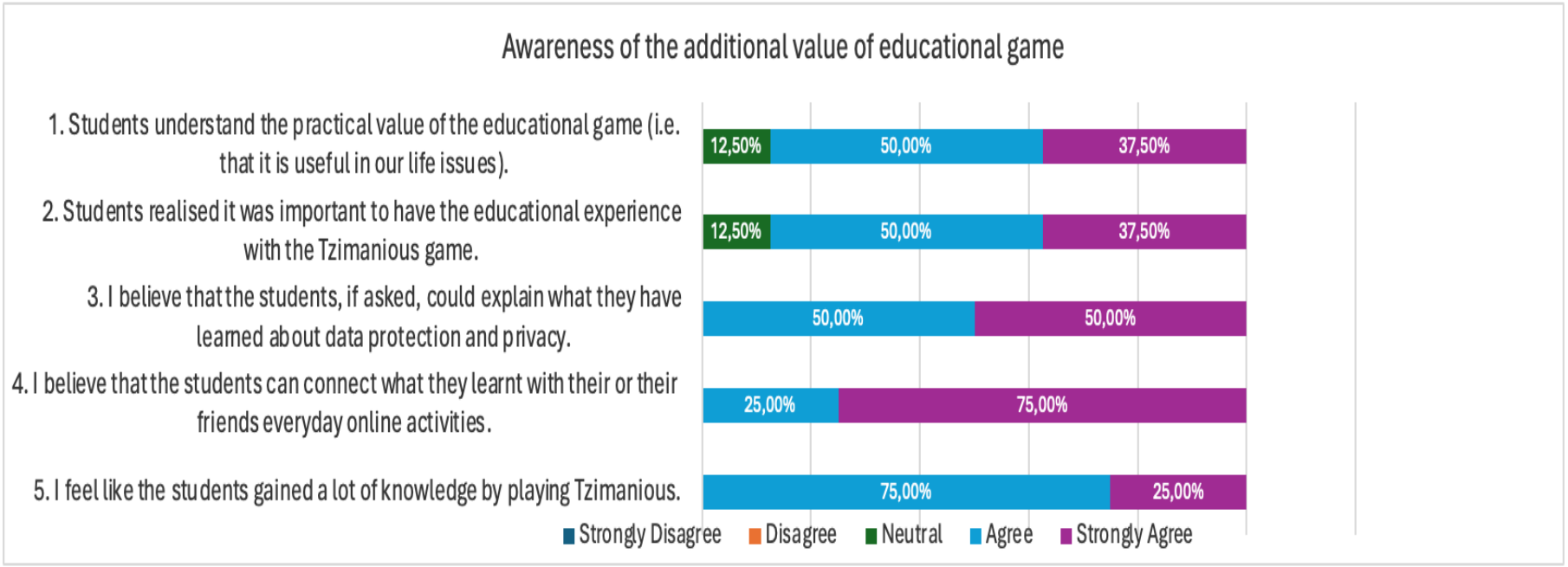

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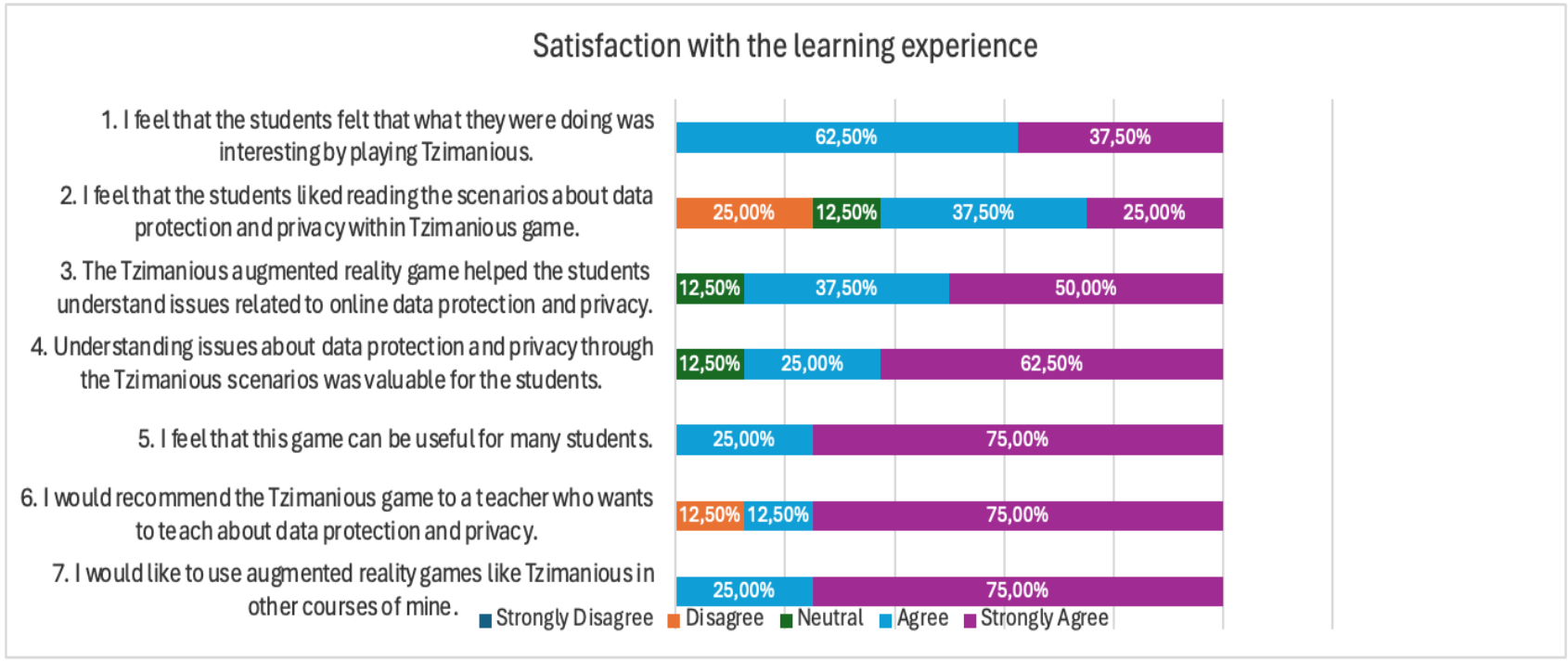
After the classrooms…

What the teachers said on their satisfaction with the learning experience



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Further discussion…

- *“If it were a simple table game I don't think they would show the same interest.”*
- *“I think they were a little bit more interested because it had something to do with situations essentially that for better or worse in their lives kids are constantly seeing with a cell phone in their hand or with personal data constantly being exposed.”*
- *“Well, in our case students were excited because, deliberately, I took them to a part of the school, the library that has work tables, not desks, and they felt like they were doing something extremely cool at work tables, sitting around, and they had the tablet in the middle.”*
- *“It shocked them that these were all true stories. I mean, they said, “yes this has happened and indeed the reaction was that”. More like they were left with something from what they saw in the presentation and then they identified it as having actually happened.”*

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Conclusions

- The careful design of the Tzimanious AR game, along with the training approach provided to teachers during Phase A, has played a pivotal role in the success of this educational activity.
- The overall impact of the developed learning approach has been profound in promoting children's understanding on the protection of personal data.
  - Students have not only gained valuable knowledge about data protection and privacy but have also developed critical thinking skills to navigate the digital landscape responsibly.
- The positive outcomes observed in this pilot study highlight the potential of AR technology as a powerful educational tool for promoting children's understanding on the protection of personal data.

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