

eLearning Motivation Across University and Rural Young Adults in Winnovators Space

Introduction

The aim of the **project Winnovators**

- Higher education (HEI) envisioned as sustainable education hubs.
- Collaboration between students and young women from vulnerable groups to foster STEAM, sustainability and entrepreneurship competencies for everyone involved.

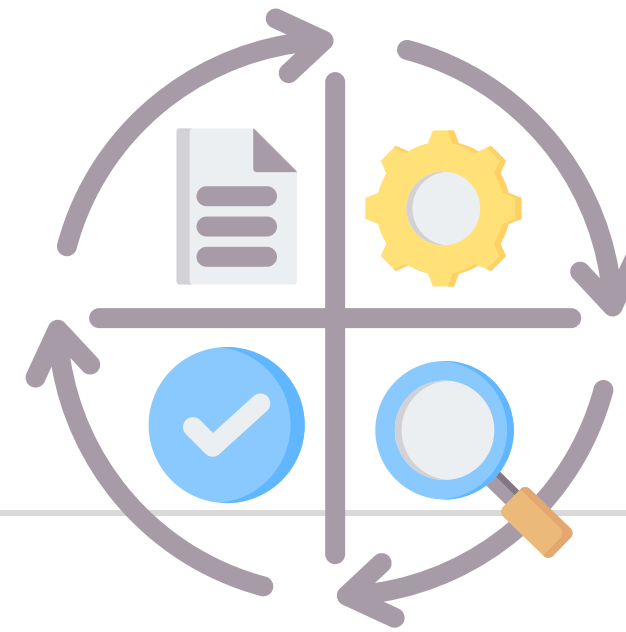
The goals of this **study**

- **Evaluation** of the *effectiveness* of gamification elements integrated within the Winnovators space to *enhance motivation and engagement* in capacity building activities.
- **Determine** *how* these elements and approaches *contributed to enhancing* the learning experience in a cross university-community collaborative educational setting.

Gamicication elements

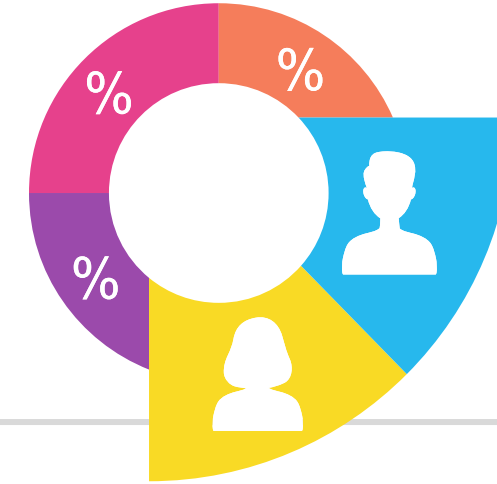
- Winnovators online learning platform
- Open Badges
- Winnovators competency framework (5 areas)
 - Learning to be
 - Learning to value
 - Learning to live and work together
 - Learning to understand and apply
 - Learning to empower
- 1 badge = 1 competence
- Participants can award badges to themselves and/or to others
- Open leaderboards
- Dashboard for displaying badges

Methodology



- Sample = 35 participants from Estonia, Serbia and Slovenia
- Data collected using online survey
- Qualitative and quantitative questions to ensure balanced data collection
 - Likert scale (from 1 - strongly disagree to 5 - strongly agree)
 - Open-ended questions to get detailed opinions
- The survey questions included:
 - General opinions on the use of badges to assess participants' overall attitudes towards badges
 - Motivational aspects to explore how badges influence engagement, collaboration, and learning
 - The process of awarding badges to self and others, emphasizing peer and self-assessment
 - Views on the use of leaderboards to track progress
 - The usefulness of reviewing all badges earned
- Ethical considerations
 - Informed consent
 - Right to withdraw from survey at any point

Demographics



- Country distribution: Estonia 6 (17%), Serbia 11 (31%), and Slovenia 18 (51%).
- Gender distribution: 85% women, 15% men, no 'other' selected, reflecting the program's focus but offering insights into gender diversity engagement among university participants.
- Residence varied: 29% from large cities, 17% suburbs/outskirts, 31% small towns, 17% villages, 6% countryside, highlighting diverse access to resources and opportunities.
- Age range: Majority 23-24 years (34%), followed by varied age groups, indicating the program's appeal across different life and career stages.
- Roles: 62% Change Agents (university students), 38% Winnovators (young women from vulnerable groups), showing the participation dynamics.

Results of the study



General Views on the use of badges

Data

Statement	Responses			Change Agents			Winnovators		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
I like being rewarded with badges for completing a general activity/challenge.	4,11	4,00	0,83	4,14	4,00	0,79	4,07	4,00	0,92
I like that the badges reflect the competences.	4,31	4,00	0,72	4,33	4,00	0,66	4,29	4,50	0,83
The type of the badge helps me recognize my strengths and the strengths of my co-participants.	4,23	4,00	0,88	4,14	4,00	0,91	4,36	5,00	0,84

Analysis

- Both Change Agents and Winnovators value badge rewards for achievements, highlighting its motivational effectiveness.
- Badges are positively viewed as competency indicators, with Winnovators showing a slightly higher preference.
- Both groups appreciate badges for recognizing personal and peer strengths, indicating a shared appreciation for the gamification system despite some diversity in opinions.
- Suggestions for improving the badge system include simplification, reducing frequency to prevent overload, and enhancing technical management for easier assignment.
- Participants desire broader recognition of achievements, suggesting a need for a balance between motivational impact and usability in the badge system.

The motivational and engagement aspects of badges

Data

<i>Statement</i>	<i>Responses</i>			<i>Change Agents</i>			<i>Winnovators</i>		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
Earning badges has increased my desire to learn.	3,23	3,00	1,14	3,29	3,00	1,10	3,14	3,00	1,23
The badges made me want to participate in the activities.	3,20	3,00	1,13	3,24	3,00	1,09	3,14	3,00	1,23

Analysis

- Badges moderately improved learning desire and activity participation among participants.
- The impact of badges was positive but not overwhelmingly significant.
- Diverse responses from the Winnovators group indicate a need for tailored badge strategies.

Awarding badges to others

Data

Statement	Responses			Change Agents			Winnovators		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
I like the possibility of awarding a badge to other participants.	4,03	4,00	0,98	4,19	4,00	0,81	3,79	4,00	1,19
Giving a badge to another participant improved our cooperation/relationship.	3,26	3,00	0,98	3,05	3,00	0,92	3,57	3,00	1,02

Analysis

- Participants, especially Change Agents, favor awarding badges to peers, though its impact on collaboration and relationships is moderately positive.
- The Winnovators group exhibited more diverse reactions, suggesting the need for personalized badge practices.
- Feedback calls for a more user-friendly system, including simplified badge awarding and clearer badge names, alongside addressing technical issues to enhance the feature's usability.

Awarding badges to oneself

Data

Statement	Responses			Change Agents			Winnovators		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
I like being able to award a badge to myself.	3,29	3,00	1,18	3,00	3,00	1,18	3,71	4,00	1,07
Giving myself a badge has helped me think about myself and thereby recognize my strengths.	3,29	3,00	1,02	3,10	3,00	1,00	3,57	3,50	1,02
Awarding a badge to myself has had a positive impact on my future work and learning.	3,17	3,00	1,01	2,95	3,00	0,97	3,5	3,00	1,02

Analysis

- Low enthusiasm for self-awarding badges among participants.
- High variability in responses indicates diverse opinions.
- Unfamiliarity with self-recognition and self-praise.
- Psychological barriers such as self-criticism and modesty are significant.
- Participants call for clear guidelines to ensure objectivity in self-awarding.

Leaderboards

Data

Statement	Responses			Change Agents			Winnovators		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
I have no problem with my score being visible to others on the leaderboard.	4,11	4,00	0,99	4,48	5,00	0,68	3,57	3,50	1,16
Comparing myself to others on the leaderboard encouraged me to work and learn even harder.	3,43	4,00	1,17	3,48	4,00	1,08	3,36	3,50	1,34
Leaderboard score influenced my cooperation and relationships with other participants.	2,89	3,00	1,13	2,9	3,00	1,14	2,86	3,00	1,17

Analysis

- Participants, especially university students, are generally comfortable with public leaderboards.
- Leaderboards have a modest positive effect on motivation.
- High variability in responses suggests diverse individual experiences with leaderboards.
- Leaderboards do not significantly influence collaboration or relationships among participants.

Badge View

Data

Statement	Responses			Change Agents			Winnovators		
	avg	med	std dev	avg	med	std dev	avg	med	std dev
I like the badge overview.	3,83	4,00	1,07	3,90	4,00	0,94	3,71	4,00	1,27
The badge overview provides a clear overview of the acquired badges.	4,06	4,00	0,87	4,19	4,00	0,87	3,86	4,00	0,86
The badge overview helped me identify the areas I need to work on.	3,97	4,00	0,79	4,00	4,00	0,77	3,93	4,00	0,83

Analysis

- Both groups generally like the badge overview, but enthusiasm varies.
- Winnovators show a wider range of opinions on badge effectiveness.
- Badge overviews are seen as clearer in showing competencies than individual badges.
- Both groups value badge overviews for identifying areas for improvement.



Conclusions

- Gamification elements in the Winnovators project were well received overall.
- Badges effectively reflected competencies but were less effective as motivational tools.
- Awarding badges to others was appreciated but didn't significantly enhance collaboration.
- Technical challenges and complexity were noted in the badge awarding system.
- Self-awarding badges faced skepticism due to unclear criteria and unfamiliarity.
- Despite potential concerns, leaderboards were accepted without negatively impacting motivation.
- The badge overview was valued for tracking progress and identifying learning needs.

References

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- 04** Saleem, A. N., Noori, N. M., & Ozdamli, F. (2022). Gamification applications in E-learning: A literature review. *Technology, Knowledge and Learning*, 27(1), 139-159.