

Course Expectations, Outcomes and Moodle Utilization

Pilot Evaluation Report

NextGen Entrepreneurs Pilot Course



Akademia WSB
WSB University

UNIVERSITATEA
ROMÂNIO-AMERICANĂ



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Agenda

- Purpose
- Pre-Course Expectations
- Post-Course Expectations
- Moodle Platform Usage & Results
- Conclusion

Purpose

Compare participant expectations before the course with their reported outcomes after completion.

- Analyze course data from two surveys distributed to participants across the four Higher Education Institutions (HEIs).
- Utilize data collected from the Moodle platform to assess engagement and utilization.

Survey	Participants	Observations
Pre-Course	166	Initial expectations
Post-Course	38	Feedback on outcomes

Pre-Course Expectations

The survey comprised two sections:

- Quantitative Questions: 15 questions rated on a scale of 1 (Disagree) to 10 (Totally Agree).
- Qualitative Questions: 2 open-response questions to capture specific learning goals.

Analysis techniques:

- ANOVA [comparison across institutions].
- Cluster analysis [expectation profiles].
- Discriminant analysis [validation of profiles].
- Structural equation modeling – SEM [testing some proposed relationships].

Pre-Course Expectations (Quantitative)

Rank	Expectation Statement	Average Score
1	I expect the instructor(s) to be knowledgeable and approachable.	8.14
2	I hope to develop new problem-solving and critical-thinking skills.	8.09
3	I aim to apply the knowledge gained from this course in practical or professional settings.	8.08
4	I expect this course to improve my knowledge and skills in the subject matter.	8.03
5	I expect the assessments to be fair and reflective of the course content.	7.95
6	I believe the course will provide sufficient resources and materials to support my learning.	7.90
7	I anticipate the course structure will be clear and well-organized.	7.88
8	I expect the course to cover topics that are relevant to current trends and real-world applications.	7.87
9	I expect the course to encourage active participation and engagement.	7.87
10	I anticipate a supportive and inclusive learning environment.	7.86
11	I expect to enhance my collaboration and teamwork abilities.	7.85
12	I believe I will have opportunities to interact and collaborate with other participants.	7.82
13	I feel confident that the course will meet my overall expectations.	7.75
14	I believe the course content will align with my learning objectives.	7.71
15	I am motivated to actively participate and engage in all course activities.	7.66

Pre-Course Expectations (by Institution)

Institution	Participants	Overall Average Expectation
RAU	14	9.03
ESTG	37	8.15
IAU	28	7.85
WSB	87	7.62
Total	166	7.92
6	I believe the course will provide sufficient resources and materials to support my learning.	7.90

Participants began the course with strong optimism, reflected in the high average score:

> Overall Average Expectation Score: 7.92/10.

Pre-Course Expectations (ANOVA)

Questions	F-value	Sig	Significant?
Q1 - I expect this course to improve my knowledge and skills in the subject matter.	2.623	0.052	No
Q2 - I am motivated to actively participate and engage in all course activities.	2.883	0.038	Yes
Q3 - I aim to apply the knowledge gained from this course in practical or professional settings.	2.943	0.035	Yes
Q4 - I hope to develop new problem-solving and critical-thinking skills.	3.852	0.011	Yes
Q5 - I expect to enhance my collaboration and teamwork abilities.	1.376	0.252	No
Q6 - I believe the course content will align with my learning objectives.	2.257	0.084	No
Q7 - I expect the course to cover topics that are relevant to current trends and real-world applications.	2.285	0.081	No
Q8 - I anticipate the course structure will be clearer and well-organized.	3.721	0.013	Yes
Q9 - I believe the course will provide sufficient resources and materials to support my learning.	2.453	0.065	No
Q10 - I expect the assessments to be fair and reflective of the course content.	1.313	0.272	No
Q11 - I anticipate a supportive and inclusive learning environment.	1.558	0.202	No
Q12 - I expect the instructor(s) to be knowledgeable and approachable.	3.506	0.017	Yes
Q13 - I believe I will have opportunities to interact and collaborate with other participants.	1.738	0.161	No

Q14 – I expect the course to encourage active participation and engagement.	2.305	0.079	No
Q15 – I feel confident that the course will meet my overall expectations.	2.097	0.103	No

Pre-Course Expectations (ANOVA)

Main Findings:

- Students from different universities do not perceive the course uniformly – Motivation (Q2), application of knowledge (Q3), problem-solving (Q4), course organization (Q8), and instructor quality are key dimensions of divergence (Q12).

Contribution:

- Highlights the need for harmonization across institutions.
- Indicates that motivation and applicability are stronger in some contexts than others.
- Provides evidence to adjust communication and teaching strategies to reduce perception gaps across partners.

Pre-Course Expectations (ANOVA)

Questions	Pairwise Comparison	Mean difference	Sig	Interpretation
Q2 – I am motivated to actively participate and engage in all course activities.	RAU vs. WSB	+ 1.704	0.046	RAU students are more motivated.
Q3 – I aim to apply the knowledge gained from this course in practical or professional settings.	RAU vs. WSB	+ 1.490	0.050	RAU students reveal stronger orientation to practice.
Q4 – I hope to develop new problem-solving and critical-thinking skills.	RAU vs. WSB	+ 1.836	0.007	RAU students reveal higher expectations for cognitive development.

Q8 – I anticipate the course structure will be clearer and well-organized.	RAU vs. IAU	+ 1.750	0.040	RAU students perceive greater clarity than the students from IAU, ESTG, and WSB.
	RAU vs. ESTG	+ 1.788	0.025	
	RAU vs. WSB	+ 1.905	0.006	
Q12 – I expect the instructor(s) to be knowledgeable and approachable.	ESTG vs. WSB	+ 1.033	0.039	ESTG students more positive about instructors.

Pre-Course Expectations (ANOVA)

Main Findings:

- RAU consistently shows higher expectations and stronger perceptions.
- WSB students demonstrate lower confidence in motivation, applicability, and structure.
- ESTG stands out positively in terms of perceived teaching quality.

Contribution:

- Confirms institutional differences in student perceptions, guiding where improvement is most needed.
- Shows that strengthening course communication and structure could reduce skepticism in institutions like WSB.
- Provides evidence for sharing best practices between partners [e.g., ESTG's strong teaching evaluations].

Pre-Course Expectations (Cluster Analysis)

Clusters	Number of Cases	Average Zscore	General Profile	Main Characteristics
Cluster 1	51	- 1.19 (approx.)	Reduced expectations	More skeptical students, with lower motivation, limited confidence in the relevance of the course, weaker perception of alignment with personal and professional goals, and doubts concerning the organization, resources, and overall impact of the course.
Cluster 2	115	+ 0.51 (approx.)	Positive expectations	Receptive and motivated students, who trust in the relevance and applicability of the course, value the expected quality of organization, resources, and teaching staff, and express confidence that the course will meet their educational objectives.

Main Findings:

- Cluster 1 shows consistently below-average expectations across all dimensions [reduced expectations] .
- Cluster 2 shows above-average expectations, reflecting motivation, trust in organization, and applicability [positive expectations].

HEI	Cluster 1 (Reduced expectations)	Cluster 2 (Positive Expectations)	Number of Students	Dominant Profile
IAU (Turkey)	10 (35.7%)	18 (64.3%)	28	Positive expectations (heterogeneous).
ESTG (Portugal)	6 (16.2%)	31 (83.8%)	37	Positive expectations (dominant).
RAU (Romania)	1 (7.1%)	13 (92.9%)	14	Positive expectations (almost homogenous).
WSB (Poland)	34 (39.1%)	53 (60.9%)	87	Positive expectations (significant skeptical minority).

Main Findings:

- Positive expectations dominate across all institutions.
- RAU and ESTG show very strong alignment [over 80% positive].
- IAU represents a mixed profile, reflecting heterogeneity.
- WSB has the highest proportion of skeptical students (39.1%).

Pre-Course Expectations (Cluster Analysis)

Analysis by clusters:

- Confirms two distinct student profiles: skeptical vs. receptive.
- Provides a diagnostic tool for tailoring interventions:
 - For Cluster 1 - increase communication, mentorship, and practical relevance.
 - For Cluster 2 - reinforce their motivation and support active engagement.

Analysis by institutions:

- Provides clearer institutional map of where skepticism is concentrated.
- Highlights opportunities for cross-institutional learning [e.g., RAU and ESTG approaches could inform IAU and WSB].
- Supports strategic adjustments for the scaling-up phase of the course.

Pre-Course Expectations (Discriminant Analysis)

Statistic	Result
Canonical correlation	0.881
Variance explained	77.6%
Wilks Lambda	0.224 ($p < 0.001$)
Classification accuracy	97.6% (original) / 95.2% (cross-validation)

Main Findings:

- The discriminant function strongly distinguishes between Cluster 1 and Cluster 2.
- Positive contributors to Cluster 2 [positive expectations]:
 - Alignment with objectives (Q6).
 - Inclusive environment (Q11).
 - Knowledge and skills (Q1).
 - Active participation (Q14).

Pre-Course Expectations (Discriminant Analysis)

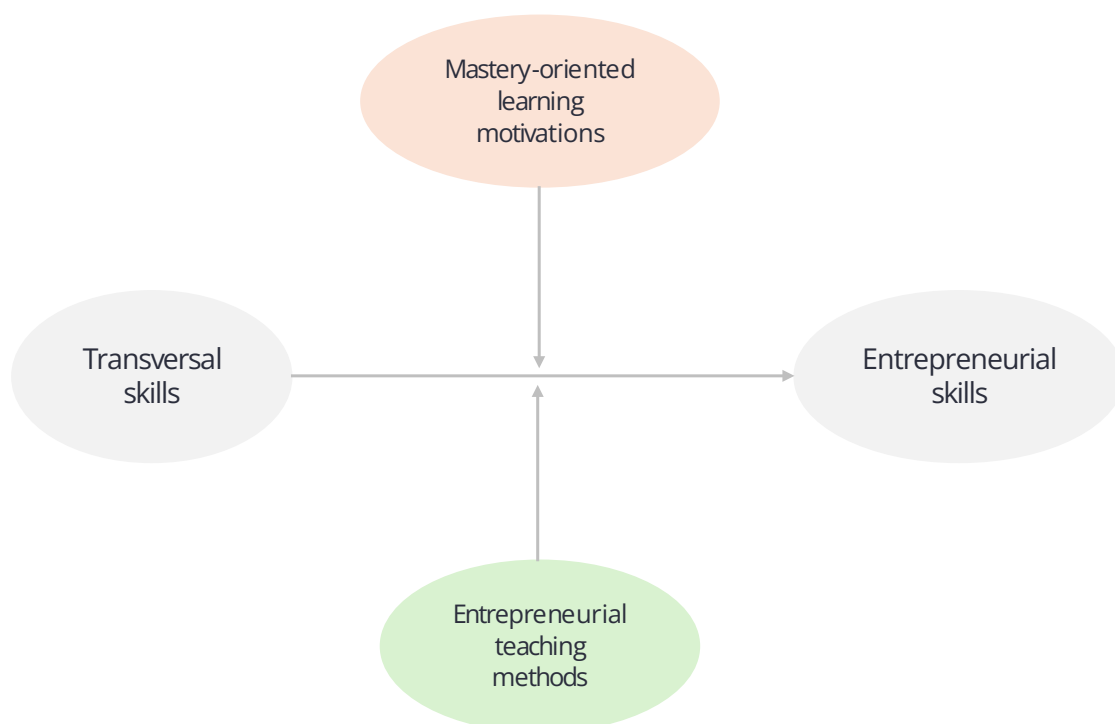
Main Findings:

- Negative contributors to Cluster 1 [reduced expectations]:
 - Relevance to real-world trends (Q7).
 - Course structure clarity (Q8)

Contribution:

- Validates that the two profiles are statistically robust and reliable.
- Identifies the critical dimensions to strengthen in future course editions – Structure clarity, real-world applicability, and communication of relevance.
- Reinforces the course's value in enhancing entrepreneurial mindset but also points to specific improvement levers.

Pre-Course Expectations (SEM)



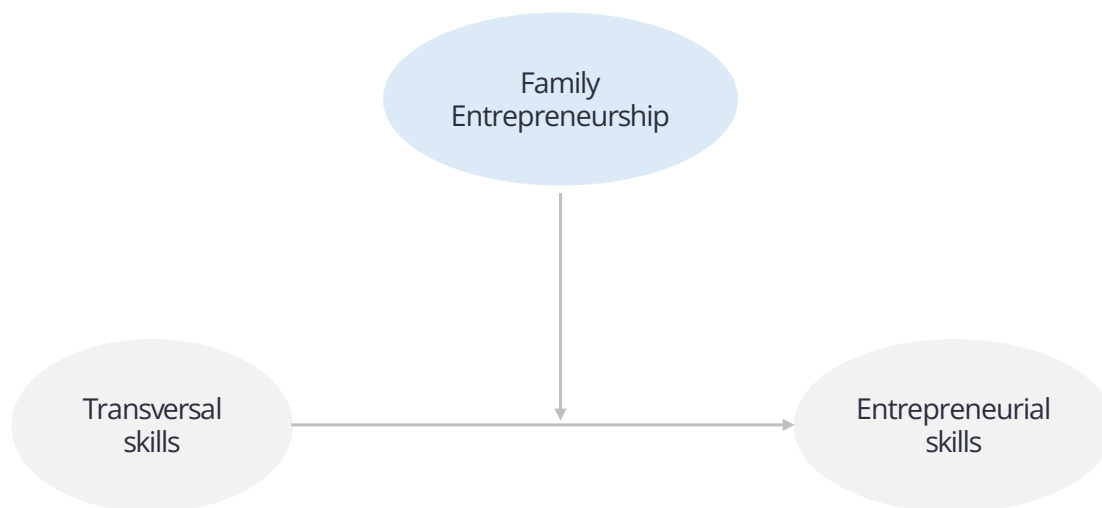
Pre-Course Expectations (SEM)

- Sample: 42 valid answers (Bachelor's Degree in Business Sciences, ESTG).
- Instrument: survey applied between February and June 2025.
 - Transversal skills: scale of 1 (strongly disagree) to 5 (strongly agree) adapted from Mioto et al. (2019).
 - Entrepreneurial skills: scale of 1 (strongly disagree) to 5 (strongly agree) adapted from Moberg et al. (2014).
 - Mastery-oriented learning motivations: scale of 1 (strongly disagree) to 5 (strongly agree) adapted from Vermunt and Donche (2017).
 - Entrepreneurship teaching methods: scale of 1 (0 hours) to 5 (more than 45 hours) adapted from Béchard and Grégoire (2005).

Pre-Course Expectations (SEM)

Effects	β (p-value)	Main Findings
Transversal Skills → Entrepreneurial Skills	0.682 (0.001)	Transversal skills are a strong predictor of entrepreneurial skills.
Mastery-Oriented Learning Motivations at +1 SD and Entrepreneurship Teaching Methods at +1 SD	0.625 (0.035)	Possible pedagogical saturation; high motivation reduces dependence on teaching methods.
Mastery-Oriented Learning Motivations at +1 SD and Entrepreneurship Teaching Methods at -1 SD	0.701 (0.047)	Motivated students can autonomously mobilize transversal skills even in traditional teaching settings.
Mastery-Oriented Learning Motivations at +1 SD and Entrepreneurship Teaching Methods at Mean	0.663 (0.013)	Balanced pedagogical conditions promote deep learning.
Mastery-Oriented Learning Motivations at -1 SD and Entrepreneurship Teaching Methods at +1 SD	0.662 (0.032)	Active methods compensate for low motivation, facilitating the conversion of transversal skills into entrepreneurial skills.
Mastery-Oriented Learning Motivations at -1 SD and Entrepreneurship Teaching Methods at -1 SD	0.738 (0.003)	Transversal skills demonstrate resilience, acting as transferable resources even without pedagogical or motivational stimuli.
Mastery-Oriented Learning Motivations at -1 SD and Entrepreneurship Teaching Methods at Mean	0.700 (0.000)	Moderated pedagogical frameworks ensure effective mobilization of skills.
Mastery-Oriented Learning Motivations at Mean and Entrepreneurship Teaching Methods at +1 SD	0.644 (0.024)	Experiential methods ensure engagement, though the impact is not maximized.
Mastery-Oriented Learning Motivations at Mean and Entrepreneurship Teaching Methods at -1 SD	0.720 (0.013)	Confirms the strength of transversal skills even under traditional pedagogies.
Mastery-Oriented Learning Motivations at Mean and Entrepreneurship Teaching Methods at Mean	0.682 (0.001)	Average conditions guarantee a stable and robust relationship.

Pre-Course Expectations (SEM)



Pre-Course Expectations (SEM)

Group	β (p-value)	R ²	Conclusion
Family entrepreneurs (n = 23)	0.918 (0.000)	84.3%	Students with family entrepreneurs demonstrate a stronger ability to translate transversal skills into entrepreneurial competence compared to their peers without family entrepreneurs.
Non-family entrepreneurs (n = 19)	0.697 (0.000)	48.5%	This suggests that exposure to entrepreneurial role models within the family context enhances students' ability to leverage transversal skills in entrepreneurial domains, reinforcing the role of social and experiential background in shaping entrepreneurial development.
Difference between groups	-0.221 (0.005)	-	The differences between both groups are statistically significant.

Main Findings:

- Family background strengthens the ability to mobilize transversal skills into entrepreneurial competences.

Pre-Course Expectations (SEM)



Pre-Course Expectations (SEM)

Group	β (p-value)	R ²	Conclusion
Urban (n = 17)	0.856 (0.000)	73.2%	Students from urban areas exhibit a stronger capacity to translate transversal skills into entrepreneurial competences compared to their peers from rural contexts.
Rural (n = 25)	0.778 (0.000)	60.6%	This suggests that the urban environment, typically characterized by broader access to networks, entrepreneurial initiatives, and innovation ecosystems, may enhance the effectiveness with which transversal skills are mobilized for entrepreneurial purposes. Conversely, students in rural areas may face contextual constraints that limit such opportunities, which can attenuate the strength of this relationship
Difference between groups	-0.077 (0.045)	-	The differences between both groups are statistically significant.

Main Findings:

- Urban contexts enhance opportunities to leverage transversal skills for entrepreneurship.

Pre-Course Expectations (SEM)

Recommendations:

- Educators must integrate transversal skills systematically and tailor pedagogies to student motivation.
- Students should invest in transversal skills as transferable and durable resources.
- Policymakers must prioritize transversal skills in curricula as strategic axis for employability and entrepreneurship.

Pre-Course Expectations (Qualitative Analysis)

Open-response questions revealed a clear focus:

- Entrepreneurship & Start-up Development.
- Critical Thinking & Problem-Solving.
- Leadership & Soft Skills [communication, negotiation].
- Teamwork & Collaboration in multicultural contexts.
- Business Strategy & Management.
- Innovation & Creative Thinking.

Pre-Course Expectations (Qualitative Analysis)



Pre-Course Expectations (Qualitative Analysis)

Most participants were enthusiastic and confident in the program.

- Over 80% of participants had no initial concerns.

Concern Category	Details
Practical Application	Desire for hands-on projects, case studies, and mentorship.
Course Logistics	Questions about workload and theory/practice balance. Feedback on outcomes.
Assessment	Questions about workload and theory/practice balance.
Language	A few non-native speakers mentioned potential language or comprehension challenges but remained optimistic.

Post-Course Expectations

The survey comprised two sections:

- Quantitative Questions: 18 questions rated on a scale of 1 (Disagree) to 10 (Totally Agree) to measure specific expectations.
- Qualitative Questions: 3 open-response questions to capture specific learning goals and concerns.

Analysis techniques:

- Quantitative analysis [descriptive].
- Qualitative analysis.
- Given the limited number of responses, it was not possible to apply the same statistical techniques that were used in the evaluation of pre-course expectations.

Post-Course Expectations (Quantitative)

Rank	Expectation Statement	Average Score
1	The instructor(s) were knowledgeable and approachable.	8.11
2	Overall, I am satisfied with my experience in this course.	7.82
3	I feel better prepared to address challenges related to the subject matter.	7.74
4	The course encouraged active participation and engagement.	7.66
5	The learning environment was supportive and inclusive.	7.58
6	I feel confident applying what I learned in practical or professional settings.	7.55
7	I gained new knowledge and skills relevant to the subject matter.	7.53
8	I would recommend this course to others.	7.53
9	The topics covered were up-to-date and applicable to real-world scenarios.	7.47
10	The assessments were fair and reflective of the course content.	7.42
11	My problem-solving and critical-thinking skills improved during the course.	7.39
12	I enhanced my ability to collaborate and work effectively in a team.	7.39
13	I had sufficient opportunities to interact and collaborate with other participants.	7.39
14	The provided resources and materials supported my learning effectively.	7.34
15	This course inspired me to pursue further learning or development in this area.	7.32
16	This course met my initial expectations.	7.29
17	The course structure was clear and well-organized.	7.29
18	The course content was relevant and aligned with my learning objectives.	7.13

Post-Course Expectations (by Institution)

Institution	Participants	Overall Average Expectation
RAU	4	8.83
ESTG	13	7.34
WSB	21	7.31
IAU	0	-
Total	38	7.53

Participants began the course with strong optimism, reflected in the high average score:

> Overall Average Expectation Score: 7.53/10.

Post-Course Expectations (Qualitative Analysis)

<p>Strengths</p> <p>Active participation, deep engagement.</p> <p>Interdisciplinary collaboration.</p> <p>Development of creativity, teamwork, entrepreneurial mindset.</p> <p>Reflective learning and feedback loops.</p>	<p>Weaknesses</p> <p>Resistance to self-directed learning.</p> <p>High instructor involvement.</p> <p>Difficulties in assessing group vs. individual contributions.</p> <p>Variability in prior knowledge affects dynamics.</p>
<p>Opportunities</p> <p>Adaptable across disciplines.</p> <p>Alignment with international goals.</p> <p>Hybrid models enhance flexibility.</p> <p>Instructors gain interdisciplinary teaching skills.</p>	<p>Threats</p> <p>Unequal access to digital tools.</p> <p>Motivation gaps among students.</p> <p>Large groups may dilute learning outcomes.</p> <p>Misalignment with institutional policies.</p>

Post-Course Expectations (Qualitative Analysis)

Most Valuable Aspects:

1. Hands-on Learning & Practical Application:

- Structured frameworks - Theory of Change, Business Model Canvas, Design Thinking).
- Creativity techniques - Six Thinking Hats.

2. Key Skill Development:

- Leadership & Teamwork.
- Focus on Sustainability & Green Economy.
- Peer interaction & real-world problem-solving.
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Post-Course Expectations (Qualitative Analysis)

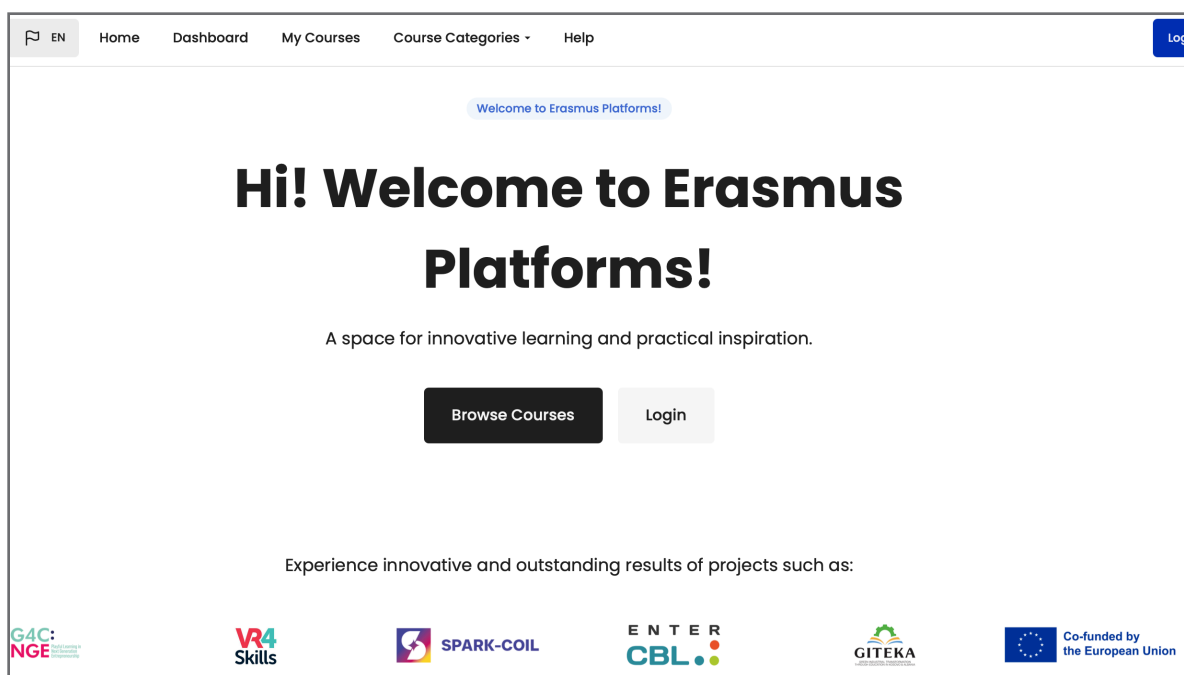
Areas for Improvement:

- Strengthen Real-World Connection - More case studies and practical examples.
- Refine Course Structure & Workload - Condense content, clearer instructions, avoid repetition.
- Increase Interactivity - More group activities and peer feedback.

Post-Course Expectations (Qualitative Analysis)

Future Application of Learning:

- Entrepreneurial Ventures - Starting and leading new businesses.
- Workplace Innovation - Contributing to innovation and project management.
- Practical Skill Integration - Using tools (SMART goals, empathy mapping, Six Thinking Hats) for improved decision-making, collaboration, and communication.
- Eco-Conscious Projects - Developing sustainable initiatives and raising environmental awareness.



Moodle Platform Usage & Results

Total Activity Views on Moodle Platform:

- Users with completed activities: 237.

Institution	Activity views
IAU	4,945
ESTG	23,071
RAU	4,599
WSB	52,321

- Average Activity Completion Rate

Institution	Participants
IAU	22%
ESTG	92%
RAU	63%
WSB	71%
Average	66%

Moodle Platform Usage & Results

High Engagement & Reach:

- The Moodle platform demonstrated strong engagement across participating institutions.
- WSB (52,321 views) and ESTG (23,071 views) showed particularly high activity, indicating the platform effectively reached many users.
- The platform is integrated at scale into teaching practices at these institutions.

Moodle Platform Usage & Results

Platform Flexibility:

- The variation in engagement and completion rates across institutions suggests the Moodle platform is flexible enough to support diverse teaching models and institutional needs.
- High completion rates at ESTG and WSB highlight successful integration into their educational approaches.

Conclusion

Overall Success & Value:

- The NextGen Entrepreneurs Course was a successful and valuable experience.
- High-quality instruction was particularly effective.
- Strong emphasis on practical tools and hands-on learning identified as the greatest strength.
- Participants reported a sense of satisfaction and preparedness.

Consistent Quality with Room for Growth:

- All reported scores were solidly above average, indicating consistent positive impact.
- Scores were slightly lower than initial expectations, indicating areas for refinement.
- Key Areas for Improvement:
 - Alignment of course content with learning objectives.
 - Clarity of the course structure.

Recommendations for Enhancement:

- Refine Course Structure - Improve organization and manage workload.
- Integrate More Real-World Content - Incorporate additional case studies to bridge theory and practice.