



STEAM BO.SS

boosting soft skills

Evaluation with VET system

National Report | January 2026



Sapere utile



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
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1. Introduction

The present report aims to analyse the impact of the STEAM Boss VET system training on teachers and trainers in Portugal. The main objective is to assess how the training influenced teaching practices, particularly regarding the integration of the STEAM approach, the development of soft skills, and the strengthening of collaboration between VET institutions and companies.

The survey collected responses from teachers/trainers who participated in different training activities such as Training Camp, Train the Trainers, and MOOC. The data allows us to evaluate to what extent the training contributed to methodological innovation, especially in adopting interdisciplinary approaches that combine science, technology, engineering, arts, and mathematics.

Another key focus of this report is the role of soft skills in education. The survey explores how awareness of soft skills evolved after the training and how their integration impacted student performance. Skills such as problem-solving, decision-making, and time management are particularly relevant in modern education and labour market demands.

Finally, the report examines the relationship between VET institutions and companies. It assesses whether the training increased interest in collaboration, led to new partnerships, or strengthened existing ones. This aspect is crucial in aligning education with real-world needs and enhancing students' employability.

Overall, this report provides insights into the effectiveness of the STEAM Boss VET system and highlights key opportunities, challenges, and recommendations for future implementation.

2. Teacher/Trainer Profile

The respondents of this survey are teachers and trainers working mainly within the VET system in Portugal, with some also teaching at primary and secondary education levels.

In terms of experience, participants show a wide range, from newly started professionals with no teaching experience to highly experienced educators with up to 20 years in the field. This diversity provides a balanced perspective on the impact of the training across different career stages.

Regarding subjects taught, the group includes educators from various disciplines such as Mathematics, Portuguese, and Sciences (Physics and Chemistry). This diversity is particularly relevant in the context of STEAM, which promotes interdisciplinary teaching approaches.

Overall, the sample reflects a heterogeneous group of educators, contributing to a comprehensive understanding of how the training impacts different educational contexts.

3. STEAM approach implementation

The results show that the training had a significant impact on the adoption of the STEAM approach among participants. Most respondents reported that the training influenced their teaching “quite a lot” or “very much,” indicating a strong perceived value.

A majority of teachers confirmed that they have incorporated STEAM-focused activities into their teaching practices after the training. These activities often involve interdisciplinary methods, problem-solving tasks, and practical applications that connect different subject areas.

Among those who implemented STEAM, the most relevant aspects include:

- Increased use of problem-based learning methodologies
- Greater integration between disciplines (e.g., combining mathematics with real-world applications)
- Enhanced student engagement through interactive and practical activities

These examples demonstrate that the training successfully encouraged innovation and pedagogical transformation.

However, not all participants have adopted the STEAM approach. Some respondents indicated that they have not yet incorporated STEAM activities into their teaching. The reasons for this may include:

- Lack of time to redesign lesson plans
- Limited resources or institutional support
- Difficulty in adapting STEAM methodologies to specific subjects

These challenges highlight the need for continued support, resources, and training to ensure broader implementation.

In conclusion, while the adoption rate is high and the impact is positive, further efforts are needed to overcome structural and practical barriers.

4. Soft skills: use and relevance

The survey results indicate a high level of awareness regarding the importance of soft skills in education. Participants clearly recognise that these competencies are essential for students' personal and professional development.

The most frequently developed soft skills after the training include:

- Problem solving
- Decision making
- Time management
- Flexibility
- Proactivity
- Conflict management

Among these, problem-solving stands out as the most consistently addressed skill, reflecting its central role in STEAM methodologies.

Regarding the impact on students, most teachers reported noticeable improvements. Some observed clear positive changes, while others identified moderate improvements. These include:

- Increased student autonomy
- Better engagement in classroom activities
- Improved ability to work collaboratively and think critically

The findings confirm that integrating soft skills into teaching methodologies enhances the overall learning experience and prepares students for real-world challenges.

5. Interest and impact of collaboration with companies

The results regarding collaboration with companies are mixed but show promising developments.

Some participants reported an increased interest in collaborating with companies after the training, while others indicated only partial change or no change. This suggests that although the training raises awareness, external factors may influence actual collaboration.

In terms of concrete outcomes:

- A smaller number of participants established or strengthened business contacts
- Collaboration mainly occurred with local companies and public bodies

The main areas of collaboration include:

- Design of educational activities
- Provision of real-world insights and practical experiences

However, only a limited number of respondents reported carrying out specific activities with companies.

This indicates that while the intention exists, practical implementation is still developing.

These results highlight the importance of creating stronger bridges between VET institutions and the business sector, including structured opportunities for collaboration.

6. Conclusions and Recommendations

The results of this study highlight a generally positive impact of the STEAM Boss VET system training on teaching practices in Portugal. Participants expressed a high level of satisfaction and reported meaningful changes in their pedagogical approaches, particularly in relation to innovation, interdisciplinarity, and student engagement.

One of the most significant outcomes is the growing integration of the STEAM approach in educational contexts. Teachers and trainers demonstrated an increased willingness to adopt more dynamic and student-centred methodologies, promoting critical thinking and practical application of knowledge. However, despite these advances, some barriers remain, including limited time, lack of resources, and challenges in adapting STEAM methodologies to specific subject areas. These constraints suggest that further structural and institutional support is necessary to ensure consistent and widespread implementation.

The role of soft skills emerged as another key finding. Participants showed strong awareness of their importance, particularly in relation to skills such as problem-solving, decision-making, and time management. The integration of these competencies into teaching practices has contributed to noticeable improvements in student engagement, autonomy, and overall performance. This reinforces the relevance of embedding soft skills systematically within VET curricula.

Regarding collaboration with companies, the findings reveal a moderate but promising evolution. While interest in partnerships has increased, the translation of this interest into concrete actions remains limited. Existing collaborations tend to focus on local entities and are often informal or occasional. This indicates the need for more structured and sustainable mechanisms to connect VET institutions with the business sector.

Considering these findings, several recommendations can be outlined. Firstly, it is essential to provide continuous professional development opportunities that support teachers in implementing STEAM methodologies effectively. Secondly, educational institutions should be encouraged to allocate time and resources specifically for innovation in teaching practices. Thirdly, stronger frameworks for collaboration between VET providers and companies should be developed, enabling more consistent and impactful partnerships. Finally, the sharing of best practices and successful case studies among educators should be promoted, fostering a community of learning and continuous improvement.

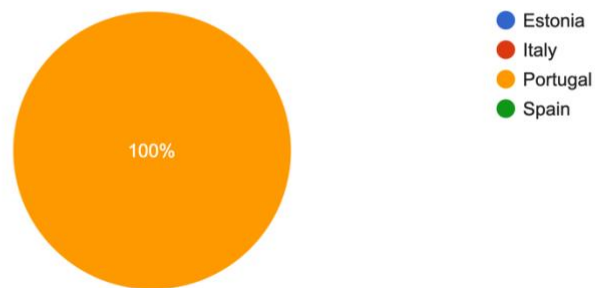
Overall, the training has proven to be a valuable step towards modernising VET education, but sustained effort and strategic support will be crucial to maximise its long-term impact.

7. Appendix

- Survey questionnaire: <https://forms.gle/MjrPfsbCqCH1zF6k7>
- Detailed tables and charts

1b. Country

5 respostas



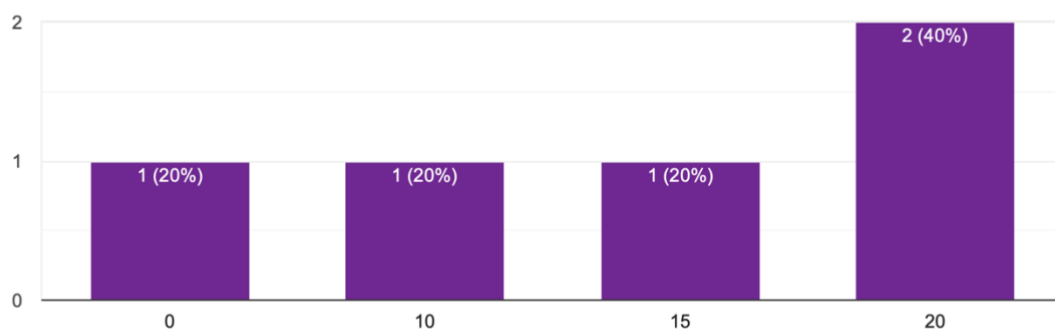
1c. Institution where you work

5 respostas



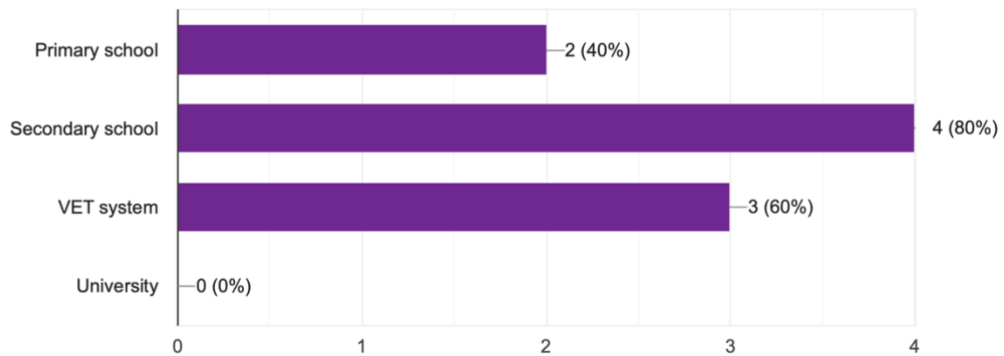
1d. Years of teaching experience

5 respostas



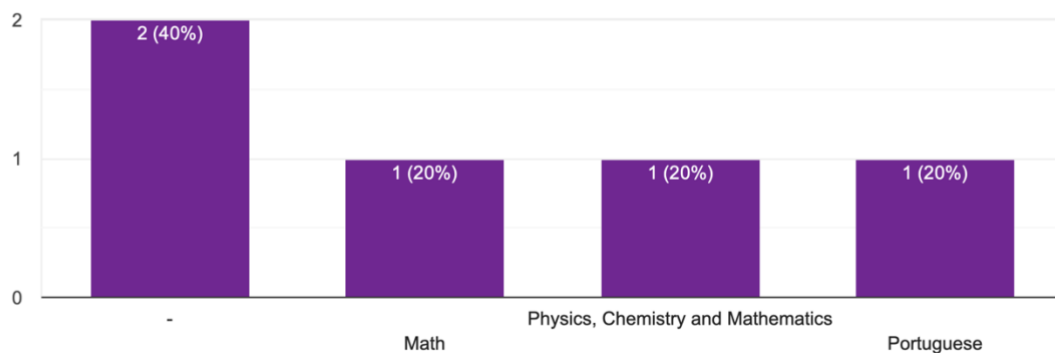
1e. Educational level at which you teach

5 respostas



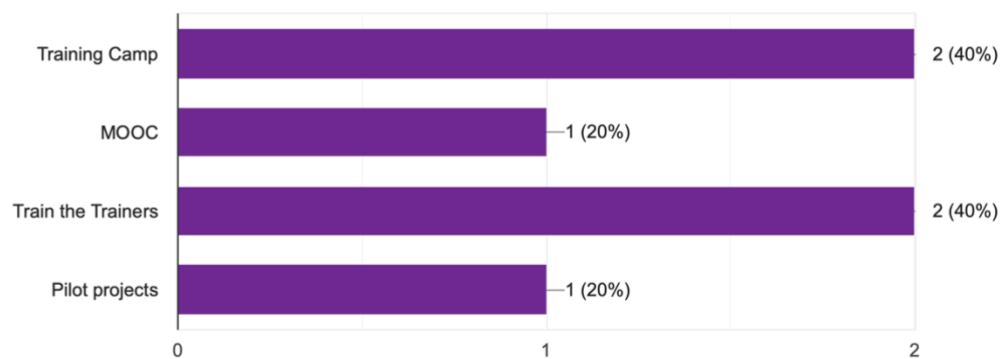
1f. Subject taught

5 respostas



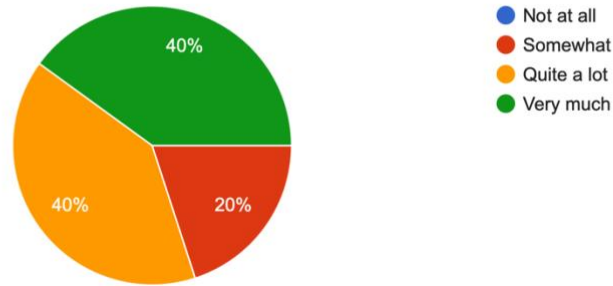
2. Which training activity/activities did you participate in?

5 respostas



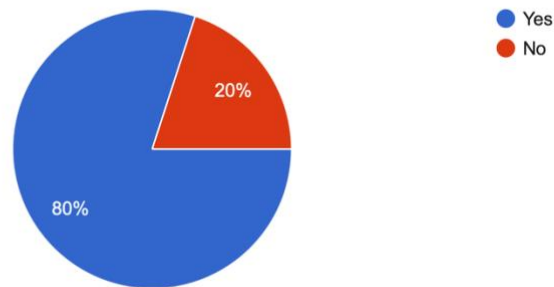
3. To what extent has training in the STEAM approach influenced your teaching methodology?

5 respostas



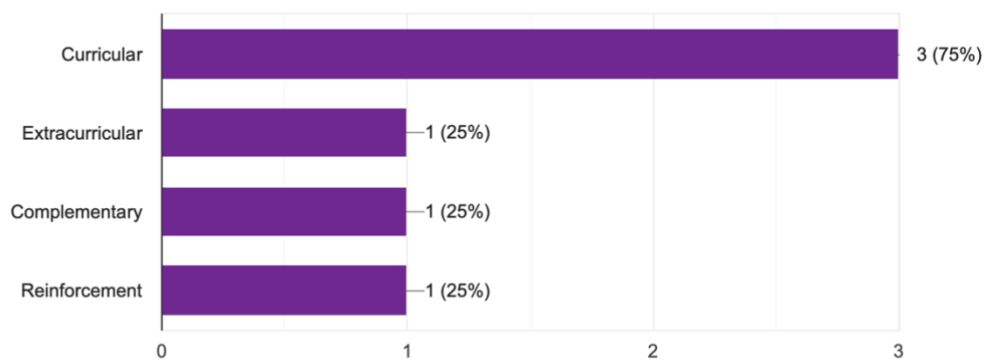
4. Have you incorporated STEAM-focused activities into your classes since the training?

5 respostas



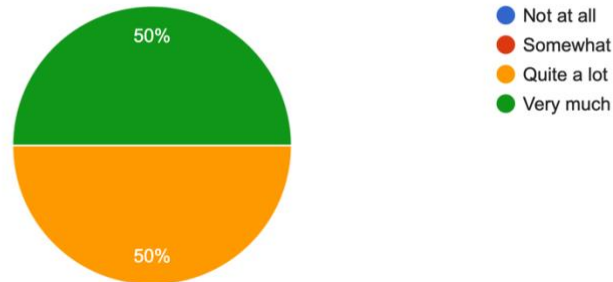
4a. What type of activities did you carry out using the STEAM approach?

4 respostas



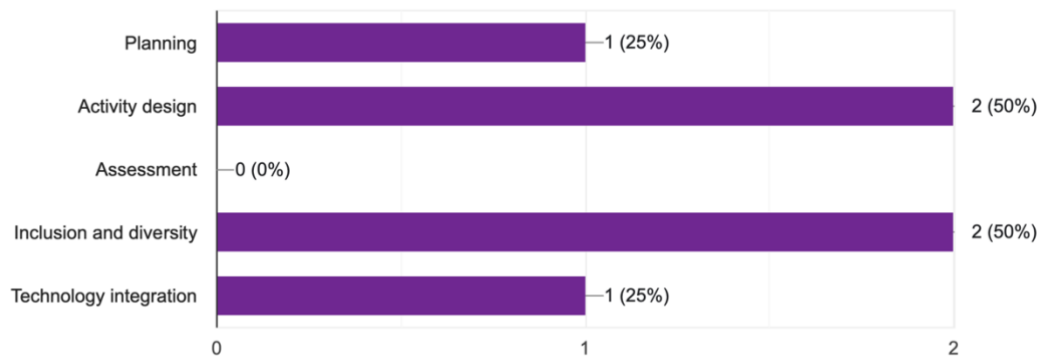
4b. How satisfied are you with the introduction of these activities?

4 respostas



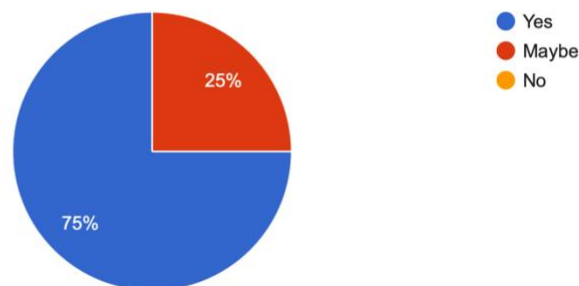
4d. In which areas of your teaching have you noticed the greatest methodological change?

4 respostas



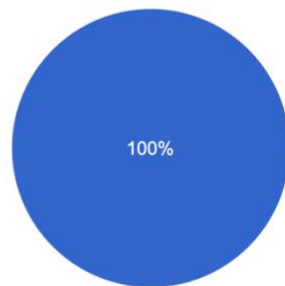
4e. Do you plan to continue developing activities using this approach?

4 respostas



4a. What is the main reason why you have not integrated STEAM activities into your lessons?

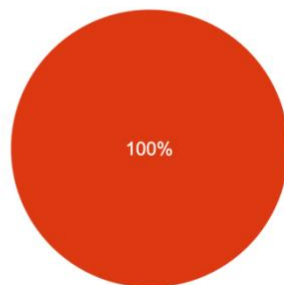
1 risposta



- Lack of time
- Lack of resources/materials
- Methodological difficulties
- I do not consider the STEAM approach useful

4b. Did you find it difficult to adapt the STEAM approach to your teaching context?

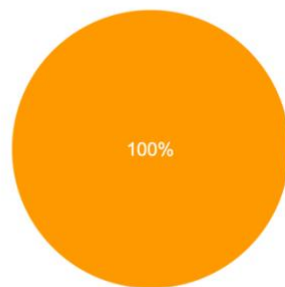
1 risposta



- Yes
- No

4d. Do you think the training you received was sufficient to apply the STEAM approach?

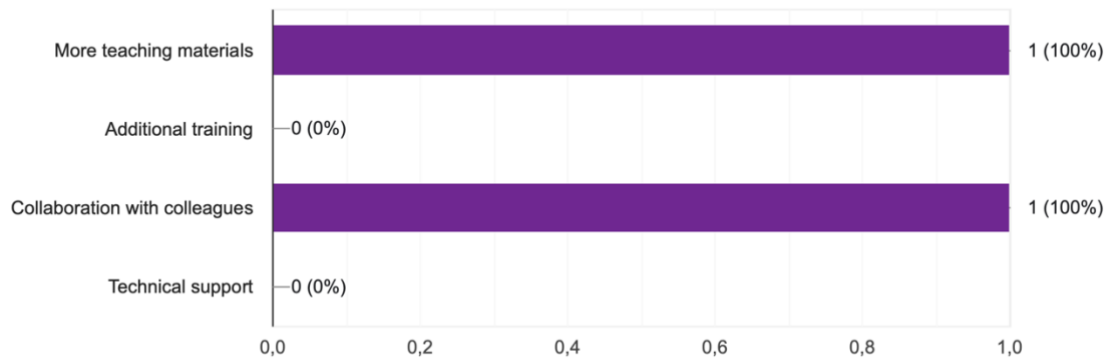
1 risposta



- Yes
- No
- Partially

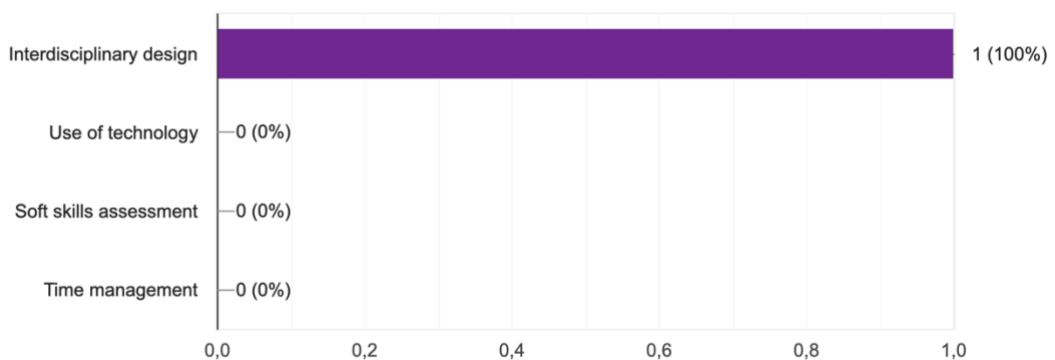
4e. What conditions would encourage you to introduce STEAM activities in the future?

1 risposta



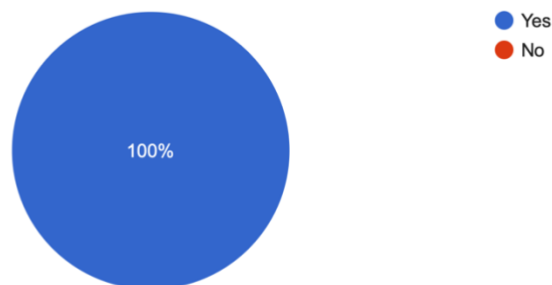
4f. Which aspects of the STEAM methodology do you find most challenging to implement?

1 risposta



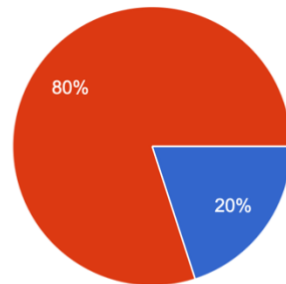
4g. Would you like to receive further practical examples or materials to facilitate the integration of STEAM?

1 risposta



5. Has the frequency with which you use active methodologies (for instance PBL, challenge-based learning, the flipped classroom) increased since the training?

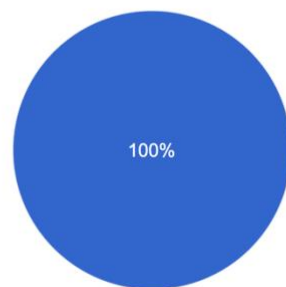
5 respostas



- It has not influenced this.
- After the training, I have increased their use.
- I have decreased their use.

6. Do you feel more prepared in your teaching practice after the training you received?

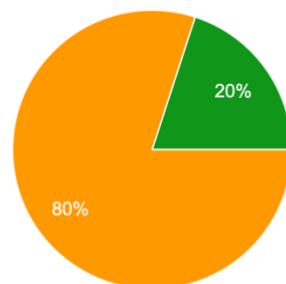
5 respostas



- Yes
- No
- NA

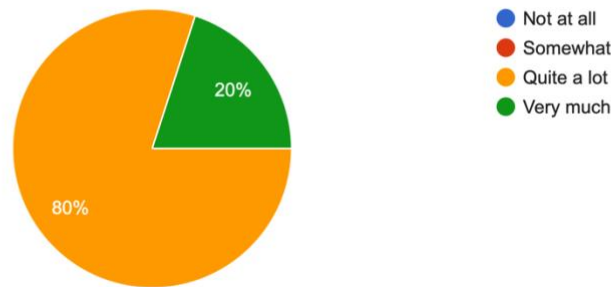
7. To what extent are you more aware of the importance of soft skills in the learning process after training?

5 respostas

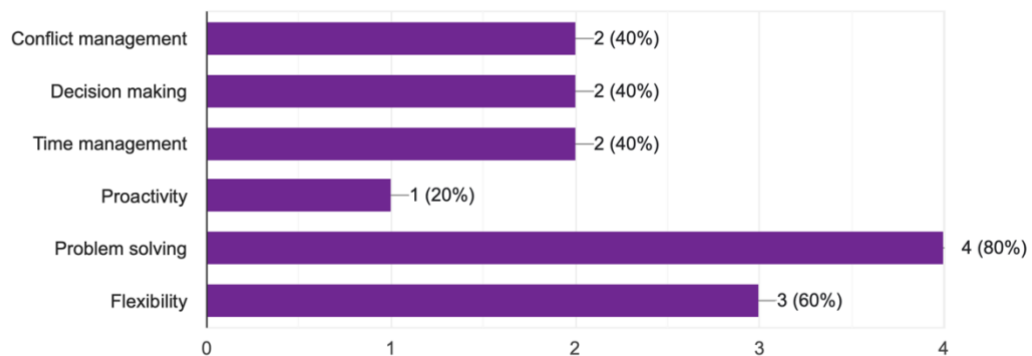


- Not at all
- Somewhat
- Quite a lot
- Very much

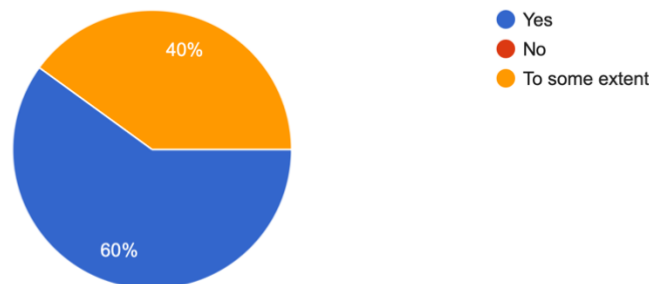
8. To what extent have you increased your focus on developing these skills in your teaching?
5 respostas



8a. Which soft skills do you work on more explicitly in your classes after the training?
5 respostas

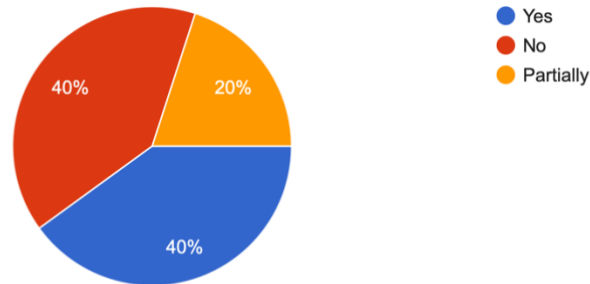


8b. Have you noticed improvements in student participation and collaboration when working with soft skills-focused methodologies?
5 respostas



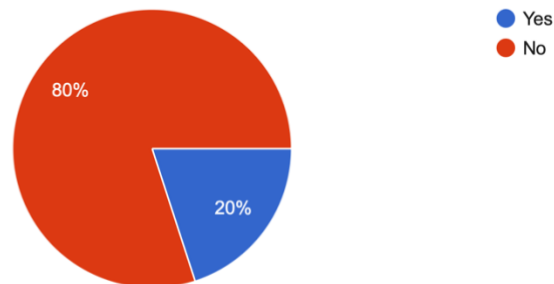
9. Has your interest in collaborating with companies or external agents increased because of the project?

5 respostas



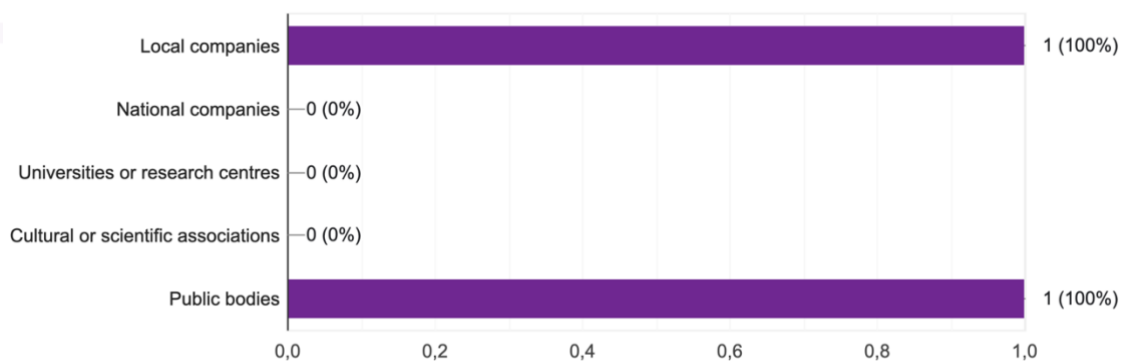
10. Have you established or strengthened contacts with companies or institutions since the training?

5 respostas



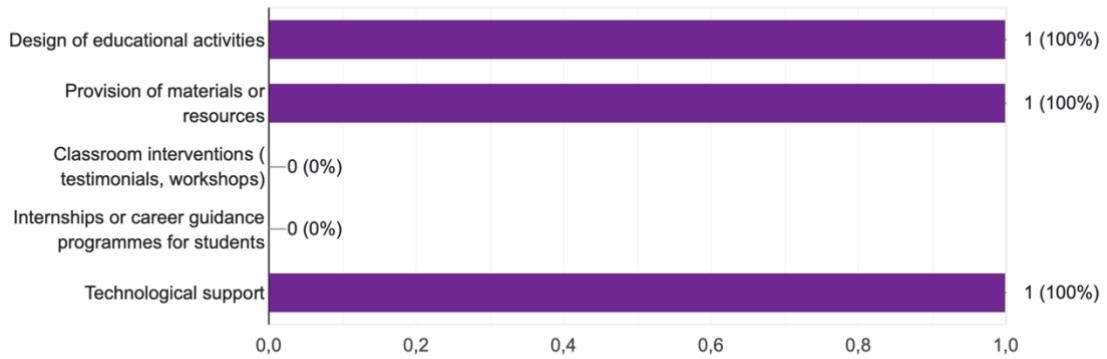
10a. What types of organisations have you collaborated with?

1 resposta



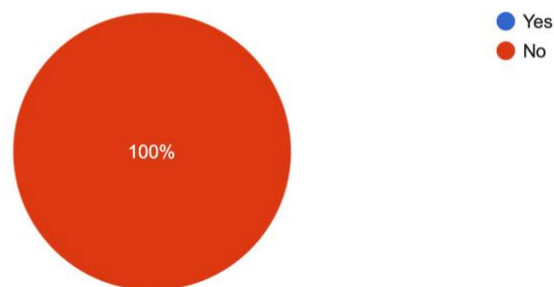
10b. In what areas did the collaboration take place?

1 resposta



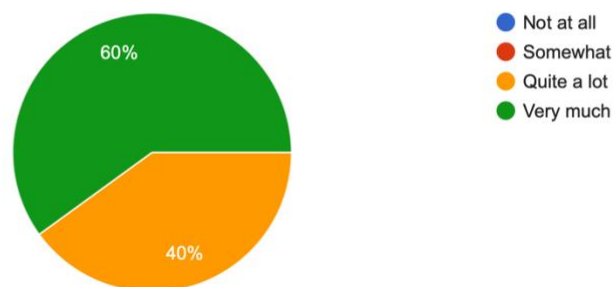
10c. Have you carried out any specific activities or projects because of this collaboration?

1 resposta



11. Finally, please rate your overall satisfaction with the STEAM and soft skills training.

5 respostas





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