

# Report on the e-learning training in the blended learning formula

## POLAND

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## ***Chapter 1 Introduction***

This report was prepared by the CRAS Association – Center for the Development of Social Activity, a partner in the international Educational Ventures project (Project Code: 2023-1-IT02-KA220-SCH-000151181). This report presents the results of a survey conducted among participants of the Polish pilot e-learning course. The survey was conducted after the course concluded. Its purpose was to assess the quality of the training and its impact on participants. The survey was distributed electronically. It focused on students' experiences of participating in the course, which covered topics such as transversal competences, active citizenship, and the responsible use of digital and immersive technologies.

Forty participants were selected to participate in the training. Of these, 39 completed the full training cycle on the e-learning platform, demonstrating the high level of participant engagement. Thirty-eight participants completed the final evaluation survey, providing information necessary to evaluate the training and identify areas requiring further development.

The obtained results constitute an important source of knowledge for the next stage of the project, which involves the use of the Educational Ventures application in augmented reality technology (Augmented Reality – AR).

Analyzing the responses allows us to better understand how participants perceive the course, the scope of competences acquired and their expectations regarding further project activities. The report also aims to assess the potential of using a blended learning model, combining online learning with elements of educational support from teachers and project coordinators.

Following the introductory section, Chapter 2 presents the characteristics of the study participants and basic information regarding the demographic structure of the target group. This analysis provides important context for interpreting the results of the evaluation survey.

Chapter 3 provides an overview of the e-learning platform used in the Educational Ventures project and a description of the thematic scope of the training modules. This section also presents an analysis of participant preferences for specific course themes and a qualitative interpretation of their responses.

Chapter 4 focuses on analyzing participants' opinions regarding their motivation to participate in the training, the course implementation process, and the assessment of the quality of the educational solutions implemented. Specifically, the study discusses the level of student engagement, evaluation of the teaching materials, the level of support from teachers and project coordinators, the level of comprehensibility of the course content, and the functioning of the e-learning platform.

Chapter 5 presents an analysis of participants' impressions of the course and an assessment of its effectiveness in developing social, digital, and personal competencies. This section also discusses the practical application of the acquired knowledge and students' level of interest in the next phase of the project, which involves the use of Educational Ventures' augmented reality (AR) application.

## CHAPTER 2 Characteristics of the study participants

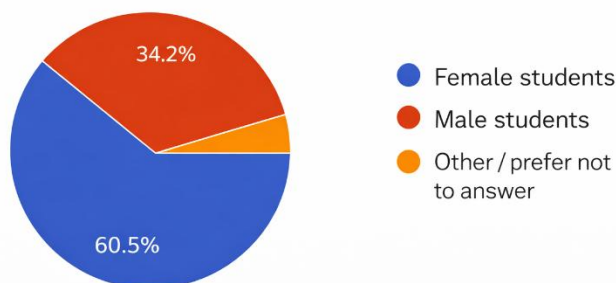
The study was conducted among secondary school students in Rzeszów who participated in an e-learning training program. The analysis included responses from 38 participants. The vast majority of students completed the full training program delivered via the e-learning platform, indicating a high level of motivation and interest in the course content. A final evaluation survey was completed by participants after the training, and the responses provided the basis for the analysis presented in this report. The students participating in the study are in their post-primary education, which plays a significant role in shaping social, civic, and digital competencies. This is a period during which young people intensively develop skills useful both in further education and in their future careers.

Analysis of demographic data allows for a better understanding of the structure of the study group and provides an important context for the interpretation of survey results.

Regarding gender structure, the majority of respondents were women – 60.5% of participants, while men constituted 34.2% of the study group. A small percentage of respondents chose a different answer or did not provide information regarding gender. The data are presented in the chart below.

### Gender Distribution of Participants

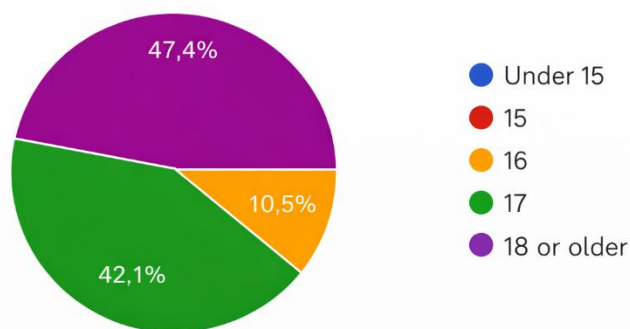
The survey involved 38 participants of the Polish pilot group the Educational Ventures project.



In terms of age, the largest group were students over 18 years of age – 47.4% of respondents. The next largest group were students aged 17 – 42.1%, while the smallest group were students aged 16 – 10.5%.

### Age Distribution of Participants

The survey involved 38 students of the Polish pilot group of the Educational Ventures project.



The results obtained indicate that the majority of project participants are upper secondary school students.

The demographic structure of the study group provides an important background for further analysis of the survey results and allows for a better understanding of how students assess their experiences of participating in the e-learning course implemented as part of the Educational Ventures project.

## ***CHAPTER 3 E-learning platform and training content***

The e-learning platform used in the Educational Ventures project served as the primary tool for delivering educational content and implementing interactive teaching activities. It provided participants with access to training materials, multimedia presentations, exercises, and quizzes to support the learning process.

The training program was carefully developed and divided into five thematic modules that covered key areas related to the development of social, civic and digital competences:

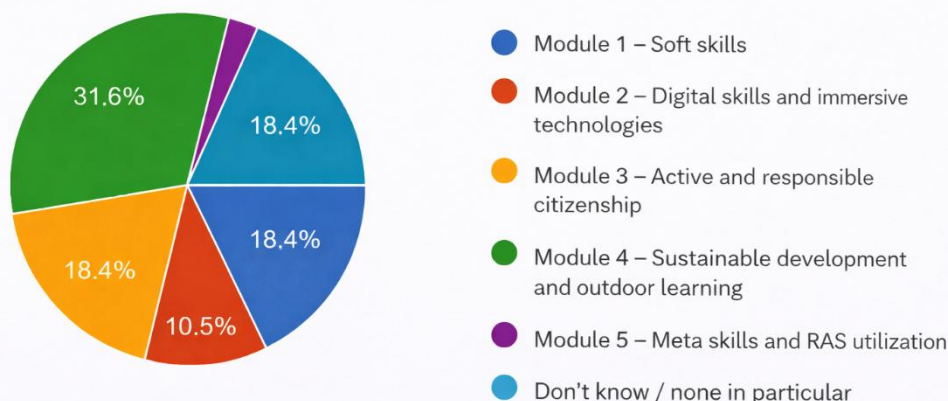
- Module 1 – Soft skills,
- Module 2 – Digital skills and immersive technologies,
- Module 3 – Active and responsible citizenship,
- Module 4 – Sustainability and outdoor learning,
- Module 5 – Meta-skills and using the RAS system.

The aim of the individual modules was to develop competences necessary to function in modern society, including cooperation skills, critical thinking, conscious use of digital technologies and a responsible approach to social and environmental issues.

The chart below presents a summary of participants' responses regarding their preferences for the topics of individual e-learning course modules.

## Module preference among participants

The pie chart illustrates the preferences of participants regarding the modules included in the e-learning course of the Educational Ventures project.



Analysis of the survey results shows that course participants demonstrated varying levels of interest in individual topics. Module 4 – Sustainability and Outdoor Learning – was the most popular, with 31.6% of respondents citing it as the most interesting. This result indicates significant interest among young people in topics related to environmental protection and education in a local context.

The remaining modules were also well-received by participants. Module 1 – Soft Skills, Module 3 – Active and Responsible Citizenship, and the "I don't know/none in particular" response were selected by 18.4% of respondents. Module 2 – Digital Skills and Immersive Technologies was selected by 10.5% of participants. The lowest response rate was for Module 5 – Meta-Skills and Using the RAS, which received a small number of responses.

The results show that participants particularly appreciated the modules related to environmental issues and the practical dimension of education. At the same time, the interest in other modules confirms that the training program addressed the diverse educational needs of young people.

The diversity of preferences also indicates that each module contributed a valuable element to the educational process, enabling participants to develop competence in many areas important for their further personal and social development.

As part of the evaluation study, course participants were asked to respond to an open-ended question: "Write down what topic you are most passionate about." Twenty-five respondents responded to this question, presenting their individual interests and reflections on the content covered during the training.

Qualitative analysis of the collected responses allowed us to identify several main thematic categories that emerged most frequently in students' responses. These included:

- issues related to sustainable development and environmental protection,
- new technologies and digital forms of learning,
- personal development and social competences,
- civic activity and social responsibility,
- students' individual interests and passions.

One of the most frequently mentioned areas was environmental issues, particularly issues related to sustainable development and the impact of human activity on the natural environment. Students emphasized the importance of environmental education and the need to increase public awareness in this area. One participant wrote:

"Sustainable development. It is important because ecological problems can have catastrophic consequences."

Similar statements also appeared in the context of nature and ecology, confirming the growing interest among young people in environmental issues. One respondent noted:

"I'm studying forestry, so topics related to ecology are important to me."

The second significant area of interest was modern technologies, particularly immersive technologies such as virtual and augmented reality. Participants recognized their potential for the future of education and new learning methods. One student stated:

"I'm most passionate about virtual and augmented reality, because these are modern technologies that can change the way we learn and work."

Many responses also included references to personal development and social skills, such as cooperation, communication, and stress management. One participant highlighted the importance of teamwork:

"The collaboration was interesting. I enjoy working with others, so this topic was very interesting."

Other participants highlighted the importance of being able to cope with difficult life situations:

"Maybe stress-related topics. I've never been good at dealing with stress."

Student responses also included references to critical thinking and problem-solving, which were considered particularly useful in everyday life. One respondent emphasized:

"Critical thinking and problem-solving – I think that helps in everyday life."

Civic engagement and social responsibility were also significant areas of interest. Some students cited their experiences with community service or volunteering. One respondent wrote:

"I'm most interested in social responsibility. I'm active in the volunteer fire department."

It's also worth noting that some participants highlighted the diversity of topics covered during the course, emphasizing that all modules were interesting and that it was difficult to choose one dominant area. One participant commented:

"I am most passionate about a few topics because each module brought something interesting and valuable."

Some responses also referenced students' individual interests, such as art, psychology, computer games, or chess. While these were not directly related to the course content, they demonstrate the wide range of passions and diversity of interests among young people.

In summary, analysis of responses to the open-ended question shows that course participants were particularly interested in topics related to ecology, new technologies, personal development, and social activism. The diversity of topics indicated demonstrates that the training program addressed the diverse educational needs of young people and encouraged participants to reflect on their own development and role in society.



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## ***CHAPTER 4 Training implementation and e-learning course quality assessment***

### ***4.1. Motivation of participants to participate in the course***

In the evaluation survey, participants were asked what encouraged them to participate in the course, what motivated them most, and what emotions they experienced during the training. The open-ended responses allowed for a better understanding of the students' motivations and their initial experiences with the project.

Motivations for participating in the course varied, but several main categories of responses can be identified. The most common response was the desire to acquire new knowledge and develop their skills. Students emphasized that they were interested in the opportunity to learn new topics and develop in areas not always covered in traditional classrooms. One participant noted:

"I was drawn to the course's content – it was different from typical lessons. I wanted to learn something new and develop myself in a practical way."

Curiosity about new forms of learning and the use of digital technologies was also a significant motivating factor. Some students indicated that the opportunity to use e-learning platforms and explore technologies such as virtual reality was particularly interesting. One respondent wrote:

"I was curious about how you could learn on the platform and use VR."

Another important motivating factor for participation in the project was the role of teachers and recommendations from the school. Many students emphasized that their teachers or school counselor encouraged them to participate in the course. For example, one participant noted:

"I was most encouraged by the teacher who described the topics of the classes and convinced me to participate in the course."

Some students also pointed to the influence of their peers, emphasizing that their classmates encouraged them to participate in the course.

The responses also highlighted motivations related to the opportunity to gain new educational experiences and explore alternative forms of learning that differ from traditional classroom instruction. One participant noted:

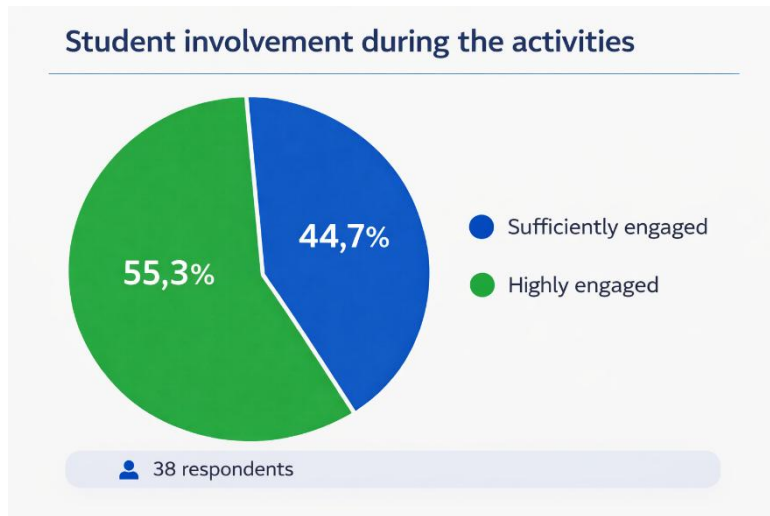
"I like learning in a different way than at school. Using new technologies adds variety for me."

Analysis of participant responses also indicates that most students experienced positive emotions associated with participating in the course. Respondents emphasized that they felt good, were interested in the course topics, and had a positive attitude toward participating in the project. Many responses included statements such as "I felt good," "I felt very intrigued," or "it was an interesting experience."

In summary, students' motivation to participate in the course stemmed primarily from a desire to acquire knowledge, curiosity about new technologies, encouragement from teachers, and an interest in modern forms of teaching. This indicates that the Educational Ventures project responded to young people's needs for more engaging and innovative learning methods.

#### ***4.2 Participant engagement level***

One of the key elements of the evaluation was assessing student engagement during the activities. Participants were asked to rate the extent to which they felt engaged in the proposed activities. Their responses are presented in the chart below.

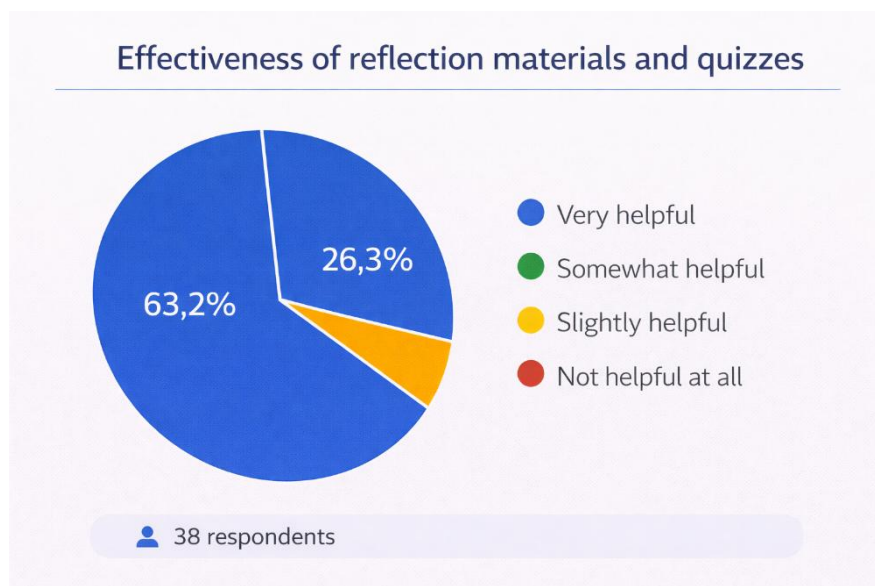


The collected data indicate that the vast majority of students rated their level of engagement as high. 55.3% of respondents stated they were sufficiently engaged, while 44.7% of participants declared a very high level of engagement. Importantly, none of the respondents indicated a lack of engagement during the activities.

The obtained results show that the form of conducting the course used encouraged active participation of students and encouraged them to take part in the proposed educational activities.

### ***4.3 Using the acquired knowledge in practice***

Another element of the study was to assess whether the reflection materials and quizzes available on the platform helped participants to practically apply the knowledge they had acquired.

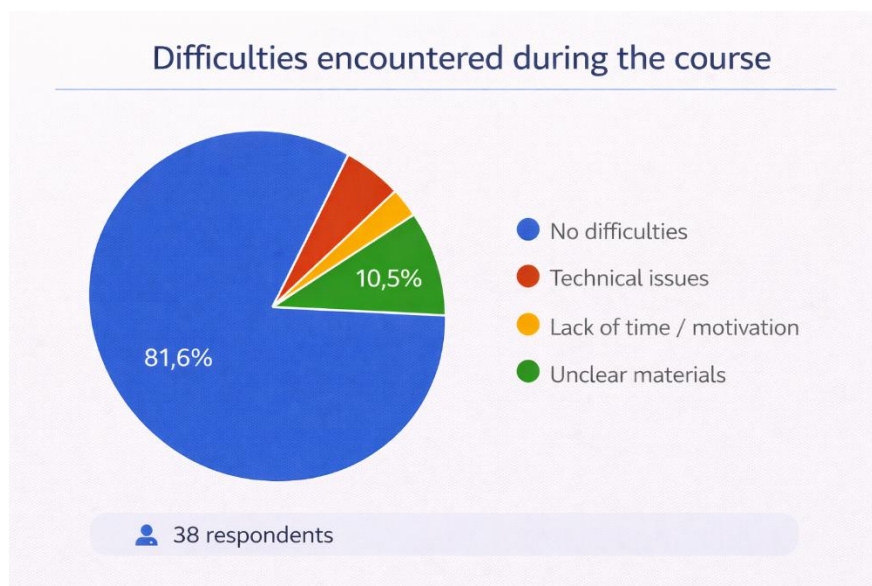


Survey results indicate that 63.2% of students felt that the materials were very helpful in applying their knowledge, while 26.3% of respondents indicated that they were somewhat helpful. Only 10.5% of participants indicated that the materials were somewhat helpful, and no one indicated that they were not helpful at all.

The obtained results indicate the high effectiveness of the teaching tools used and confirm that interactive elements, such as quizzes and reflection materials, support the learning process.

#### ***4.4 Difficulties encountered during the course***

Participants were asked about any difficulties that arose during the training.



The analysis of the responses indicates that 81.6% of participants did not encounter any difficulties during the course, which proves the good organization of the training process and the clarity of the teaching materials.

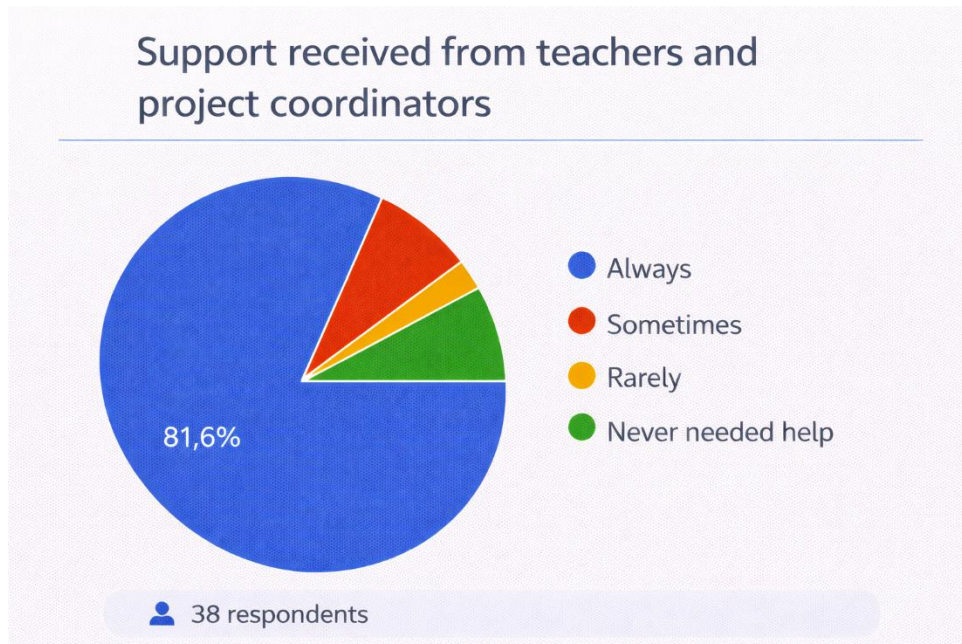
Among the remaining responses, the most prominent were:

- technical problems related to accessing or playing the materials,
- ambiguity of some materials,
- lack of time or motivation (10.5%).

The small percentage of indications of difficulties suggests that the e-learning platform was relatively intuitive to use and did not constitute a significant barrier for participants.

#### ***4.5 Support from teachers and project coordinators***

An important element in assessing the quality of the training was also the analysis of the level of support provided to participants by teachers and project coordinators.



Most respondents (81.6%) indicated that they always received appropriate support when needed. Another 10.5% of students reported that support was sometimes available, while a small percentage reported difficulties in obtaining help.

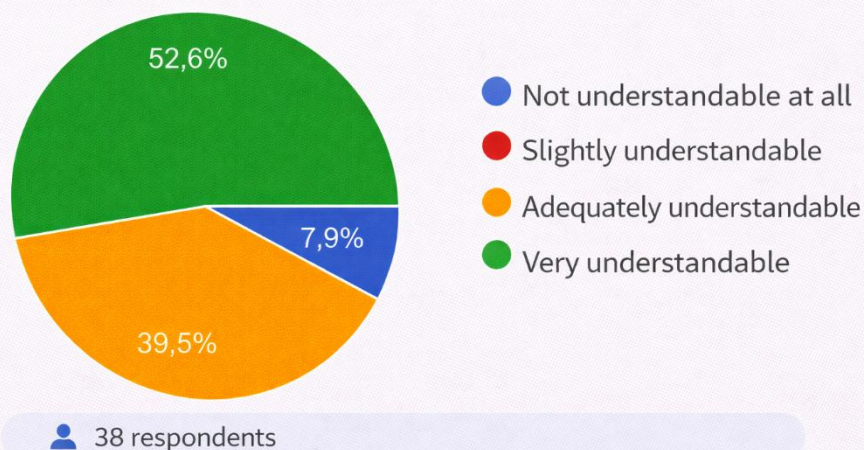
Some participants (10.5%) also stated that they did not need additional support during the course, which may indicate the high transparency of the materials and the intuitiveness of the platform.

The obtained results confirm that the organizational and substantive support provided during the training was of a high standard and constituted an important element of the educational process.

#### ***4.6 Evaluation of the comprehensibility of the course content***

One of the key aspects of the quality of the training was the assessment of the degree of comprehensibility of the educational materials.

## How clear and understandable was the course content?



Survey results indicate that participants found the course content clear and understandable. Over half of respondents (52.6%) rated the materials as very understandable, while 39.5% considered them to be sufficiently understandable.

Only 7.9% of students indicated that the content was completely incomprehensible to them, which is a small percentage of the entire study group.

The obtained results suggest that the training materials were prepared in a way that was accessible to secondary school students, and the forms of communication used facilitated effective knowledge acquisition.

### **4.7 Evaluation of platform interactivity and technical quality of materials**

Participants were asked to evaluate the interactivity of the e-learning platform and the technical quality of the teaching materials, such as videos, quizzes, and presentations. The question was open-ended and allowed students to freely express their opinions and provide any suggestions regarding the platform's operation.

Analysis of the responses indicates that the vast majority of participants rated the platform's operation very positively. Many responses included short, clear ratings such as "very good,"

"10/10," "everything was great," "no complaints," or "everything worked smoothly." A significant number of respondents also emphasized that they had no comments or suggestions regarding the platform's operation, which may indicate its high functionality and intuitive user experience.

Participants primarily emphasized the readability of the materials and the ease of use of the platform. One participant noted:

"I rate the interactivity of the platform very positively – everything was clear and easy to use."

Many responses also highlighted the aesthetics and presentation of content. Students particularly appreciated the clear graphics and moderate amount of text in the educational materials. As one participant noted:

"I especially like the presentation's graphics. It's also nice that you don't have to read much."

Other respondents emphasized that the materials were clear and understandable, and that using the platform was easy:

"Everything is clear, legible and understandable."

Among the few comments, there was a suggestion regarding individual messages in English, which may have been less understandable for some students. One respondent noted that:

"Some of the messages were in English. It would have been simpler to have everything in Polish."

At the same time, the participant emphasized that the platform was intuitive to use and, despite this minor difficulty, it was possible to use the materials without any problems.

Overall, participant feedback indicates that the platform's interactivity and the technical quality of the teaching materials were rated very highly. Students appreciated the clarity of the interface, the aesthetic appeal of the presented materials, and the intuitiveness of the platform. The comments made were sporadic and concerned only minor linguistic elements that did not significantly impact the overall assessment of the course.

#### ***4.8 Participants' suggestions for improving the modules e-learning***

Participants had the opportunity to formulate suggestions for improving the e-learning modules implemented as part of the course. The question was open-ended, allowing respondents to freely express their opinions on the further development of the platform and teaching materials.

Analysis of the responses indicates that the vast majority of participants did not submit any significant comments or suggestions for changes. Many responses included short answers such as "no," "no comments," "no suggestions," or "everything is fine." This indicates that participants were largely satisfied with the quality of the materials and the way the course was delivered. One participant emphasized:

"No, I have no suggestions – the course was prepared to my full satisfaction."

However, individual responses included suggestions for further development of educational materials, particularly in terms of increasing the use of multimedia. Some students suggested introducing more films or short videos, which could further enhance the learning process. One response suggested:

"Maybe some videos?"

Another participant pointed out the possibility of using more dynamic forms of communication, such as short videos or podcasts:

"Maybe add some podcasts or videos."

Among the individual suggestions, there were also proposals to expand the course topics to include additional issues, for example those related to environmental protection:

"More environmental topics."

Some respondents also noted that the course was a new learning experience for them and that they found it difficult to provide specific suggestions for improvement. One student noted: "It's hard for me to say. I have nothing to compare it to, and I don't know what else could be included in such courses."

It's also worth noting individual statements pointing to the need for broader implementation of similar educational solutions in schools, which may indicate a positive assessment of the teaching method itself. One participant stated:

“I wish there were more platforms like this at our school.”

Overall, participant responses indicate that the e-learning course received very positive feedback in terms of its organization and the quality of the teaching materials. Suggestions primarily concerned expanding the number of multimedia materials and potentially broadening the course's topics, but these were sporadic and did not impact the overall high rating of the training program.

#### ***4.9 Summary of the evaluation of the training implementation***

Analysis of participant responses indicates that the e-learning training was positively evaluated in terms of its organization and content. Students demonstrated a high level of engagement during the classes, and the teaching materials and interactive tools supported the learning process.

Additionally, the high level of support available from teachers and project coordinators and the low number of reported difficulties indicate that the course was implemented effectively and supported the achievement of the intended educational goals.

## ***CHAPTER 5 Course Effectiveness and Participant Experience***

### ***5.1 Participants' impressions of the course and its effectiveness***

Analyzing participants' responses to the survey allows us to assess not only the overall experience of participating in an e-learning course but also its potential effectiveness in developing social, digital, and personal competencies. The study addressed three key areas: participants' perceived increased awareness of selected topics, assessment of specific competency development, and the ability to apply acquired knowledge in practice.

### ***5.2 Increasing awareness of participants***

One of the first aspects analyzed was the question asking whether participants felt more aware of at least one of the areas covered during the course. Analysis of responses indicates that the vast majority of students noted an increase in their awareness of the topics discussed.

The largest group of respondents answered "yes," clearly indicating the positive impact the course had on their knowledge and reflection on the topics covered. Some participants selected "partially," which may suggest that the course inspired them to further deepen their knowledge, but not all topics were fully understood. A small number of respondents selected "difficult to say," which may be due to the short time between completing the training and completing the survey.

The results obtained indicate that participation in the course contributed to increasing students' awareness in areas such as social competences, active citizenship and responsible use of digital technologies.

Development of participants' competences

The next element analyzed was an assessment of the potential competencies that participants believed they would be able to develop after completing the course. Respondents could indicate several areas simultaneously.

The most frequently mentioned skill was better teamwork or collaboration within a group, demonstrating that participants recognize the importance of social skills in everyday functioning both in and outside the classroom. Equally common were responses regarding more effective communication, including online, indicating a growing awareness of the importance of communication skills in the digital world.

A significant number of students also indicated that after completing the course they would be able to better cope with stress, motivation and planning their own goals, which indicates that the course also influenced the development of competences related to self-regulation and personal development.

Recognizing digital threats and protecting privacy online were also important areas identified by participants. These responses suggest that students found the content on digital safety particularly valuable and useful.

Some respondents also noted greater awareness of social and environmental issues, which is consistent with the course's objectives of developing attitudes of social and civic responsibility. In individual cases, there was a response indicating a lack of certainty about the impact of the course on the development of competences, but this constituted a small percentage of all responses.

### ***5.3 Using knowledge in practice***

A key indicator of course effectiveness is the ability to apply acquired knowledge in real-life situations. Therefore, participants were asked whether they had already had the opportunity to apply the skills or knowledge acquired during the training.

Analysis of the responses indicates that a significant portion of participants reported using the knowledge they acquired in practice more than once. Another group of respondents indicated that they applied it at least once, which also demonstrates the practical nature of the skills they acquired.

Some participants indicated that they would not respond “yet, but I think it will happen”, which may be due to the fact that relatively little time has passed since the end of the course, and some competences only reveal their usefulness in specific social or educational situations. The obtained results suggest that the course had real potential to transfer knowledge into practice, which is one of the key indicators of the effectiveness of educational activities.

#### ***5.4 Overall evaluation of the course effectiveness***

Summarizing the analysis results, it can be concluded that the e-learning course was rated as a valuable learning experience by participants. Students reported increased awareness in numerous subject areas, development of social and digital skills, and the opportunity to apply the acquired knowledge in practice.

The collected responses indicate that the training program largely meets the goals of developing transversal competencies such as collaboration, communication, social responsibility, and the conscious use of digital technologies. These results also confirm that the use of modern teaching methods, such as e-learning platforms and interactive educational materials, can effectively support young people's learning process.

#### ***5.5. Interest in the next phase of the project – experience in augmented reality***

As part of the survey, participants were also asked about their level of interest in participating in the next phase of the project, which involves using Educational Ventures' augmented reality (AR) application. The purpose of this question was to understand students' attitudes toward continued participation in the project and their expectations for new forms of learning.

Analysis of the responses indicates that most participants demonstrate a high level of interest in participating in subsequent project activities. A significant number of respondents indicated "very," indicating considerable interest in the potential use of augmented reality technology in the learning process. Students perceive this form of education as innovative and attractive, especially considering its limited presence in the traditional school system.

A significant number of participants indicated that they would like to "probably, but first I'd like to better understand how it works," suggesting that students are interested in this new form of learning but need further explanation of how AR works. This may indicate the need for a brief introduction or demonstration of the technology before moving on to the next stage of the project.

Only a small number of respondents declared a low level of interest, which may be due to a lack of previous experience with augmented reality technology or uncertainty about its application in education.

Participants were also asked to describe their expectations for their next AR-based learning experience. Analysis of the responses indicates that students primarily expect greater interactivity and opportunities for practical use of the technology. One response suggested:

"I would like the next experience to be even more interactive and hands-on."

Some participants highlighted the opportunity to experiment with the technology themselves, which could increase their engagement in the learning process. One respondent noted:

"It would be nice if you could create something yourself or decide what happens."

The emerging suggestions also included proposals for more practical activities and combining activities in real space with augmented reality technology, for example through outdoor activities.

Some participants also emphasized that they didn't yet have clearly defined expectations for this form of learning, as it was a new learning experience for them. As one respondent pointed out:

"I don't know exactly what to expect from my next augmented reality experience, as it's still something new for me."

Overall, the survey results indicate that students are open to further participation in the project and interested in using augmented reality technology in education. At the same time, they expect future project activities to be practical, engaging, and enable active exploration of new technologies.

## ***CHAPTER 6 Conclusions and Recommendations***

The analysis of the evaluation survey results indicates that the e-learning course implemented in a blended learning format was positively assessed by participants in terms of both its organization and content. Students highly rated the quality of the teaching materials, the platform's level of interactivity, and the support provided by teachers and project coordinators. The responses obtained show that the course met the needs of secondary school students, particularly in developing social, civic, and digital competencies. Participants reported increased awareness of the topics covered during the training, improved cooperation, communication, and stress management skills, and a greater awareness of social and environmental issues. A significant outcome was also the recognition of the practical value of the knowledge acquired and the ability to apply it in everyday situations.

The evaluation results also confirm that the use of modern teaching methods, including an e-learning platform and interactive teaching materials, fosters active student participation and positively influences their motivation to learn. The low number of reported difficulties and high levels of satisfaction with the training demonstrate the effectiveness of the organizational and teaching solutions adopted.

At the same time, analysis of participant responses suggests several directions for further development. In particular, it is worth considering enriching the course with more multimedia materials, such as short films, podcasts, and more dynamic forms of content presentation. Suggestions also emerged for expanding the coverage of environmental issues and increasing the number of practical educational activities.

Particularly noteworthy is the high level of participant interest in the next phase of the project, which involves the use of augmented reality technology. The results indicate that students are open to innovative forms of teaching and perceive AR as an attractive and valuable educational tool. At the same time, some respondents indicated the need for prior explanation of how this technology works, suggesting the merits of a preparatory phase before implementing subsequent project activities.

In summary, the e-learning course implemented as part of the Educational Ventures project can be considered a valuable and effective learning experience. The results achieved indicate that the blended learning model is a promising solution for working with young people and can be successfully developed in subsequent stages of the project.