WILOS360

Co-funded by the European Union

INTERNAL EVALUATION REPORT

WITNESS LOCAL CUSTOMS IN 360

2023-1-ES01-KA220-SCH-000162182

A. Emvalotis & T. Zevgitis

TEACHING AND SCHOOL PEDAGOGY LABORATORY | UNIVERSITY OF IOANNINA

IOANNINA, 2026

Table of contents

Executive Summary

The present report provides an internal evaluation of the Erasmus+ KA220 project *"WILOS360 – Witness Local Customs in 360"*, focusing on the implementation process, the quality of project outputs, and the impact on its target groups.

The WILOS360 project aimed to explore the potential of Immersive Reality (IR) as an innovative educational tool for enhancing student engagement, promoting cultural awareness, and supporting the development of digital competences. By enabling students to virtually experience cultural events across Europe through 360° content, the project sought to strengthen European identity and introduce new pedagogical approaches in education.

The evaluation of the project was conducted using a utilization-focused approach, combining quantitative and qualitative data from students, teachers, and project partners. Data sources included entry and final questionnaires, evaluation of training activities, and feedback on impact and dissemination.

The findings indicate that the project achieved its main objectives, particularly in relation to engagement and innovation in teaching and learning. Students reported increased motivation, interest in learning, and improved digital skills. While initial responses reflected uncertainty and uneven expectations, final results demonstrate a clear shift toward more positive and structured learning experiences. The use of Immersive Reality was perceived as highly engaging, with students emphasizing the sense of presence and realism as key elements of the learning experience.

Teachers confirmed these findings and highlighted the strong pedagogical value of the project. They reported that immersive technologies enhanced student participation, supported interdisciplinary teaching, and contributed to more dynamic and interactive classroom environments. In addition, teachers developed both technical and pedagogical competences, demonstrating a clear intention to continue using immersive tools in their teaching practice.

The project also contributed to increased cultural awareness and, to a certain extent, the development of European identity. Both students and teachers reported improved understanding of cultural diversity and greater interest in other European countries. However, the impact in this area was moderate rather than uniform, which can be partly explained by the absence of physical mobility and direct interaction among students from different countries.

The evaluation of training activities showed high levels of satisfaction and effectiveness. Participants reported that the trainings were well-organized, relevant, and essential for building confidence in the use of immersive technologies. The hands-on approach and collaborative environment were identified as key success factors.

Despite these positive outcomes, several challenges were identified. These include technical constraints, limited access to equipment, and the complexity of integrating immersive technologies into classroom practice, particularly in large groups. In addition, while engagement was high, the impact on deeper learning outcomes and long-term intercultural development was more gradual.

The project demonstrates strong potential for sustainability and wider impact. Teachers expressed a clear intention to continue using the developed materials, and the project platforms provide accessible, multilingual resources that can be adopted by a broader educational community. At the same time, long-term sustainability will depend on continued support, infrastructure, and integration into educational systems.

In conclusion, WILOS360 provides evidence that Immersive Reality can serve as a powerful tool for educational innovation, particularly in enhancing engagement and supporting digital and cultural learning. Future initiatives should focus on strengthening pedagogical integration, expanding access to resources, and combining immersive technologies with opportunities for direct interaction in order to maximize their impact.

1. Introduction

1.1 Project Overview

The project *"Witness Local Customs in 360" (WILOS360)* is an Erasmus+ KA220 Cooperation Partnership in School Education, implemented over a period of 30 months (November 2023 – April 2026). The project brings together a multidisciplinary partnership consisting of schools, a higher education institution, and technical partners, aiming to integrate innovative technologies into education.

The central concept of the project is the use of Immersive Reality (IR) to enable students to virtually participate in cultural events and traditions across Europe. Through the use of 360° videos and immersive environments, students are "transported" to different cultural contexts, allowing them to experience heritage in a more engaging and meaningful way.

The project addresses key Erasmus+ priorities, including:

- the promotion of European values and cultural awareness,
- the development of digital competences, and
- the support of teachers in adopting innovative pedagogical approaches

The main outputs of the project include:

- a Cultural Platform featuring 360° representations of cultural events,
- an Educational Platform with lesson plans, worksheets, and teaching resources,
- a Training Platform to support educators in using Immersive Reality

These outputs aim to provide both students and educators with accessible, innovative tools that enhance teaching and learning processes across different educational contexts.

1.2 Purpose of the Evaluation

The purpose of this internal evaluation is to assess the extent to which the WILOS360 project has achieved its objectives, as defined in the original project proposal. The evaluation focuses on both the implementation process and the impact of the project outcomes on its target groups.

More specifically, the evaluation aims to:

- assess the effectiveness of project activities and outputs,
- examine the impact on students and teachers, particularly in terms of digital skills, engagement, and cultural awareness,
- evaluate the pedagogical value and usability of the developed materials and platforms,
- and provide evidence-based recommendations for future use, sustainability, and further development of the project results.

The findings of this evaluation will contribute directly to the final project report, while also supporting partners in improving the exploitation and long-term use of the project outcomes.

1.3 Evaluation Approach: Utilization-Focused Evaluation

The evaluation of the WILOS360 project is based on the Utilization-Focused Evaluation (UFE) approach, as proposed by Patton[1]. This approach emphasizes that evaluation should be designed and conducted with a clear focus on its intended use and users[2].

In this context, the evaluation has been structured to ensure that its findings are:

- practical and actionable,
- directly relevant to the needs of stakeholders,
- and useful for improving both current and future educational practices.

The primary intended users of this evaluation include:

- project partners,
- teachers and educators,
- school leaders,
- and stakeholders interested in adopting the project methodology.

The evaluation process combines both formative and summative elements:

- Formative evaluation was conducted throughout the project via meeting and training feedback.
- Summative evaluation focuses on the overall impact of the project at its completion.

By adopting a utilization-focused approach, the evaluation ensures that the results are not only descriptive but also support decision-making, sustainability, and wider adoption of the project outcomes.

2. Evaluation Framework

2.1 Evaluation Questions

The evaluation of the WILOS360 project is guided by a set of key questions that reflect the project's objectives and expected outcomes. These questions aim to assess both the effectiveness of implementation and the impact on target groups.

The main evaluation questions are:

[1] Patton, M. Q. (2008). *Utilization-Focused Evaluation*: SAGE Publications.
[2] Patton, M. Q. (2011). *Essentials of Utilization-Focused Evaluation*: SAGE Publications.

1. To what extent have the objectives of the project been achieved?
2. What is the pedagogical value of the developed materials and platforms?
3. What impact has the project had on students in terms of engagement, learning, and cultural awareness?
4. What impact has the project had on teachers in terms of skills development and classroom practice?
5. How effective is the use of Immersive Reality as an educational tool?
6. How usable and accessible are the project outputs (platforms and materials)?
7. What is the potential for sustainability and further exploitation of the project results?

These questions are directly aligned with the goals of the project and the priorities of the Erasmus+ programme.

2.2 Evaluation Criteria

The evaluation of the WILOS360 project was guided by a set of criteria reflecting its objectives and expected outcomes.

- Relevance refers to the extent to which the project addressed the needs of students and teachers in relation to digital competences, cultural awareness, and innovative pedagogical approaches.
- Effectiveness concerns the degree to which the project achieved its objectives, particularly in enhancing engagement, learning outcomes, and the use of Immersive Reality in education.
- Efficiency examines how well the project resources, activities, and time were managed in relation to the results achieved.
- Impact relates to the changes observed in students and teachers, including skills development, attitudes, and pedagogical practices.
- Sustainability refers to the extent to which the project results can continue to be used and developed beyond the project's duration.
- Transferability considers the potential of the project outputs and approaches to be applied in different educational contexts or by other stakeholders.

2.3 Evaluation Design

The evaluation of the WILOS360 project was designed following a utilization-focused approach, aiming to generate findings that are directly useful for stakeholders and support decision-making, improvement, and future development.

A mixed-methods design was adopted, combining quantitative and qualitative data in order to provide a comprehensive understanding of the project's implementation and outcomes. Quantitative data were collected through structured questionnaires administered at different stages of the project, including entry and final questionnaires for both students and teachers, as well as evaluation forms for training activities and meetings. These instruments allowed for the measurement of changes in participants' skills, attitudes, and perceptions over time.

Qualitative data were collected through open-ended questions included in the questionnaires, enabling participants to reflect on their experiences, expectations, and perceived impact. This approach provided deeper insight into the processes underlying the observed outcomes and allowed for the identification of strengths, challenges, and areas for improvement.

The evaluation followed a longitudinal logic, comparing baseline (entry) and final data in order to assess change and impact. This comparison was complemented by the analysis of training evaluations and partner feedback, allowing for the triangulation of data across different sources and stakeholder groups.

Particular attention was given to the perspectives of both students and teachers, recognizing their central role in the implementation of the project. In addition, feedback from project partners was used to assess aspects related to impact, dissemination, and sustainability.

The combination of quantitative and qualitative data, along with the inclusion of multiple stakeholders and data sources, ensured a robust and balanced evaluation design. This approach allowed for the identification of both measurable outcomes and contextual factors influencing the project, supporting a comprehensive interpretation of its effectiveness and impact.

3. Methodology

3.1 Data Sources

The evaluation is based on multiple data sources collected throughout the project implementation:

- Evaluation questionnaires from transnational meetings held in:
  - Thessaloniki
  - Ericeira
  - Ioannina
- Evaluation questionnaire from the online kick-off meeting
- Baseline questionnaires completed by:
  - students
  - teachers
- Final evaluation questionnaires completed by:
  - students
  - teachers
- Impact and Dissemination questionnaire completed by all partners

These data sources provide both longitudinal and cross-sectional insights into the project's implementation and impact.

3.2 Data Collection Methods

Data were collected using structured questionnaires, including:

- Likert-scale questions for quantitative analysis,
- multiple-choice questions,
- and open-ended questions for qualitative insights.

The use of multiple instruments ensured that:

- different aspects of the project were captured,
- feedback was collected from all target groups,
- and both measurable outcomes and personal experiences were documented.

3.3 Data Analysis

The analysis of the collected data combines:

- Quantitative analysis:
  - descriptive statistics (means, percentages)
  - comparison between baseline and final responses
- Qualitative analysis:
  - thematic analysis of open-ended responses
  - identification of key patterns and recurring themes

This mixed-methods approach allows for a deeper understanding of both the measurable impact and the perceived value of the project.

3.4 Limitations

Despite the comprehensive design of the evaluation, some limitations should be acknowledged:

- Delays in data collection due to the need to re-record cultural events, as many events occur only once per year.
- Variability in participation levels across partners and countries.
- Dependence on self-reported data, which may introduce subjectivity.

However, the use of multiple data sources and methods helps to mitigate these limitations and ensures the overall reliability of the findings.

4. Implementation Overview

4.1 Overview of Project Implementation

The WILOS360 project was implemented over a period of 30 months through a structured yet flexible approach, combining collaborative work among partners with the development of innovative educational outputs.

The implementation process involved continuous interaction between partner organisations, including schools, a higher education institution, and technical partners. This multidisciplinary collaboration allowed the project to integrate pedagogical expertise with technological development.

Project activities were organised across different work packages, each contributing to the overall objective of integrating Immersive Reality (IR) into educational practice. The implementation included research, content development, training activities, and the creation of digital platforms.

Regular communication among partners was maintained through online meetings, transnational meetings, and shared digital environments, ensuring coordination and alignment throughout the project lifecycle.

4.2 Development of Project Outputs

The project resulted in the development of several key outputs designed to support both students and educators.

The Cultural Platform includes a collection of 18 cultural events, with six events contributed by each participating country. These events are presented through 360° immersive content and are accompanied by detailed descriptions, including historical background and cultural significance.

The Educational Platform includes 23 lesson plans developed by partner schools. These materials are designed to support the integration of immersive learning into classroom practice across different subjects and educational levels.

The Training Platform includes a structured training course aimed at supporting educators in the pedagogical use of Immersive Reality.

All project outputs are available in four languages (English, Greek, Spanish, and Portuguese), ensuring accessibility and supporting transnational use.

4.3 Work Package Implementation

The implementation of the project was structured around key work packages.

Work Package 2 focused on the development of the Cultural Platform. Activities included the identification and documentation of local cultural events, the production of 360° audiovisual material, and the preparation of accompanying descriptive content.

Work Package 3 addressed the development of the Educational Platform. This included the design of lesson plan templates, the creation of educational materials, and the development of pedagogical approaches for the use of immersive content in teaching.

Work Package 4 focused on the Training Platform. Activities involved the preparation of training materials and the organisation of learning activities aimed at supporting teachers in adopting immersive technologies.

Each work package involved contributions from multiple partners, reflecting the collaborative nature of the project.

4.4 Participation and Engagement

The project involved the active participation of both students and teachers from partner organisations.

Students participated in activities such as:

- researching cultural events,
- contributing to the creation of content,
- engaging with immersive learning materials.

Teachers were involved in:

- developing educational content,
- implementing lesson plans,
- participating in training activities.

In addition, local communities contributed to the project through interviews and the sharing of cultural knowledge, particularly in relation to local traditions and customs.

Participation levels varied across activities and partners, reflecting differences in local contexts and available resources.

4.5 Deviations and Adaptations

During the implementation of the project, several adaptations were made in response to practical and contextual challenges.

A key challenge was related to the recording of cultural events in 360° format. In some cases, technical issues affected the quality of the recorded material, leading to the need for re-recordings. Since many cultural events take place annually, this resulted in delays in content production.

In addition, one of the transnational meetings, originally planned to take place in Latvia, was relocated to Ericeira (Portugal) following agreement among partners.

Adjustments were also made in the development of the digital platforms, including redesign processes aimed at improving usability and functionality.

These adaptations reflect the dynamic nature of the implementation process and the need to respond to emerging challenges.

4.6 Summary of Implementation Context

The implementation of the WILOS360 project took place within a dynamic and evolving context, characterised by collaboration among diverse partners and the integration of innovative technologies into educational practice.

While the project followed a structured plan, adjustments were required to address technical, logistical, and contextual challenges. Despite these challenges, the development of project outputs continued, supported by ongoing communication and cooperation among partners.

The implementation context provides the necessary background for understanding the evaluation results presented in the following section.

5. Evaluation Results

5.1 Evaluation of Meetings and Training Activities

The evaluation of training activities focuses on the quality of implementation, participant satisfaction, and the effectiveness of knowledge transfer throughout the project.

Data were collected from:

- the online kick-off meeting,
- the training activity in Thessaloniki,
- the training activity in Ericeira,
- and the training activity in Ioannina.

All face-to-face meetings were implemented as training activities, each with a distinct pedagogical focus aligned with specific work packages.

5.1.1 Online kick-off meeting

The online kick-off meeting established a shared understanding among partners regarding project objectives, roles, and communication procedures. Participants reported clarity and effective coordination, although interaction was more limited due to the online format.

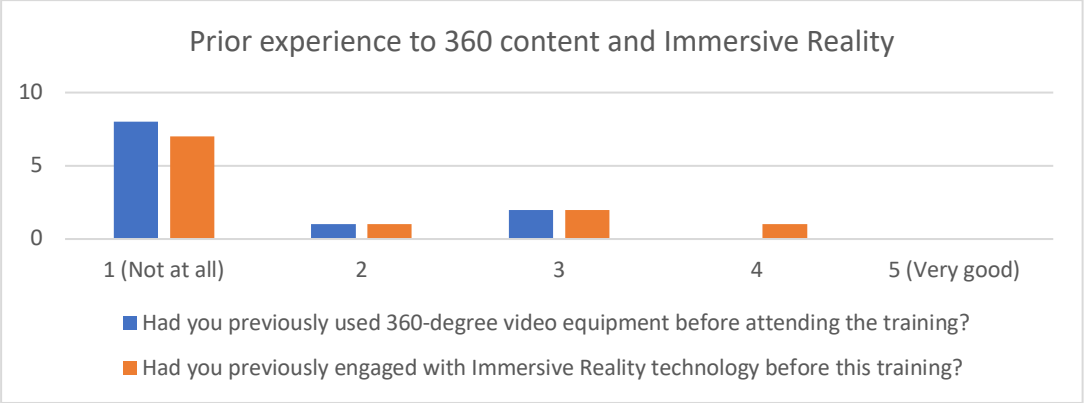
Here are some indicative responses.
"All the partners seem to be in focus to work and collaborate in this project. The coordinator discussed in detailed the timeline of the project. We know what is being expected from us and how to do it."
"Clarity of information and connection between partners"

"To be on site (the meeting) so that we can meet each other in person."

5.1.2 Training course on the usage of Immersive Reality technology and 360 video (Thessaloniki)

The training in Thessaloniki focused on the use of Immersive Reality technologies and 360° content production. Participants evaluated the training as highly relevant and reported increased confidence in using immersive tools.

The average self-reported prior experience with 3D content creation was 1.5 on a 1–5 scale, and the average prior engagement with Immersive Reality technology was 1.7. These relatively low values indicate that for most participants the topic was new or only partially familiar. Despite this, the training content was rated as highly relevant to participants' roles (mean rating 4.8 out of 5). This confirms that the training addressed real needs within the partnership.



The inclusion of relevant examples and case studies was very positively evaluated (mean=4.8), and the quality and accessibility of the technological resources used during the training was rated 4.9 out of 5.

Finally, participants reported very high levels of confidence in applying what they had learned in their work or future projects (mean=5.0). All respondents described the pace of the training as "just right", and none reported significant technical difficulties.

The qualitative responses indicate that participants perceived the training as highly relevant and applicable to their professional practice. A key finding is that participants intend to actively use the acquired knowledge in both teaching and content creation, particularly in relation to the development of immersive educational materials.

Several responses highlight the creative and pedagogical potential of 360° video production, suggesting that the training supported not only technical skill development but also reflective thinking regarding content design. For example, one participant noted that "*making the videos is creative on its own… thinking what event you should capture and from which angle… is very inspiring*", while another emphasized its application "*in educational and cultural programs*".

In addition, participants expressed intentions to disseminate the acquired knowledge within their institutions, indicating potential multiplier effects. This is reflected in responses such as

"*I will share with my colleagues and then we will take films in our projects*" and "*we will use the knowledge gained… to educate other interested people*".

Regarding participants' overall experience, the training was evaluated very positively, with particular emphasis on its practical orientation, collaborative atmosphere, and the expertise of the trainers. The importance of hands-on learning is evident in responses such as "*the practice*" and "*the walking routes recording 360 videos*", while others highlighted "*the excellent preparation of the hosting organization*" and "*the knowledge and expertise on the topic from the instructor*".

In terms of areas for improvement, responses were minimal, with most participants indicating that the training met their expectations. Comments such as "*everything was fine*", "*nothing*", and "*everything was just perfect*" suggest a high level of satisfaction. A small number of participants proposed further opportunities for practice and refinement, as reflected in the suggestion "*we need to share our movies and improve movements and techniques*".

5.1.3 Training on usage of Immersive Reality technology in education (Ericeira)

The training in Ericeira focused on the development and implementation of lesson plans within the framework of Work Package 3. The activity aimed to support partners in understanding the structure, pedagogical approach, and practical application of the educational materials. Participants reported that the training facilitated the development of teaching competences and supported the alignment of lesson plans across partners.

The qualitative results indicate that the training addressed a clear initial gap in the use of immersive technologies in teaching practice. The majority of participants reported little or no prior experience with Immersive Reality, with most responses concentrated at the lowest level of familiarity (mean=1.6). This confirms that the training targeted a relevant and underdeveloped area of pedagogical practice.

Despite this limited prior experience, participants evaluated the training as highly relevant to their professional roles, with all respondents rating its relevance at the highest level. This suggests strong alignment between the training content and the needs of the participants.

The structure of the lesson plans was also evaluated very positively, with the majority of participants rating it as very comprehensive. This indicates that the training successfully provided clear guidance and a structured framework for the development of educational content within the project.

The pacing of the training was considered appropriate by all participants, suggesting that the balance between theoretical input and practical application met their expectations. In addition, the instructors were consistently rated as highly knowledgeable, reflecting the quality of expertise provided during the training.

Importantly, participants reported high levels of confidence in continuing their work after the meeting, with the vast majority indicating that they felt very confident. This finding

suggests that the training was effective not only in transferring knowledge but also in empowering participants to apply it independently.

The qualitative responses further reinforce the positive evaluation of the training, highlighting both its pedagogical value and its contribution to collaboration among partners.

Participants particularly valued the opportunity to clarify expectations and gain a clear understanding of the next steps in the project. The presence of concrete and visual examples was identified as a key strength, supporting comprehension and reducing uncertainty. This is reflected in responses such as "there were visual examples of what is expected" and "any doubts the participants might have were clarified."

In addition, the training was perceived as an important opportunity for strengthening collaboration and team cohesion. Participants emphasized the positive interpersonal dynamics and the benefits of face-to-face interaction, as illustrated in comments such as "*good cooperation and positive interaction*", "*very good vibes*", and "*the team-building process that happened in Ericeira*".

The face-to-face format itself was also highlighted as a valuable aspect of the meeting, suggesting that in-person interaction plays an important role in facilitating both learning and collaboration.

In terms of suggestions for improvement, responses were minimal, with most participants indicating that no changes were needed. Feedback such as "*nothing to report*" and "*just to keep being the same useful, joyful and practical as they were so far*" reflects a high level of satisfaction with both the structure and the content of the training.

5.1.4 Train the trainers (Ioannina)

The training in Ioannina focused on the pilot implementation of the training course developed under Work Package 4. During this activity, participants tested the course content and structure, and provided feedback on necessary revisions. This process contributed to the refinement and finalization of the training material.

The qualitative results indicate a very positive evaluation of the training course structure, with all participants rating its depth and detail at the highest level. This suggests that the developed training material was perceived as comprehensive, well-organized, and suitable for its intended purpose.

The discussion regarding the final version of the training material was also evaluated very positively, with the majority of participants considering it very effective (mean=4.8). This reflects the value of the collaborative review process in refining the course content and ensuring its quality.

Regarding the extent to which the discussion covered participants' needs, responses were slightly more distributed, although still consistently high (mean=4.5). While half of the participants indicated that their needs were fully covered, the remaining responses suggest

that some participants identified areas where further clarification or development could be beneficial.

The qualitative responses further confirm the positive evaluation of the training, particularly in relation to its organization, clarity, and collaborative character.

Participants consistently reported that no technical difficulties were encountered during the meeting, suggesting that the training was well-prepared and effectively implemented. This is reflected in responses such as "*we didn't encounter any issue, everything went according to the programme*" and "*everything was explained very clearly*". The absence of technical barriers appears to have facilitated a smooth and productive learning environment.

A central theme emerging from the responses is the strong emphasis on collaboration and teamwork. Participants highlighted the value of interaction and shared reflection, indicating that the meeting provided an important space for collective work and coordination. This is evident in comments such as "*the collaborative atmosphere*", "*our mutual trust, collaboration, and exchange of best practices*", and "*sharing experiences*".

In addition, participants appreciated the structured organization of the meeting and the clarity in planning future tasks. The importance of coordination is reflected in responses such as "*the division of tasks and their clear planning*" and "*teamwork to plan the next tasks to be carried out*". These findings suggest that the meeting was effective not only as a training activity but also as a coordination mechanism for the final stages of the project.

Regarding areas for improvement, most participants expressed a high level of satisfaction, indicating that no significant changes were required. Responses such as "*nothing to suggest*", "*everything was very well organised*", and "*I wouldn't change a thing*" highlight the overall positive perception. A small number of participants suggested the need for more time or broader participation, as reflected in comments such as "*it would be better if we had more time to work on the project*".

5.1.5 Summary of the trainings

The training activities played a central role in supporting capacity building and ensuring the effective implementation of the project.

Across all training activities, participants reported:

- high levels of satisfaction,
- effective knowledge transfer,
- and strong collaboration among partners.

At the same time, some limitations were identified, including time constraints and varying levels of familiarity with the technologies used.

5.2 Baseline and Final Evaluation – Students

5.2.1 Baseline Findings

The qualitative results provide a nuanced picture of students' initial conditions in relation to digital competence, familiarity with immersive technologies, and readiness for international collaboration.

The baseline findings suggest that students entered the project with:

- moderate and uneven digital competences,
- varied familiarity with immersive technologies,
- limited understanding of project requirements,
- mixed levels of motivation for international collaboration,
- generally positive but not uniform attitudes toward cultural diversity.

In terms of digital skills, students reported moderate to relatively high familiarity with digital tools. The majority of responses were concentrated in the middle and upper levels of the scale, indicating that most participants possessed a functional level of digital competence, although only a smaller proportion identified as advanced users. This suggests that while students were generally prepared to engage with digital aspects of the project, there was variability in their level of confidence and expertise.

When focusing specifically on immersive technologies, the findings indicate a mixed level of prior exposure to 360° material. While a significant number of students reported having used such content at least occasionally, a notable proportion had either never encountered it or were not familiar with the concept. This variability highlights the importance of the project in establishing a common baseline and ensuring that all participants develop the necessary understanding of immersive environments.

In contrast to their general digital familiarity, students reported lower levels of confidence regarding their understanding of the project's requirements. Responses were distributed across the lower and middle levels of the scale, with only a very small number indicating a high level of familiarity. This suggests that, at the beginning of the project, many students were uncertain about the skills and expectations involved, reinforcing the importance of initial guidance and structured support.

Regarding collaboration, students expressed generally positive attitudes toward working with peers from other countries, although responses were more varied compared to previous assumptions. While a substantial number reported high levels of excitement, a noticeable proportion indicated moderate or even low enthusiasm. This suggests that, although there is strong potential for engagement, not all students initially felt equally confident or motivated.

Previous experience with international collaboration was limited, with most students reporting no prior involvement in similar activities. This confirms that the project represents a new learning context for the majority of participants.

Awareness of the project's international dimension was also relatively limited, as only about half of the students were able to identify the partner countries, while others were unsure or unaware. This further supports the need for clearer communication and orientation at the early stages of the project.

In terms of cultural awareness, most students acknowledged the existence of cultural differences between project partners. However, responses regarding the importance of understanding and respecting these differences were more varied. While the majority considered it important or very important, a smaller group assigned lower importance, indicating differences in students' initial attitudes toward intercultural competence.

The qualitative responses provide a diverse and, in some cases, contrasting picture of students' expectations and attitudes at the beginning of the project.

A key finding is the variability in students' expectations. While a number of participants expressed positive expectations related to gaining new experiences, developing skills, and meeting new people, others indicated limited or no expectations. Responses such as "*new experiences and knowledge about filming*", "*communication and socialising skills*", and "*learn how to use 360 devices*" reflect an interest in both technical and social aspects of the project. At the same time, responses such as "*nothing" and "I don't expect anything*" suggest that a portion of students entered the project with low engagement or unclear expectations.

In terms of perceived benefits, the responses were again mixed. Some students identified potential academic and personal gains, including improvements in communication, creativity, and collaboration, as reflected in statements such as "*it would give me more patience and creativity*" and "*I will learn from other people*". However, several participants expressed uncertainty or skepticism, with responses such as "*I don't think it will benefit me*" and "*I don't know*". This indicates that the perceived value of the project was not equally understood by all participants at the outset.

When considering potential challenges, the dominant theme across responses is the language barrier, which was frequently identified as the main difficulty in international collaboration. Comments such as "*it is hard to communicate*", "*the language barrier is difficult*", and "*I'm not used to talk in English*" highlight students' concerns regarding communication. Cultural differences were also mentioned, although less frequently, and were sometimes perceived as a secondary challenge.

Despite these concerns, some students demonstrated an initial awareness of how such challenges could be addressed. Suggested strategies included improving communication efforts and actively trying to understand others, as reflected in responses such as "*I would address this problem by trying harder to understand what they are saying*".

In relation to effective collaboration, a strong and consistent theme across responses is the importance of respect and mutual understanding. Many students emphasized respect as the key factor for successful interaction, as seen in responses such as "*teach respect and brotherhood*", "*respect others*", and "*it is important to respect people from other countries*". In addition, practical suggestions such as the use of a common language (English) or translation tools were also mentioned.

Finally, the overall tone of the responses suggests a combination of:

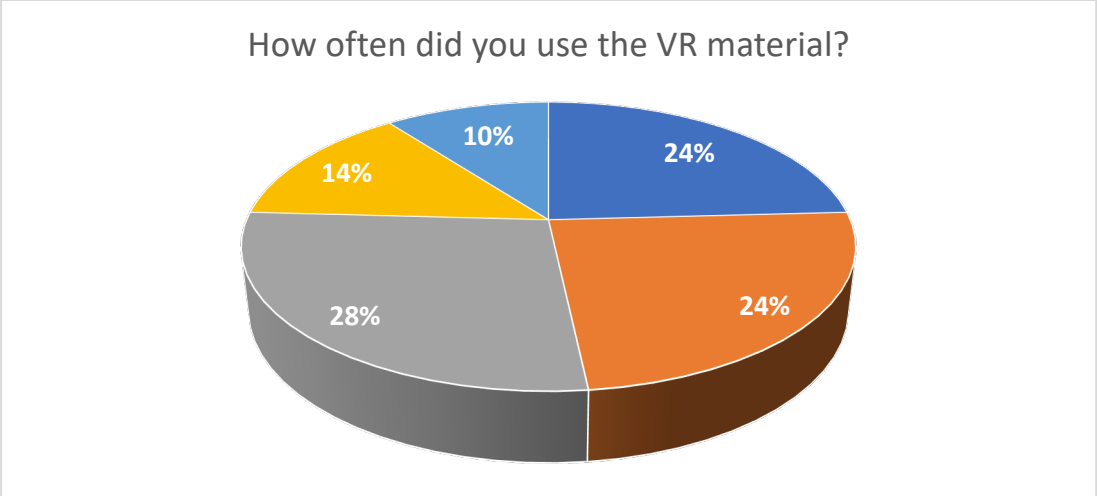
- enthusiasm among some students,
- uncertainty among others,
- a general openness to participation.

Comments such as "*I hope that I can learn new things and skills*" coexist with neutral responses like "*I don't know*", indicating that student engagement at the beginning of the project was not uniform.

5.2.2 Final evaluation Findings

The final evaluation results provide a comprehensive picture of students' participation, experiences, and perceived outcomes of the WILOS360 project.

Students were involved in a range of project activities, with the majority participating in VR experiences, while a smaller number were engaged in content creation and research-related tasks. This suggests that the project was more widely experienced as a learning tool rather than as a production-oriented activity.



The frequency of VR use varied among participants, with responses distributed across all levels. While some students reported frequent use, others indicated limited engagement. This variability suggests that access, time, or implementation differences may have influenced the level of exposure to immersive content.

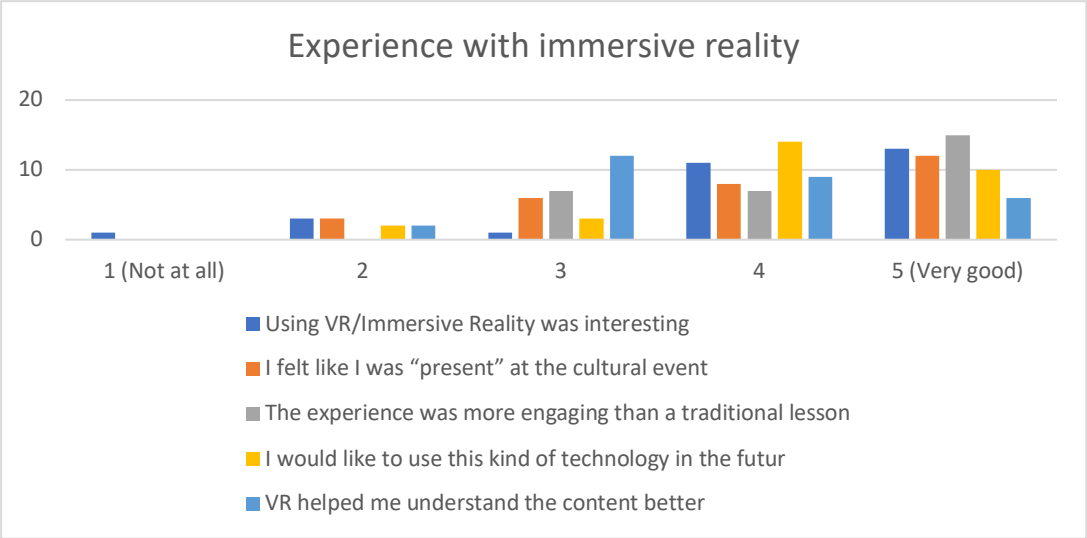
Students evaluated the use of Immersive Reality very positively. Most participants found the experience interesting, with responses strongly concentrated in the higher levels of the scale.

The sense of presence within cultural events was also reported at relatively high levels, indicating that the immersive component was effective in creating a realistic and engaging learning environment.

In addition, a clear majority of students considered the experience more engaging than traditional lessons, confirming the added value of immersive technologies in increasing student motivation.

Students also expressed a strong willingness to use such technologies in the future, suggesting that the project had a lasting influence on their attitudes toward innovative learning tools.

However, responses regarding the extent to which VR improved understanding were more moderate, indicating that while engagement was high, the cognitive benefits were perceived as more variable.



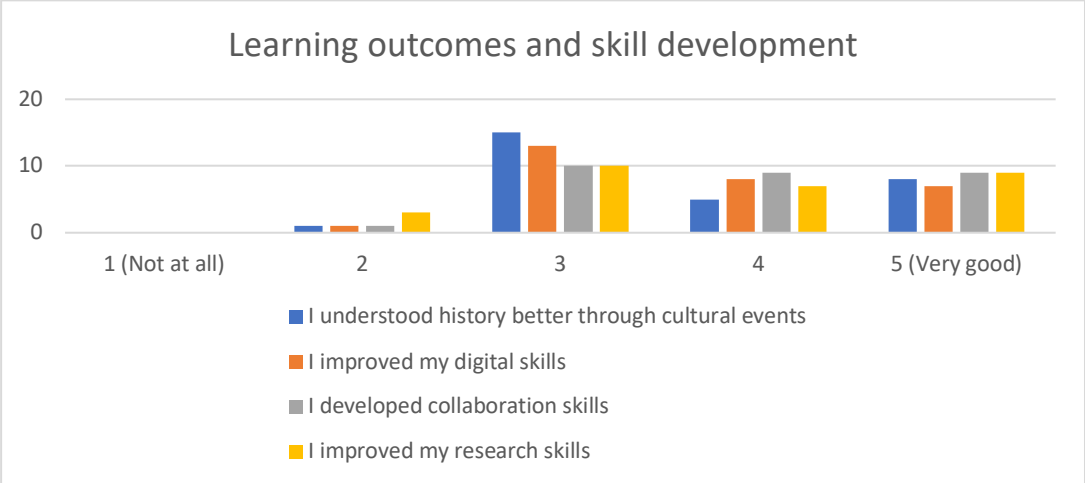
Regarding the learning outcomes and skill development, the results indicate moderate to strong perceived learning outcomes.

Students reported improvements in:

- digital skills,
- collaboration skills,
- research skills.

However, responses were more concentrated in the middle to upper levels rather than exclusively at the highest level, suggesting gradual rather than transformative development .

Understanding of cultural content and history also improved, although again with some variation among participants. This indicates that the learning impact was present but not uniform across all students.

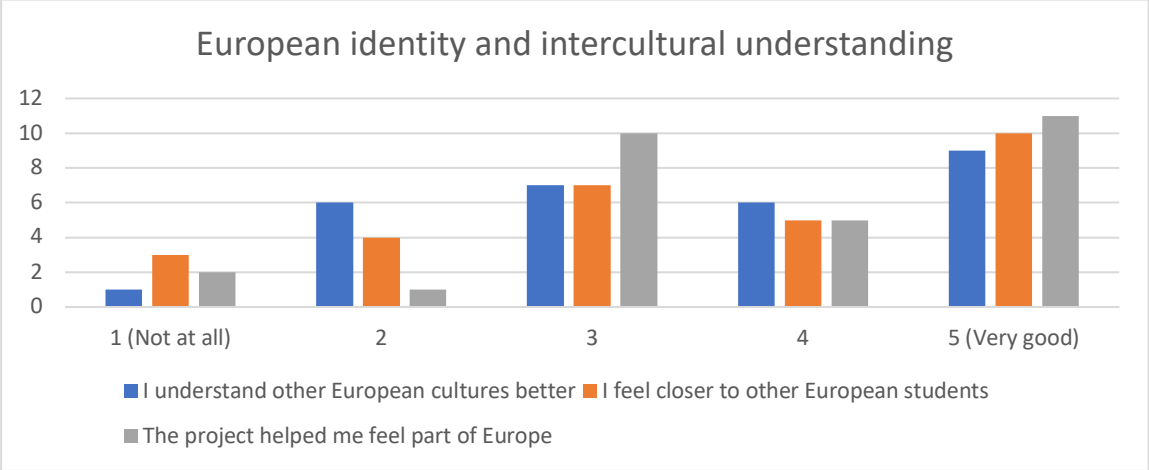


The findings indicate a generally positive, though moderate, impact on students' intercultural awareness and sense of European identity.

Students reported improved understanding of other cultures and increased interest in other countries. However, the development of a strong sense of connection with peers from other countries appears more limited.

This can be partly explained by the absence of physical mobility, as direct interpersonal interaction often plays a significant role in shaping intercultural experiences and identity formation.

Nevertheless, the use of immersive content appears to have contributed to raising awareness and supporting initial stages of intercultural understanding.



Students who participated in content creation activities reported positive experiences, particularly in terms of creativity and engagement.

The majority indicated that they felt creative during the process (mean=3.9) and gained a better understanding of local history (mean=4.0). Interaction with the local community was also evaluated positively (mean=3.9), suggesting that the project successfully connected learning with real-world contexts.

However, responses regarding the ease of content creation were more varied, indicating that some students found the process challenging (mean=3.6). This reflects the complexity of immersive content production and the need for structured support.

The evaluation of the project platform (WILOS360.eu) was generally positive. Students reported that the platform was easy to use (mean=4.0) and the material understandable (mean=4.1), while the overall experience was considered enjoyable (mean=4.4). However, some variation in responses regarding navigation (mean=3.8) suggests that minor usability improvements could enhance the user experience.

Overall satisfaction with the project was high, with the majority of students reporting that they were very satisfied (mean=4.4).

In addition, nearly all participants indicated that they would recommend the project to other students. This suggests a strong positive perception of the overall experience and its value.

The qualitative responses indicate a generally positive shift in students' perceptions, with a clearer articulation of learning outcomes and experiences compared to the initial stage of the project.

A dominant theme in the responses is the acquisition of technological knowledge and experience, particularly in relation to Immersive Reality. Students highlighted their engagement with new tools and skills, as reflected in responses such as "*I have improved my technological skills*", "*overall knowledge about this kind of technology*", and "*I have learnt to use other type of technology*". This suggests that the project successfully addressed one of its core objectives related to digital competence development.

In addition, students reported increased cultural awareness and understanding, with several responses emphasizing learning about other countries and local traditions. Indicative comments include "*to better understand other European cultures*" and "*I have learned more customs and traditions about my country*". This reflects a dual impact, both in terms of international awareness and deeper connection with local heritage.

Students also emphasized the experiential and immersive nature of the project as one of its most valuable aspects. The use of VR technology appears to have created a strong sense of presence and engagement, as reflected in responses such as "*it is so similar to real life… I thought I was there*" and "*feeling like I was there*". The use of equipment, such as VR headsets and 360 cameras, was frequently mentioned as a particularly enjoyable element.

Another important theme is the social and collaborative dimension of the project. Students appreciated the interaction with peers and the overall positive atmosphere, as seen in responses such as "*I love the people who are working in the project*" and "*the funny moments during the filming*". This suggests that the project contributed to creating a supportive and engaging learning environment.

In terms of areas for improvement, most responses indicate high levels of satisfaction, with many students stating that no significant changes were needed. Comments such as "*nothing*" and "*everything was good*" reflect this overall positive perception. However, a few participants suggested increased use of VR or greater student participation, as reflected in responses such as "*use VR more often*" and "*the overall student participation*". These suggestions point toward opportunities for enhancing engagement and inclusivity.

It is also worth noting that a small number of responses were vague or neutral (e.g., "*I don't know*", "*yes*"), indicating that not all students were equally reflective or engaged in articulating their experience.

5.2.3 Comparison of Baseline and Final Results

The comparison between baseline and final results indicates a clear shift in students' perceptions, engagement, and learning outcomes over the course of the project.

At the initial stage, students demonstrated moderate digital competence but limited familiarity with immersive technologies and an uneven understanding of the project's requirements. Their expectations were varied, with some expressing enthusiasm while others showed uncertainty or low expectations. In addition, most students had little or no

prior experience with international collaboration and identified language barriers as a potential challenge.

By the end of the project, students reported significantly more positive and concrete experiences. Familiarity with Immersive Reality increased, and students were able to clearly identify the technological skills they had developed. While initial responses often included uncertainty (e.g., "I don't know", "nothing"), final responses reflected more structured learning outcomes, such as improved digital skills, better understanding of cultural content, and increased engagement with innovative technologies.

Motivation and engagement also appear to have improved. While initial excitement was present but uneven, final results show that students found the experience interesting, enjoyable, and more engaging than traditional lessons. The immersive nature of the activities contributed to this shift, particularly through the sense of presence and interaction with cultural content.

In terms of collaboration and intercultural understanding, the project contributed to increased awareness of other cultures and a stronger interest in European contexts. However, the impact in this area was moderate rather than strong, which can be partly explained by the absence of physical mobility and direct interaction with peers from other countries.

Overall, the findings suggest that the project successfully transformed initial uncertainty into meaningful engagement and learning. The most significant impact is observed in:

- increased familiarity with immersive technologies,
- improved digital and transversal skills,
- enhanced motivation and engagement in the learning process.

At the same time, the results indicate that deeper outcomes, such as intercultural identity development, may require longer-term or more direct interaction to be fully achieved.

5.2.4 Impact on Students (Teachers' Perspective)

The evaluation of student outcomes from the perspective of teachers indicates a consistently positive impact across multiple domains, including digital skills, cultural understanding, collaboration, and motivation.

Teachers reported that students developed digital competences to a significant degree, with responses concentrated in the upper levels of the scale (mean=4.3). This suggests that participation in the project contributed to strengthening students' ability to engage with digital tools and technologies, particularly in relation to immersive environments and content creation.

In addition, teachers observed a notable improvement in students' understanding of cultural diversity. The majority of responses indicate that students gained a better awareness of other cultures, reflecting the effectiveness of the project's focus on cultural heritage and immersive experiences as a means of promoting intercultural learning (mean=4.5).

The impact on students' sense of European identity was also evaluated very positively (mean=4.6). Most teachers reported that students' sense of belonging to a broader

European context was strengthened, suggesting that the project successfully contributed to one of its key objectives, despite the absence of physical mobility activities.

Furthermore, teachers indicated that students improved their collaboration skills, although responses show slightly more variation in this area compared to others (mean=4.3). This suggests that while collaboration was enhanced, its development may have been influenced by contextual factors, such as the nature of interaction and the level of direct communication with peers from other countries.

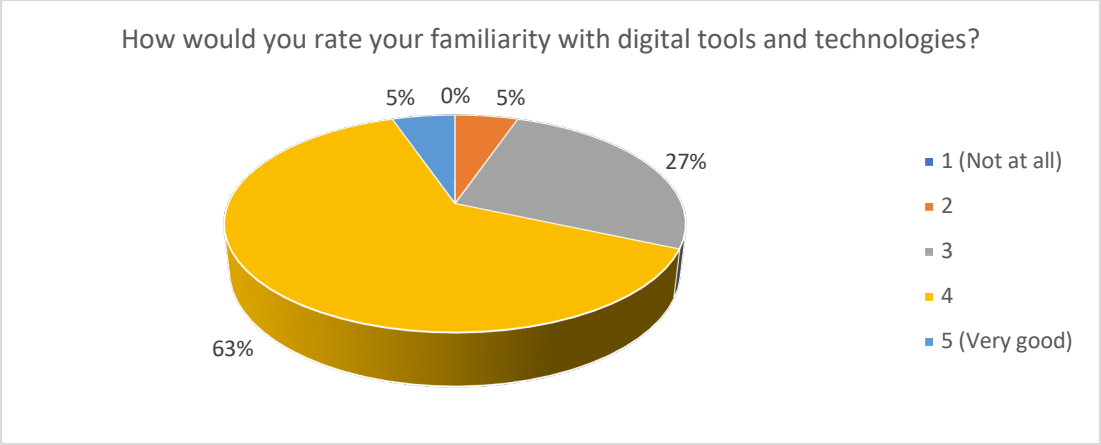
Student motivation and interest in learning were also reported to have increased significantly (mean=4.6). Teachers consistently observed higher levels of engagement, indicating that the use of immersive technologies and experiential learning approaches had a positive effect on students' attitudes toward learning.

5.3 Evaluation Results – Teachers

5.3.1 Baseline Findings

The baseline results for teachers indicate a relatively high level of readiness in terms of digital competence, combined with strong prior experience in international collaboration and highly positive attitudes toward intercultural engagement.

In terms of digital skills, the majority of teachers reported moderate to high familiarity with digital tools, with responses concentrated in the upper levels of the scale. This suggests that participants were generally well-prepared to engage with the technological aspects of the project, although only a small number identified as highly advanced users.



However, when focusing specifically on immersive technologies, such as 360° material, prior experience appears more limited. Most teachers reported either no previous exposure or only occasional use, indicating that while general digital competence was strong, familiarity with immersive tools was still developing. This highlights the relevance of the project's training component.

In contrast to students, teachers demonstrated a relatively high level of understanding of the project's requirements from the outset (mean=4.1). The majority indicated that they were familiar or very familiar with the expected skills, suggesting that initial project communication and planning were effective at the professional level.

Teachers also expressed very high levels of motivation for international collaboration, with all participants indicating strong enthusiasm (mean=4.2). This is further supported by their prior experience, as all respondents had participated in international projects to some extent, with many having extensive experience across multiple initiatives.

Awareness of the project context was also very high, as all participants were familiar with the partner countries and recognized the existence of cultural differences. Furthermore, all teachers considered the understanding and respect of cultural differences to be very important, indicating a strong foundation for intercultural collaboration.

The qualitative responses indicate that teachers entered the project with clear expectations, strong professional motivation, and a well-defined understanding of its potential value.

A dominant theme across responses is the intention to develop digital and technological competences, particularly in relation to Immersive Reality and 360° content. Teachers emphasized their interest in acquiring practical skills that could be directly applied in the classroom, as reflected in responses such as "*improving my knowledge about 360 technology to put it into practice in my lessons*" and "*skills in new technologies and digital devices*". This suggests a strong alignment between teachers' expectations and the project's technological objectives.

In addition, teachers highlighted the importance of pedagogical innovation, expressing the intention to make their teaching more engaging and interactive. Responses such as "*create a new, funnier and different way to teach*" and "*make my lessons more interesting*" indicate a clear focus on enhancing the learning experience of students through innovative approaches.

Another key theme is the emphasis on cultural exchange and European dimension. Teachers expressed strong interest in learning about cultural traditions and fostering intercultural understanding among students. This is reflected in responses such as "*to know better the customs and values of other countries*" and "*making my students learn about European identity and other cultures*"

.Teachers also demonstrated a strong orientation toward collaboration and professional development, emphasizing the value of exchanging ideas and practices with colleagues from other countries. Indicative responses include "*exchange ideas with foreign colleagues*" and "*gain new ideas and collaborations that will help me in the development of my job*". This reflects a high level of readiness for transnational cooperation.

In terms of expected outcomes, teachers emphasized the importance of producing useful and sustainable educational material, as seen in responses such as "*creating a bulk of materials that will be useful for our classes*" and "*good material, entertaining but also educational*". This suggests a focus on long-term impact beyond the duration of the project.

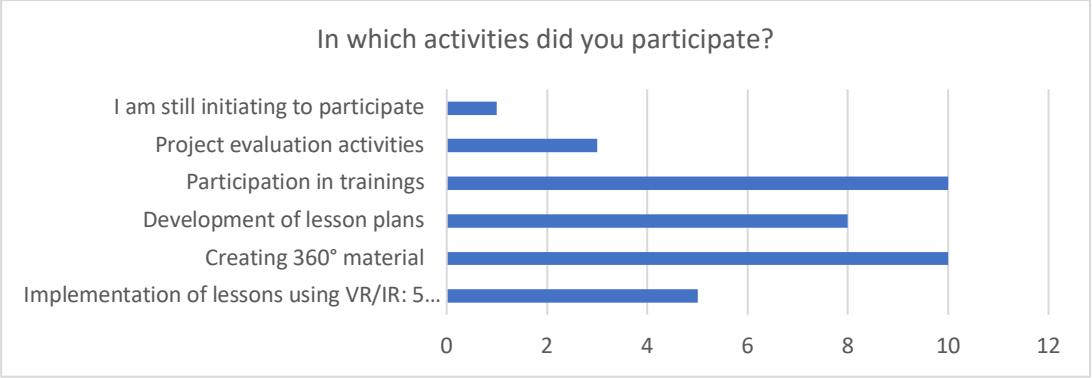
Regarding potential challenges, teachers identified issues such as language barriers, cultural differences, and coordination across contexts. However, these challenges were generally framed as manageable, with proposed solutions emphasizing communication, collaboration, and mutual understanding. For example, participants highlighted "*good will to have a multicultural working team*" and "*open mind and open heart*" as key strategies for overcoming difficulties.

Finally, responses related to effective collaboration consistently emphasized communication, respect, and structured coordination. Teachers highlighted the importance of "*constant communication*", "*mutual collaboration*", and "*respect between all participants*", indicating a strong awareness of the conditions necessary for successful transnational cooperation.

5.3.2 Final Findings

The final evaluation results indicate a high level of engagement, strong pedagogical value, and overall positive perceptions regarding the use of Immersive Reality in education.

Teachers participated in a range of project activities, with higher levels of involvement in content creation, training activities, and lesson plan development. A smaller proportion reported implementing lessons using VR/IR in the classroom, suggesting that while teachers actively contributed to the development of materials, the integration of these tools into everyday teaching practice remains at a developing stage. Similarly, the use of project materials varied among participants (mean=3.1), with most reporting moderate to frequent use, but no responses at the highest level, indicating that full integration has not yet been fully achieved.



The pedagogical value of the project materials was evaluated very positively. Teachers consistently reported that the materials support the teaching of history, promote interdisciplinary learning, enhance student engagement, and facilitate active learning approaches (mean=4.4). Furthermore, the materials were considered suitable for addressing different learning styles and applicable within the existing curriculum, suggesting that the project outputs are both relevant and adaptable to real educational contexts (mean=4.6).

The use of Immersive Reality was perceived as having a strong positive impact on the learning process. Teachers reported improvements in the overall learning experience, increased student motivation and interest (mean=4.5), and enhanced understanding of concepts. However, the perceived ease of implementation was somewhat lower, indicating that while the benefits of the technology are clear, practical integration into classroom settings may require additional effort, time, or support. Despite this, most teachers expressed a clear intention to continue using such technologies in the future (mean=4.2), reflecting a sustained change in their professional attitudes.

The evaluation of the project platforms was also highly positive. Teachers considered the platforms user-friendly (mean=4.4), the content of high quality (mean=4.3), and the navigation clear (mean=4.4). In addition, the materials were perceived as ready for classroom use and aligned with teachers' needs (mean=4.2), suggesting that the platforms effectively support both access and application of the project outputs.

Support mechanisms within the project were evaluated positively as well. Teachers reported that collaboration with partners was sufficient (mean=4.3), training activities were useful (mean=4.4), and the provided materials and technical support were adequate (mean=4.2). These findings indicate that the project created a supportive environment that facilitated both participation and implementation.

In terms of sustainability, the results suggest strong potential for continued use and further development. Most teachers indicated that they intend to continue using the project materials (mean=4.0) and that these can be integrated into the school curriculum (mean=4.1). They also reported that the materials can be used by other educators (mean=4.6) and that the project has potential for further development (mean=4.5). However, the distribution of responses suggests that long-term sustainability may depend on contextual factors such as institutional support, available time, and access to resources.

Overall satisfaction with the project was very high, with the majority of teachers reporting strong satisfaction levels (mean=4.6). All participants indicated that they would recommend the project to other educators, reflecting a very positive overall perception of its value and impact.

The qualitative responses provide a comprehensive understanding of teachers' perceptions regarding the pedagogical value, implementation challenges, and future potential of the project.

A central theme across responses is the strong pedagogical value of combining Immersive Reality with cultural learning. Teachers consistently emphasized that the project enables students to engage with cultural content in a more experiential and meaningful way. The immersive dimension was highlighted as a key factor, as reflected in responses such as "*experiencing the immersion without travelling*" and "*knowing other cultures immersing in them with VR*". This suggests that the project successfully provided an alternative form of cultural exposure, particularly relevant in the absence of physical mobility.

In addition, teachers highlighted the role of the project in promoting active and engaging learning environments. The integration of technology and cultural heritage was perceived as enhancing student motivation and participation, as reflected in responses such as "*joining culture and technology to boost learning*" and "*making classes more dynamic, engaging, and motivating*". The interdisciplinary nature of the project was also emphasized, particularly in relation to subjects such as history and geography.

Another important dimension is the development of digital and intercultural competences. Teachers noted that the project supports both students and educators in improving their digital skills while simultaneously fostering intercultural awareness. This is evident in responses such as "*enhancing digital skills and fostering intercultural awareness through immersive interaction*". Furthermore, the project was seen as contributing to the

development of a stronger European perspective, with references to "*strengthening students' European identity*".

Despite these positive outcomes, teachers identified several challenges related to implementation. The most frequently mentioned issues concern the use and management of technological equipment, particularly in classroom settings with large groups of students. Responses such as "*the setup of the VR headsets*" and "*using the devices with large groups of students*" highlight practical constraints. In addition, some teachers noted the need for technical support and further training, as reflected in comments such as "*we are not IT teachers, we need some support*". These findings suggest that while the pedagogical value is clear, effective implementation requires adequate infrastructure and support.

Teachers also provided constructive suggestions for improvement. These include increasing the availability of equipment, expanding the range of content, and providing additional practical training. Some participants emphasized the importance of broader participation and resource development, as reflected in responses such as "*include more 360° content*" and "*more practical training would be necessary*". Notably, one suggestion highlighted the potential added value of student mobility, indicating that combining immersive learning with physical interaction could further enhance the project's impact.

In terms of future use and sustainability, teachers expressed strong confidence in the long-term potential of the project. Many responses emphasized the possibility of integrating the materials into regular teaching practice, as well as expanding the platform with additional content. Indicative responses include "*the project tools can be integrated into the curriculum*" and "*teachers and students can continue to create new immersive experiences*". Dissemination and replication were also highlighted as key strategies, suggesting that the project has the potential to extend beyond its initial scope.

5.3.3 Comparison of Baseline and Final Results

The comparison between baseline and final results indicates a consistent and largely confirmed development of teachers' competences, perceptions, and pedagogical practices throughout the project.

At the initial stage, teachers already demonstrated a relatively high level of digital competence and strong experience in international collaboration. They entered the project with clear expectations, particularly in relation to developing skills in Immersive Reality, enhancing their teaching practices, and promoting cultural learning. Their responses reflected a structured and goal-oriented approach, with a strong emphasis on pedagogical innovation and professional development.

By the end of the project, these expectations appear to have been largely fulfilled. Teachers reported that they had developed practical skills related to immersive technologies and were able to integrate these tools into their educational practice, at least to a certain extent. The final results confirm that the project materials were perceived as pedagogically valuable, supporting active learning, interdisciplinary teaching, and student engagement.

A notable development is observed in the transition from expected to applied pedagogical value. While at the baseline stage teachers anticipated that immersive technologies would make learning more engaging and meaningful, the final responses indicate that this expectation was validated in practice. Teachers reported increased student motivation,

improved learning experiences, and better understanding of concepts when using Immersive Reality.

At the same time, the comparison highlights a shift from a primarily theoretical understanding of immersive technologies to a more practical and reflective perspective. While initial responses focused on learning how to use the technology, final responses include more nuanced reflections on implementation challenges, such as the management of equipment, the need for technical support, and the constraints of classroom environments. This suggests that teachers moved from initial enthusiasm to a more realistic and experience-based understanding of the conditions required for effective integration.

In terms of collaboration and intercultural dimensions, teachers maintained consistently high levels of engagement throughout the project. Their initial strong orientation toward collaboration and cultural exchange is reflected in the final results, where they emphasize the value of sharing practices, interacting with partners, and fostering intercultural awareness among students.

Furthermore, the final responses demonstrate a strong orientation toward sustainability and future use. While baseline expectations included the development of useful materials and professional growth, the final results indicate that teachers intend to continue using the project outputs, integrate them into the curriculum, and expand their application in future contexts. This reflects a shift from anticipated outcomes to concrete plans for continued use.

5.3.4 Challenges and Limitations

Teachers identified several challenges during implementation, including technical constraints, time limitations, and initial unfamiliarity with immersive tools.

Language barriers were also mentioned as a challenge in the context of international collaboration.

These factors suggest that the integration of innovative technologies requires adequate support, time, and resources.

5.3.5 Sustainability

Teachers expressed a generally positive attitude toward the continued use of the project materials. Many indicated their intention to use the developed resources in the future and considered them applicable to their teaching context.

However, sustainability depends on factors such as institutional support, access to equipment, and integration into formal curricula.

5.4 Impact and Dissemination

In addition to student and teacher evaluations, feedback was collected from project partners regarding the impact and dissemination of the project results.

The responses indicate that partners perceive the project as having a positive impact at multiple levels, including:

- educational practice,
- institutional development,
- and collaboration between organisations.

Partners reported that the project outputs:

- are relevant and applicable to educational contexts,
- support innovation in teaching,
- and have the potential to be used beyond the duration of the project.

In terms of dissemination, partners indicated that:

- project results have been shared through institutional channels,
- local and international networks have been engaged,
- and efforts have been made to reach wider educational communities.

However, the findings also suggest that:

- dissemination efforts vary across partners,
- and further strategies may be needed to ensure broader visibility and long-term exploitation.

Overall, the feedback highlights the importance of structured dissemination strategies and continued collaboration to maximize the impact of the project.

5.5 Summary of Key Findings

The evaluation results indicate that the WILOS360 project contributed to:

- the development of digital and pedagogical competences among teachers and students
- increased engagement and motivation in learning
- improved understanding of cultural diversity and European identity
- successful introduction and use of Immersive Reality technologies in educational contexts

At the same time, the findings highlight the importance of addressing technical, organizational, and contextual challenges to support the long-term use of innovative educational practices.

6. Discussion

6.1 Interpretation of Findings

The findings of the evaluation indicate that the WILOS360 project contributed to measurable developments in both student learning and teaching practices, supported by evidence from quantitative and qualitative data across all target groups.

At the student level, the comparison between baseline and final results demonstrates a clear transition from uncertainty and uneven expectations to more structured and positive learning outcomes. Initially, students showed moderate digital competence, limited familiarity with immersive technologies, and mixed levels of motivation. By the end of the project, students reported increased engagement, improved digital skills, and a clearer understanding of cultural content. Qualitative responses further confirm this shift, as students moved from vague expectations (e.g., “nothing”, “I don’t know”) to more concrete outcomes such as learning to use new technologies and understanding cultural traditions.

At the teacher level, the results indicate a different trajectory. Teachers entered the project with relatively high levels of readiness, clear expectations, and strong motivation for professional development. The final findings suggest that these expectations were largely fulfilled. Teachers reported that immersive technologies enhanced student engagement, supported interdisciplinary teaching, and contributed to improved learning experiences. The consistency between initial expectations and final perceptions reflects a coherent and effective implementation process.

The evaluation of training activities further supports these findings. Across all training sessions, participants reported high levels of satisfaction, strong knowledge transfer, and increased confidence in using immersive technologies. The qualitative feedback highlights the importance of hands-on experience, collaboration, and clear guidance, suggesting that the training activities played a key role in enabling both students and teachers to engage with the project effectively.

6.2 Immersive Reality as a Learning Tool

The results strongly support the pedagogical value of Immersive Reality as a tool for enhancing engagement and experiential learning.

Both students and teachers consistently reported that immersive environments made learning more interesting and interactive. Students highlighted the sense of presence and realism, while teachers emphasized the increased motivation and participation observed in the classroom. These findings confirm that immersive technologies are particularly effective in capturing attention and creating meaningful learning experiences.

However, the data also indicate that the impact of Immersive Reality on deeper understanding is more moderate. While students reported improved comprehension, responses were more varied compared to engagement-related indicators. Similarly, teachers

acknowledged the benefits of immersive learning but identified challenges in implementation. This suggests that the effectiveness of immersive technologies depends not only on the technology itself but also on its pedagogical integration.

6.3 Cultural Learning and Intercultural Competence

The project's focus on cultural heritage and European identity is reflected in both student and teacher responses.

Students reported increased awareness of other cultures and greater interest in learning about different countries. Teachers confirmed these findings, indicating that students developed a better understanding of cultural diversity and, to a significant extent, a stronger sense of European identity.

However, the results also show that this impact is not uniform. While many participants reported positive changes, others indicated more moderate shifts. This variability can be partly explained by the absence of physical mobility, as students did not directly interact with peers from other countries in face-to-face settings. In this context, immersive technologies functioned as a partial substitute, enabling exposure to cultural experiences without physical travel.

6.4 Pedagogical Integration and Constraints

The integration of project outputs into teaching practice presents a balanced picture of strengths and limitations.

On the one hand, teachers evaluated the materials as highly relevant, adaptable, and pedagogically valuable. The lesson plans, cultural content, and platforms were considered suitable for classroom use and aligned with curriculum needs. On the other hand, the actual use of materials in teaching was moderate, indicating that full integration is still in progress.

Qualitative findings provide further insight into these constraints. Teachers identified challenges related to the use of equipment, classroom management, and the need for technical support. These challenges highlight that the introduction of innovative technologies requires not only high-quality materials but also appropriate infrastructure, training, and institutional support.

6.5 Collaboration and Learning Processes

The project fostered collaboration at both student and teacher levels, although with different characteristics.

Students showed initial uncertainty regarding collaboration, particularly in relation to communication and language barriers. By the end of the project, both quantitative and

qualitative data indicate improvements in collaboration skills, although the impact was moderate. This suggests that collaboration was developed, but not to its full potential, likely due to the absence of direct interaction.

Teachers, in contrast, demonstrated strong collaboration throughout the project. Both baseline and final results highlight their active engagement in knowledge exchange, joint development of materials, and shared reflection. Training activities further reinforced this collaborative environment, with participants emphasizing teamwork, mutual support, and the exchange of best practices.

6.6 Implementation Quality and Training Impact

The evaluation of training activities indicates a high level of implementation quality.

Participants consistently reported that the training sessions were well-organized, relevant, and effective in supporting both technical and pedagogical development. The Thessaloniki training contributed to the development of technical skills, while the Ericeira and Ioannina trainings supported pedagogical design and refinement of materials.

Qualitative feedback highlights the importance of hands-on learning, clear structure, and opportunities for collaboration. The absence of major technical issues and the high level of satisfaction suggest that the training activities successfully supported the overall implementation of the project.

6.7 Sustainability and Future Use

The findings indicate strong potential for sustainability, particularly from the perspective of teachers.

Most teachers expressed their intention to continue using the project materials and integrating them into their teaching practice. They also highlighted the potential for further development, dissemination, and expansion of the project outputs.

At the same time, the results suggest that sustainability depends on contextual factors such as access to equipment, institutional support, and time availability. Without these conditions, the long-term use of immersive technologies may be limited.

7. Conclusions

The WILOS360 project demonstrates that the integration of Immersive Reality into educational practice can have a meaningful and multidimensional impact on both students and teachers.

The findings indicate that the project successfully achieved its core objectives, particularly in relation to enhancing student engagement, supporting the development of digital competences, and introducing innovative pedagogical approaches. Students reported increased motivation, greater interest in learning, and improved familiarity with immersive technologies. While their initial expectations were often unclear or limited, the final results show a clear shift toward more structured and positive learning outcomes.

At the same time, the project contributed to the development of cultural awareness and, to a certain extent, European identity. Students demonstrated increased understanding of cultural diversity and greater interest in other European contexts. However, the impact in this area was moderate rather than uniform, suggesting that deeper intercultural development may require more sustained interaction or direct contact.

From the perspective of teachers, the project had a strong and consistent impact on pedagogical practice. Teachers reported that the use of Immersive Reality enhanced student engagement, supported interdisciplinary teaching, and enriched the overall learning experience. Importantly, teachers not only acquired technical skills but also developed the capacity to integrate these tools into their teaching, although full implementation remains in progress.

The evaluation also highlights the importance of training and support in facilitating the adoption of innovative technologies. The training activities played a central role in building capacity and confidence among participants, contributing significantly to the successful implementation of the project.

At the same time, several challenges were identified. These include technical constraints, the need for adequate equipment, and the complexity of managing immersive technologies in classroom settings. These findings suggest that the successful integration of such innovations requires not only pedagogical readiness but also appropriate infrastructure and institutional support.

A key finding of the project is that Immersive Reality is highly effective in enhancing engagement and creating meaningful learning experiences, but its impact on deeper learning outcomes depends on how it is pedagogically integrated. Similarly, while immersive technologies can support cultural learning, they cannot fully replace direct interpersonal interaction, particularly in the development of intercultural identity.

Finally, the project demonstrates strong potential for sustainability. Teachers expressed a clear intention to continue using the developed materials and to integrate them into their teaching practice. The availability of the platform and the multilingual resources further supports the transferability and wider use of the project outputs.

In conclusion, the WILOS360 project provides evidence that immersive technologies can serve as a valuable tool for innovation in education. Its impact is particularly strong in engagement, digital skills, and pedagogical development, while also contributing to cultural awareness and European identity. At the same time, the findings highlight the importance of long-term support, continued implementation, and further research to fully realize the potential of immersive learning in educational contexts.

8. Recommendations

Based on the findings of the evaluation, the following recommendations are addressed to key stakeholder groups in order to support the effective implementation, sustainability, and further development of immersive learning initiatives such as WILOS360.

8.1 Recommendations for Teachers

Teachers play a central role in the successful integration of immersive technologies into educational practice. The findings suggest that, although teachers recognize the pedagogical value of Immersive Reality, further support is needed to enhance implementation.

It is recommended that teachers continue to engage in professional development activities focusing on the practical use of immersive technologies. Hands-on training, peer collaboration, and the exchange of good practices can strengthen confidence and competence. In addition, teachers should aim to integrate immersive experiences within structured pedagogical frameworks, ensuring that technology supports clear learning objectives rather than functioning solely as a motivational tool.

Furthermore, adopting more student-centered approaches, such as project-based learning and co-creation of content, can enhance both engagement and skill development. Encouraging students to actively participate in the creation of immersive material can deepen their understanding and foster ownership of the learning process.

8.2 Recommendations for Students

Students should be encouraged to take a more active and participatory role in immersive learning environments. While the project demonstrated high levels of engagement, the findings indicate that deeper learning outcomes are strengthened when students are involved not only as users but also as creators.

It is recommended that students are supported in developing both digital and collaborative skills through structured activities that promote critical thinking and problem-solving. In addition, opportunities for intercultural interaction should be expanded, either through virtual collaboration or mobility activities, in order to enhance intercultural competence and strengthen their sense of European identity.

8.3 Recommendations for School Administration

School leadership plays a critical role in enabling the integration of innovative educational practices. The evaluation highlights the importance of adequate infrastructure and institutional support.

It is recommended that schools invest in appropriate technological resources, including sufficient VR equipment, reliable internet connectivity, and technical support systems. In addition, schools should create conditions that facilitate the use of immersive technologies in the classroom, such as flexible scheduling, smaller group work where possible, and collaboration among teachers.

School administrations should also support the integration of project outputs into the curriculum, ensuring that innovative practices are sustained beyond the duration of the project.

8.4 Recommendations for Project Partners and Developers

For project partners and content developers, the findings highlight the importance of continuous improvement and expansion of project outputs.

It is recommended that the platform and materials continue to be updated and enriched with additional content, including cultural events from more regions and countries. Supporting teachers and students as content creators can ensure that the platform remains dynamic and relevant.

In addition, further development of guidance materials, manuals, and training resources can support wider adoption and more effective use of the project outputs.

8.5 Recommendations for Policy Makers and Educational Authorities

At a broader level, policy makers and educational authorities play a key role in supporting the integration of immersive technologies in education.

It is recommended that policies promote the use of innovative digital tools, such as Immersive Reality, within formal education systems. This includes providing funding for infrastructure, supporting teacher training initiatives, and encouraging the inclusion of digital and immersive learning approaches within curricula.

Furthermore, policy frameworks should support international collaboration and intercultural learning, recognizing that while digital tools can enhance access to cultural experiences, opportunities for direct interaction remain essential.

8.6 Recommendations for Sustainability and Future Development

To ensure long-term impact, it is essential to focus on sustainability and wider dissemination.

It is recommended that the project results are actively disseminated through educational networks, professional communities, and institutional channels. Encouraging the use of materials by a wider audience of educators can enhance the reach and impact of the project.

Future initiatives should also consider combining immersive learning with other forms of interaction, including blended or hybrid approaches, in order to maximize both engagement and learning outcomes.

Disclaimer

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.