



EVALUATION OF THE LEARNING PROCESS IN THE ARKS TESTIMONIES PROJECT

2024.09.30.

IMPACT ASSESSMENT REPORT IN THE FRAME OF THE ARKS TESTIMONIES PROJECT

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1 Introduction

This evaluation report was prepared with the purpose of presenting and illustrating the results of the impact evaluation of the 'Making the Museum' activity of the '*Save Schindler's Ark – implement testimony, iWALK and permanent hybrid digital and place-based learning in the unique place where the events occurred*¹' project. The main objective of the evaluation was to assess the impact of the learning process throughout the implementation of the 'Making a Museum' activity, considering all of its components, including place-based learning, digital learning (in the form of video testimonies) and the co-creation process, with a focus on students' attitudes, skills (e.g., critical thinking, empathy), behaviour and knowledge. Before the methodology and then the results of the evaluation are presented, it is necessary to provide a short introduction about what was evaluated, in other words, what is the Making a Museum activity of the '*Save Schindler's Ark*' project.

1.1 THE PROJECT AND THE 'MAKING A MUSEUM' ACTIVITY

The aim of the project in which the evaluated activities were implemented is to save Schindler's Ark to form a Museum of Survivors. Schindler's Ark was a concentration camp where 1200 Jews on Schindler's List were saved, as shown in the film by Stephen Spielberg. Schindler's Ark formed part of what was the second-largest wool factory in Europe, owned by the Low-Beers since 1854. In 1938 they fled the Nazis. The Low-Beer family bought back the ruined factory in 2018 and in partnership with the local community formed the Arks Foundation. They co-designed the project for a museum and the testimony activities led by local guides.

Against this backdrop, the 'Making a Museum' activity aimed to involve secondary school students from different European countries in a collaborative co-creation process in order to gather their input for the 'making of the museum' as well as for testimony-based activities. The purpose of the overall collaborative process was to create a learning process for the students which encompasses student-centred learning methods, such as site-based learning and digital learning (through the implementation of testimony-based learning materials). In addition to gathering important contributions to the museum in the making, these methods have also aimed to develop the thematic knowledge of students, as well as their skills, such as cooperation, communication and critical thinking, while also affecting their attitudes and behaviour.

¹ The project itself is funded under the CERV programme of the European Union, under the project number 101089907.

1.2 ACTIVITIES OF THE MAKING A MUSEUM ACTIVITY

With the objectives defined above the original plans for the project elaborated that the 'Making a Museum' activity should include 1) visits to the Museum site (enabling place-based learning); 2) the testing of five testimony-based learning materials in the schools of the participating students (enabling digital learning); and 3) a co-creation process resulting in a tangible input for the Museum in the making. The specifics of what these tasks involve were not defined in advance but were developed with the launch of the activity at the beginning of the 2023/2024 school year, with the coordination of the Zachor Foundation (a partner in the project consortium).

The final tasks implemented under this activity varied from country to country – the project partners responsible for the involvement of students in the project supported the delineation of the exact tasks to be completed under the three main tasks defined above. Based on the reports of the participating teachers the following activities were carried out, by the country.

In Hungary:

- Participation in domestic visits among the Hungarian student groups (from 6 different locations)
- Participation in the visits to the museum sites in Brnenec
- Implementation of peer-guided (student-led) iWalks
- Student-led testing of testimony-based learning materials in a school lesson environment
- Local research along 5 jointly defined themes
- Preparation of end-result for the Museum: roll-ups with the results of the local research from 6 cities on 5 main themes (including the development of written materials for the roll-ups)

In Czechia:

- Participation in the visits to the museum sites in Brnenec
- Participation in an iWalk
- Piloting the learning material related to the film "Schindler's List" during the school year
- Preparation of a poster

In Austria:

- Participation in the visits to the museum sites in Brnenec
- Implementation of the lessons using testimony-based learning materials with students

In Poland:

- Participation in the visits to the museum sites in Brnenec
- Watching the film "Schindler's List" followed by a discussion in a school lesson
- Completion of exercises on the IWitness platform
- Participation in a guided walk around Bielsko-Biała in the footsteps of Holocaust survivors
- Finding and watching testimonies and preparing a poster

2 Methodology

The evaluation methodology was designed to be carefully tailored to the needs and features of the project and the activities to be evaluated. Overall, the methodology builds on a mixed-method approach, utilising both qualitative and quantitative methods, building on the perspectives of both the participating students (who are the end beneficiaries) as well as the teachers who have led, guided and observed the students throughout the process of the project implementation. The two key methods used in the evaluation were surveys (with the students) and interviews (with the teachers), as described in detail below.

2.1 SURVEYS

For the purposes of the evaluation, a pre- and post-survey was carried out with students to measure the impact of the learning process of the project. The use of surveys as evaluation tools before and after the implementation of the project was beneficial due to the extent and scope of the 'intervention' evaluated.

The **target group** of the survey were students participating in the co-creation process of the 'Making a Museum' activity, and all the learning activities and elements of the project, including the site visits as well as the activities during the school year (in the present report this group will be called 'participants'). In addition to the participant group of students, a **control group** – who have not participated in the project – was also involved in completing the pre- and post-surveys (in the present report this group will be called the 'control group'). The involvement of the control group is relevant, as the possible changes caused by the project can only truly be measured against the potential changes of those who were not involved.

The control group – the non-participant students – can be further divided into two groups. This is because some students, though not participating in the complete set of activities of the project, have attended the lessons using video testimony-based learning materials developed during the project and tested in the participating schools. These lessons were either led by the participating students or their teachers. Therefore, one part of the control group is those students who had not been involved in the project overall but had participated in the lesson (or lessons) using video testimonies (in the present report this group will be called the 'testimony control group'; and the other part of the control group is those who have not participated in any activity that is related to the project at all (they will henceforth be referred to as 'full control group').

MATCHING

The pre- and post-surveys (for both the participants and the control group) were matched based on a code provided by the students in each survey. The identification code was based on the students' names but in order to keep their anonymity they only provided 3 letters from their first name and 3 letters from their surname, which together provided the code. The pre- and post-surveys then were matched based on these codes after the data collection phase.

THE SAMPLE

Overall, 487 students completed the two surveys: 460 students provided complete responses, while an additional 27 partial responses were included in the sample². 448 students completed the pre-survey and 189 students filled out the post-survey. In the pre-survey, 196 students indicated that they were taking part in the project (with 252 students in the control group), while this number in the post-survey is only 91 (with 98 students in the control group). The pre-survey was completed by students from 6 countries, while in the post-survey there were only 4 countries represented. The large difference in the number of students completing the pre- and post-surveys may be attributed to the fact that the pre-survey was completed at the end of the school year, while the implementation of most project activities started only in the next school year; thus, it is a typical pattern that many students dropped out from either the participating or the control groups.

As indicated above, the pre- and post-surveys were matched using an identification code provided by the students. Based on this process 150 matches were made overall; thus **150 students completed both surveys**. Since the comparison of the pre- and post-survey results constitutes a large part of the analysis, the focal sample of the analysis will be these 150 students who have completed both surveys.

Looking at the sample of 150 students who completed both surveys, we can see that **80 students participated in the project** (53,3%) and **70 are in the control group**, which can be further divided with 50 students in the 'testimony control group' (33,3%) and 20 in the 'full control group' (13,3%). Nearly three-quarters of participating students (73%) were in 11th grade in the 2023/2024 school year (63% of the control group), while 17% of participants were in 10th grade (34% of the control group), and 10% were seniors, in the last year of their secondary education (3% of the control group). The majority of respondents are women (66% of the control group and 70% of participating students), and they come from three countries, with most students from Hungary, followed by Czechia and then Austria. Students overall came from 11 schools: 6 schools in Hungary, 4 schools in Czechia and 1 school from Austria.

² The 27 partial responses were included, as they have completed sufficient number of questions to be relevant for the analysis.

From some schools, only 1 student was participating in the project (among the respondents), and there was also one school with 25 participating students, however, from the majority of schools, 4-10 students were among the participants.

2.2 INTERVIEWS

The teacher interviews aimed to increase the understanding of the impacts on students from the teachers' perspective, and to allow teachers to reflect on the activities and the overall process. With the teacher interviews, we introduce an expert perspective into the evaluation – educators reflecting on a learning process –, and also a point of view that can be considered somewhat external, but still involved enough in the project and close enough to the students to be deemed relevant and accurate. The teacher interviews overall aim to complement the results of the student surveys from a qualitative perspective.

The selected method was semi-structured interviews – which allowed the interviewer to set a clear frame for the discussion with sufficient flexibility regarding both the structure of the interview and the specific questions – following the content and dynamics of the interview. The target group of the interviews were carried out with teachers who were involved in the project – with their students –, i.e. they guided and coordinated a group of students (who were not necessarily students they were teaching in a regular school setting). The interviews were carried out once the project concluded – after the closing visit to the museum site in Brnenec –, in July and August 2024.

Overall, 11 teachers were interviewed in this process. Six (online) interviews were carried out with the six teachers from Hungary who were involved in the project, while five teachers from other participating countries (from Czechia, Poland, Austria and Switzerland) responded to the interview questions in writing. The decision was made for the written interview method to enable information gathering in an as authentic way as possible – from a language perspective. The six "traditional" interviews were carried out in Hungarian while teachers from other countries had the possibility to respond in their own languages to the questions, which were then translated. This way we could ensure that there was no important information lost due to language barriers.

2.3 NOTES ON METHODOLOGICAL CONSIDERATIONS

As with most social science research, this evaluation overall, especially the quantitative part, is not free from methodological limitations and biases. While it is very important to acknowledge such limitations and make them explicit for the interpretation of the results, it is equally important to recognise and reflect on the professional context in which the research is conducted.

The main limitation of the evaluation is the small sample size of the survey – which is mostly due to the scope of the project and some organisational challenges regarding data collection –, in addition to

certain biases typical for most surveys (such as the social desirability bias). Despite these limitations, the evaluation was able to provide relevant, and statistically significant results. It is also essential to highlight that in an educational context an intervention with a scope such as this project, considering the timeframe, its international nature, the number of involved students, the number of activities and the complexity of the intervention overall, together with the possibility to implement assessment measures (both before and after the intervention) is rare. Moreover, it is also uncommon to have the opportunity to conduct an assessment in the context of an educational initiative with a control group, further increasing the relevance of the evaluation and its results.

Consequently, there are potential biases in the evaluation that are important to keep in mind when interpreting the results and drawing conclusions, while it is also crucial to make such interpretations considering the professional context in which the intervention and the evaluation results are embedded.

3 Evaluation results: the student survey

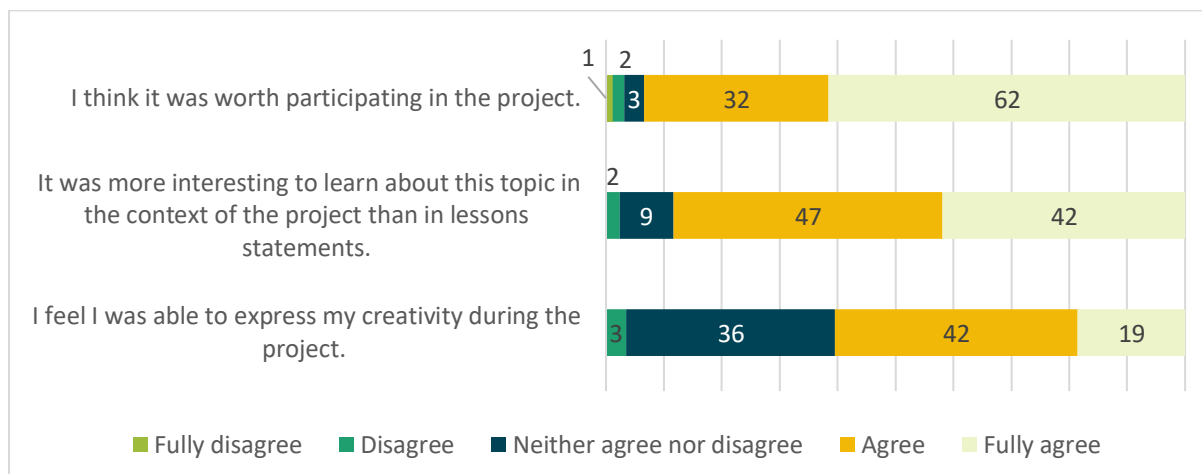
3.1 THEMATIC EVALUATION

In the section below we provide a post-evaluation of different thematic aspects of the project based on the descriptive analysis of the post-survey completed by the students. This also means that – unless indicated otherwise – the sample used in this section considers all those who have completed the post-survey, including students who did not fill out the pre-questionnaire (or did not have a match based on the identification codes).

EVALUATION OF THE PROJECT AND ITS ACTIVITIES

Overall, the project was very positively evaluated by participants (see Figure 1 Evaluation of project participation by participating students (%)*Figure 1). Nearly all of them indicated that it was worth taking part in the project (62% fully agree and a further 32% agree), while also nearly 90% of participants reported that it was more interesting to learn about the topic this way compared to school lessons (see Figure 1). In terms of expressing creativity throughout the project, the responses were more indecisive compared to the previous questions – although even here nearly two-thirds of the participants agreed or fully agreed that they were able to express their creativity during the project, and only 3% indicated disagreement. This rather general feedback suggests satisfaction in terms of overall participation, the format of learning, as well as the possibility of creative expression, reflecting the value that participants placed on hands-on, collaborative learning experiences. It also reinforces the idea that project-based learning can offer more immersive and practical experiences, enabling participants to apply what they've learned in real-world contexts.

Figure 1 Evaluation of project participation by participating students (%)*



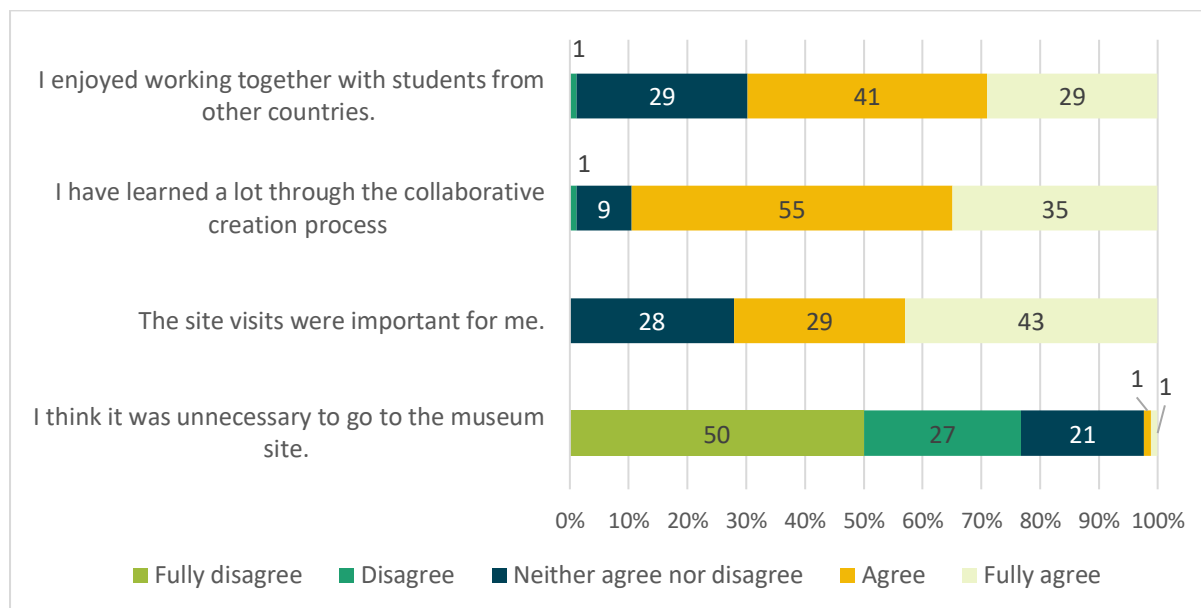
Source: authors

*Sample for the sentences of the figure: n=87; n=86; n=86 respectively

Evaluation items reflecting the **collaborative aspect of the project** show that the overwhelming majority of students valued the cooperative learning and creation of the project (see Figure 2): 35% fully agreed and 55% agreed that they have learned a lot through the collaborative creation process, 9% were unsure, while only 1% disagreed. At the same time, the feedback regarding the extent they liked to work together with students from other countries was slightly more varied, with only 29% fully agreeing and 41% agreeing. Nearly a third of participating students were neutral regarding the transnational cooperation, at the same time, only 1% indicated that they did not enjoy the process. It is important to highlight that while students from different countries met twice during the initial and closing site visits, they did not work closely too much during the one year of the project implementation. In conclusion, despite some neutrality, international collaboration was generally viewed positively, and learning through collaboration showed strong promise and was viewed as impactful by the majority.

A crucial element of the educational approach of the project was **site-based learning**, therefore the survey also asked students to reflect on their experience with the site visits (see Figure 2). Nearly three-quarters of participating students indicated that the site visits were important for them, and while more than 25% were neutral, no respondent disagreed with this statement. To gain a deeper understanding of how students relate to the site visits, we have also asked them to mark how much they agree with a negative statement on the site visits: 'I think it was unnecessary to go to the museum site'. Half of the respondents fully disagreed with this and a further 27% disagreed. Only 2% of respondents expressed their agreement that it was not necessary to go there – the rest of the respondents (21%) were undecided. This overall confirms that (most of) the students found the site visits an important and valuable component of the project and its learning process.

Figure 2 Evaluation of the project's collaborative nature and site-based learning (%)



Source: authors

*Sample for the sentences of the figure: n=86

The students have also reflected on the site visits in their own words through open-ended questions. The responses show that the site visits to Brnenec were transformative for many students. Regarding the advantages of the site visits for the work carried out throughout the project, students mainly emphasized the deeper emotional connection and personalisation resulting from the visits, the enhanced understanding of the historical context, and the inspiration and creativity that the visits provided for their work. When asked about the personal added value of the site visits, the key patterns emerging from students' (self-)reflections were personal growth, gaining knowledge and perspective, social interactions and friendships, inspiration and skill development.

Visiting Brnenec made the whole project more personal, emotionally impactful and lasting for the students. As one of the students put it, they became *"emotionally closer to the place, and therefore to the history of the place itself"*. Another student noted how *"it made the project an experience, not a task"*, reflecting on the transformative nature of the site visits. Many students emphasised a similar deep emotional connection to the places visited, as one wrote: *"it definitely gave me a sense of belonging, an emotional connection to the place and a deeper understanding"*. They also described the experiences as *"unforgettable"* and engaging: *"I felt closer to the topic, so I was more motivated"*.

The visits also helped the students understand history in a more tangible way. Responses like *"seeing the place live is something that cannot be replaced by just a video"* and *"we could link the stories we learned about the place, and that helped us understand"* illustrate how the site brought the historical narrative to life. Responses also frequently referenced an increased understanding of the Holocaust, its

history, consequences and lessons for today. For example, several students mentioned the importance of learning from the past, that the visits provided them *"a clearer insight and a lesson that we need to respect each other"* and *"not repeat the mistakes of the past"*.

Many students found inspiration in these visits for creativity and for contributions to the museum project or other activities and emphasised that the visits were creatively stimulating and inspiring. Answers like *"the atmosphere of the place inspired my ideas"*, *"inspiration for our work"*, *"developed creativity"* and *"the location inspired me"* highlight this pattern.

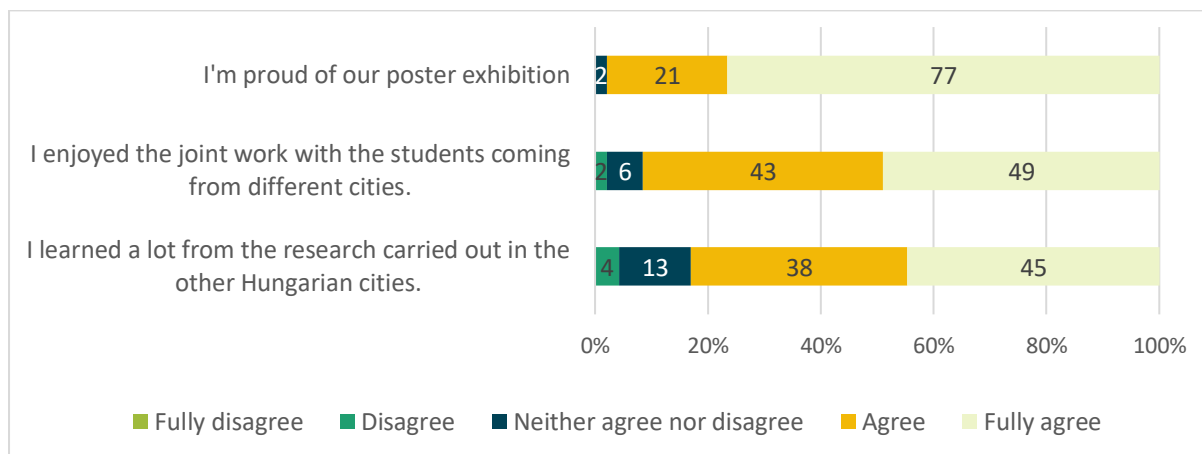
In addition, many students emphasized in their responses that they have gained practical skills and self-awareness, including improved communication and teamwork skills. They noted, for example, that they have learned *"how to put a team together, how to cooperate, and above all, autonomy"* and *"I learned more about myself through experience"*.

Another, and final, recurring theme was the friendships they made during the project. While this social aspect was not an explicit objective of the project or the site visits, it is a very important result, which contributed greatly to the overall experience and learning process of students. Students' phrases such as *"new friends"*, *"a welcoming community"*, and *"a third family, so to speak"* underscore the significance of interpersonal connections they have made through the site visits.

The activities of the students carried out during the school year were the most extensive and the most specifically defined in Hungary, a few extra questions were asked from the students participating from the six Hungarian schools regarding the evaluation of the project and its results (see Figure 3).

First of all, a significant part of the **Hungarian students' activities** was visits to each other's locations and learning about the Jewish history of those locations, utilising video testimonies during peer-guided iWalks and learning local history. During these occasions, they also had the opportunity to get to know each other, work together on the project and share the results of the work they have done so far. The success of these activities can be observed in their answers as more than 80% of them indicated that they have learned a lot from these local visits, while more than 90% of them reported that they have enjoyed the work with the students from the other schools. The final result of the Hungarian group was a roll-up or poster exhibition, of which almost all participants were proud – with 77% fully in agreement with this sentence. This is also reflected in the results of the teacher interviews which elaborate in detail that it was very important for the students to see the result of their work in a tangible and visual way at the end of the project.

Figure 3 Evaluation of the project, specific to the activities of the Hungarian students (%)*



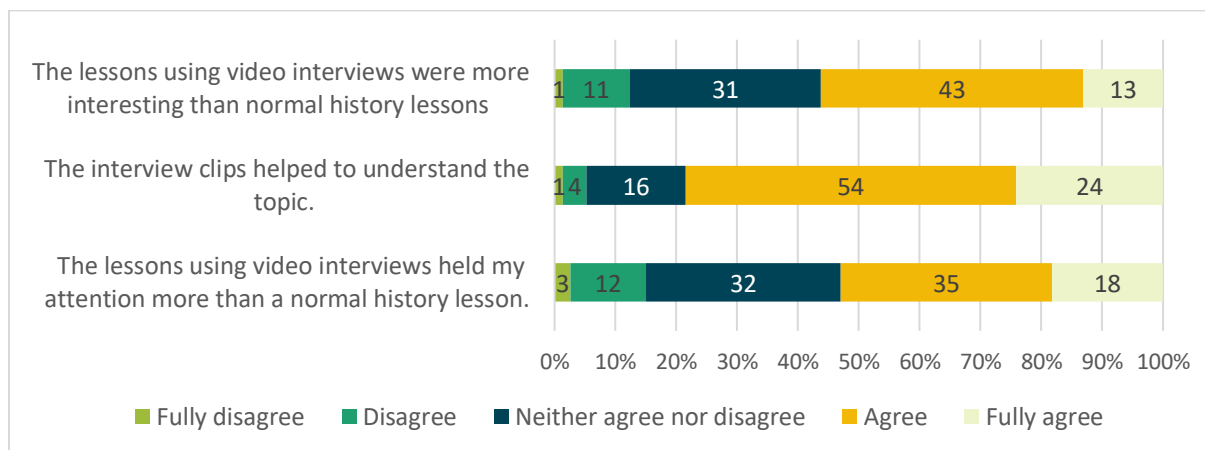
Source: authors

*Sample for the sentences of the figure: n=47

EVALUATION OF THE LESSONS USING TESTIMONY-BASED LEARNING MATERIALS

The analysis reveals several key insights into the effectiveness of testimony-based (digital) learning. First, students participating in the lessons using the testimony-based learning materials showed a clear preference for testimony-based learning over traditional history lessons: more than half of them agreed that the lessons using video testimonies were more interesting than normal history lessons (13% fully agree and 43% agree), while similarly more than 50% also indicated that the lesson was more engaging, capturing their attention more than traditional lessons (18% fully agree and 35% agree) – although nearly one-third of participants remained undecided in both cases (see Figure 4). In addition, the overwhelming majority of the students participating in these lessons reported that the testimony clips have increased their understanding of the lesson's topic (78% agree or fully agree) – which can indicate that testimonies support learning (complementing other types of sources) in general, on the one hand, while also suggesting that the use of testimonies in these specific materials is effective and well-designed, on the other.

Figure 4 Reflection on the testimony-based learning materials by the students participating in the lessons (%)*

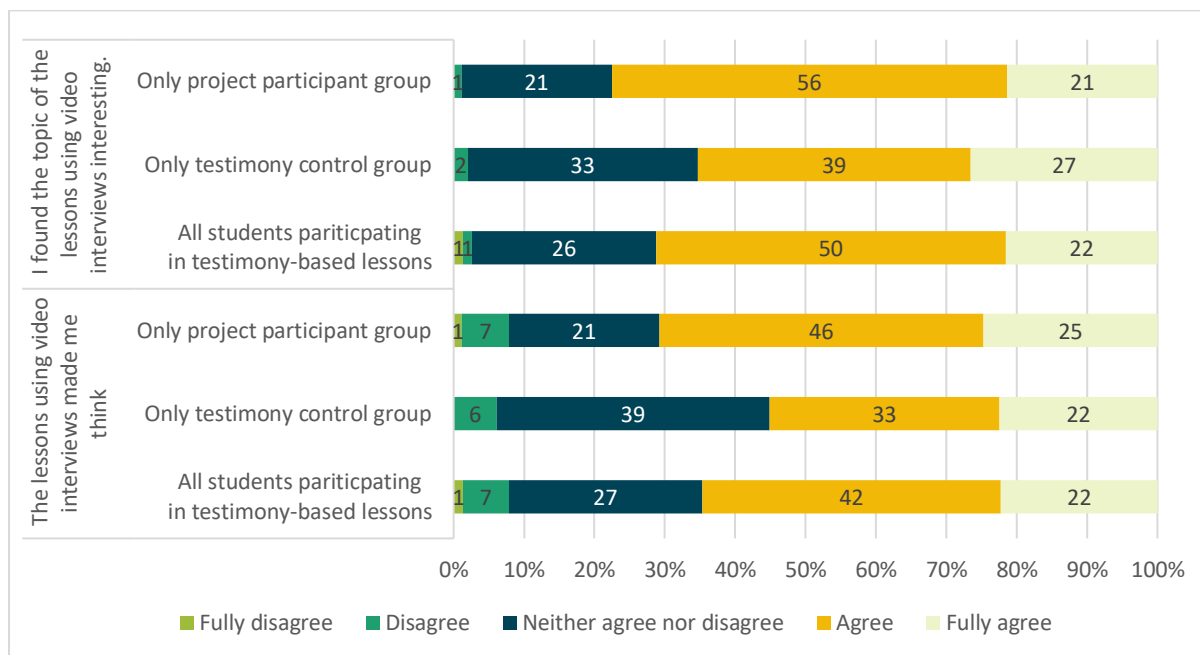


Source: authors

*Sample for the sentences of the figure: n=153, including the participant group and the testimony control group

The testimony-based learning materials also demonstrated a strong cognitive impact. Nearly two-thirds of all student participants indicated that these lessons have made them think, and even a higher ratio (72%) reported that they found the topic of the lessons interesting. Looking at the results separately for the participant group and the 'testimony control group', we can observe that the participant group evaluated the lessons, based on these above two aspects, slightly more positively compared to the testimony control group (see Figure 5). This may be accredited to the fact that in certain cases students from the participant group attended these lessons in the teacher role – leading the lesson –, which provided another layer to the experience of the lesson. At the same time, for the other items (discussed above) there were no such observable differences between the groups. It is notable to highlight that while the rate of students who provided negative feedback is not significantly different, there are more students in the neutral category in the testimony control group. One possible explanation could be that the students involved more deeply in the topic through the project were generally more engaged and therefore, they found the topic more interesting and felt that the interview clips made them think more compared to those who have not put significant effort already into the topic and the use of the method. Overall, the positive responses, particularly the high percentages of engagement and cognitive stimulation, suggest that the testimony-based format can significantly enhance the learning experience by making the given topic more relatable as well as thought-provoking.

Figure 5 Feedback on lessons using the testimony-based learning materials, according to groups (%)*



Source: authors

* Sample for all of the above sentences: only project participant group: n=89; only testimony control group: n=49; all students participating in testimony-based lessons: n=153

The above results are further supported by the qualitative analysis of students' responses to open-ended questions. Hearing personal experiences supported students' learning in multiple key aspects. They highlighted how the personalization of history made it feel more real and relatable. As one of the students phrased it: *"without people, history is just numbers, concepts, and gore, but with people, it becomes real"*. Many students' answers emphasised the emotional connection and seeing the human side of historical events as well. Another emerging theme seemed to be a deeper understanding and engagement through hearing lived experiences, as illustrated by the following quotes from students:

"it was easier to understand, than from a book";

"the learning of history is quite superficial, but a story told by someone who lived through it helps us much better to see and understand events";

"I was able to empathize more with their situation and understand it better, and it made me think much more deeply about the subject of the Holocaust".

The personal testimonies also encouraged students to think critically about history. Responses like *"I could imagine better and gain insight"* and *"it made me think about how these events could happen again and how we might prevent them"* show how this form of learning inspired reflection on historical questions. Additionally, the testimonies made students think beyond the scope of the Holocaust as a

historical event. The personal stories made them reflect on their own lives and their privileges, increasing their self-awareness. As one of the students wrote *"I realised how everything can collapse overnight"*, while another added, *"I am extremely grateful to be living in this time"*. The experience of hearing these testimonies also encouraged them to draw connections between past and present and think critically about historical events and current issues. One of the students mentioned that *"it makes me think because there are similar things going on in the world"*, while another's comments highlighted that *"the present is also strongly influenced by the past"*.

Moreover, the stories seemed to have increased students' empathy and broadened their perspectives, for example, they noted that they *"could put myself in their shoes and get a better idea"* and *"thought a lot about my social involvement and the impact I have on the world"*.

Overall, the evaluation of the lessons using testimony-based materials, and the use of personal stories in itself indicates that the use of testimonies allowed the historical topic in question to become more relatable and easier to understand, while students became emotionally engaged. The results further show that the personal, narrative-driven format of video testimonies encourages reflection and critical thinking, thus beyond the emotional connection testimonies also promote cognitive engagement.

CONCLUSION

In the survey, we asked students who have participated in the project to elaborate on what they found the most important or defining for themselves in the project, and what they will remember the most. As a conclusion for the thematic evaluation chapter, we present a summary of students' responses.

Many of the students highlighted that one of the most memorable parts of the project for them was hearing the **testimonies** of Holocaust survivors (and witnesses), **visiting significant historical sites** like the Schindler factory, and learning about overlooked figures, such as Mrs Schindler. Responses like *"the testimonies of people who lived through the Holocaust"* and *"real testimonies struck me the most"* suggest a deep emotional engagement with individual narratives, which seem to have left a lasting impression. Students also valued the opportunity for **collaboration** with peers from different schools and cultures and felt empowered by contributing ideas to the museum itself. They gained a sense of achievement from contributing to the museum project or presenting ideas. Responses reflected a sense of empowerment and purpose, as one of the students highlighted: *"our ideas were listened to and will be incorporated into the museum"*. Additionally, the project fostered personal growth, deeper historical understanding, and memorable experiences through site visits and teamwork.

3.2 EFFECTS OF THE PROJECT

This chapter aims to present the results of the effects of project participation. The effect is measured through the comparison of averages. While it is necessary to consider the methodological limitations for measuring effects, it is important to highlight that the analysis yielded statistically significant results and that effect sizes need to be interpreted according to the professional context of the evaluation and the intervention itself. Against this backdrop, this chapter first looks at the effects of project participation through the comparison of results before and after the implementation of the project activities, then it considers the comparison of results after the completion of the project based on participation (against the control group(s)).

STATISTICAL COMPARISON OF SURVEY RESULTS BEFORE AND AFTER THE PROJECT

This section focuses on the changes between the results of the pre- and post-surveys for both the participants of the project and the control group. The analysis considers various aspects we asked about in the survey, on students' approach to different forms of learning, their self-assessed skills, as well as their attitudes towards and interest in history, personal history, local (site-based) history, social and civic issues, and arts. In the analysis, we compared the means of students' responses to the same questions before and after the project³. In this part of the analysis, the sample of 150 students is considered – those, from both participant and control groups, who have completed both surveys.

Before the presentation of the results, it is important to make some notes regarding the interpretation of the effect sizes. In a common statistical analysis, the following effect size categorisation is used for the effect size indicator⁴ used for the T-test analysis: 0,2-0,5 – small effect; 0,5-0,8 moderate effect; and above 0,8 strong effect. At the same time, the specific interpretation of the effect size is contextual, thus strongly connected to the thematic or professional domain in which the analysis is embedded. Typically, in social science research and specifically in the field of education the effect size scopes shift lower, therefore values between 0,2 and 0,5 can be considered moderate effects which indicate meaningful changes. Thus, the effects considered notable in the analysis are those with a value of 0,2 or above.

As the analysis shows below, many changes and effects are statistically significant, which further enhances the relevance of the results. At the same time, it is important to highlight that in an evaluation like this even statistically not significant results can be indicative of changes and meaningful results of the project.

³ With the help of the method paired samples T-test.

⁴ Cohen's d with Hedges' correction.

Overall, we see from the analysis that the learning process throughout the implementation of the project had, in several cases even statistically significant, effects on certain aspects of students' knowledge, attitudes and skills. While most of the changes show rather weak effects (with small effect size), there are some which show moderate effects, which are notable changes. The variables showing these notable effects are presented in Table 1 (for the participant group) and Table 2 (for the control group), while the detailed summary of statistics on these variables is shown in the Annex (Table 5). In the following, we present these changes between the pre- and the post-survey thematically, highlighting the strongest effect sizes from the analysis.

We can see that the project led to improvement in the **relative self-assessment** of the participant group, considering specific aspects of their knowledge and skills. Participants reported feeling more confident in their academic knowledge, as well as in their ability to use and create content (such as blogs and videos through new media platforms like websites, Facebook, Twitter, and WordPress). They also demonstrated better research skills, particularly in finding and utilizing information from various sources, including online databases, libraries, and books. Interestingly, despite these gains, there was a slight decrease in participants' overall interest in historical topics by the end of the project. At the same time, there was some increase in their level of interest in the topic of the Holocaust specifically – although the change is very small and not significant.

When it comes to the changes in **transversal skills**, the results indicate that students participating in the project found it increasingly difficult (more so at the end of the project) to express their thoughts and ideas in front of others. This change may indicate a more realistic understanding of their own abilities in public speaking or expressing themselves in a second language in a group setting, since situations occurred during the project when they had to express themselves in front of others – in some cases even somewhat formally. At the same time, the control group showed greater openness to having their views challenged after the project (compared to before), suggesting some growth in intellectual flexibility independent of the project – there was a slight increase in openness for the participant group as well, although notably smaller than for the control group. Additionally, the control group's results also show a positive change in their media and information literacy skills as they indicated more that they checked the credibility of online sources, after the end of the project. While it is one of the strongest effects among the changes in the control group, it remained statistically not significant and rather weak (see details in Table 5).

In terms of the **ways and methods of learning**, students reflected on their own preferences and processes. While students at the beginning of the project indicated that they think digital tools facilitate learning to the same extent among the participants and the control group, there was a significant improvement in this regard among project participants (statistically as well), while it remained about the

same for the control group. While the effect in general is still considered moderate, it is one of the strongest effects of project participation, indicating that the inclusion of digital and hybrid learning methods and tools in the project's learning process did have a crucial effect on participants.

Due to the project's focus on personal and oral history, the analysis also explored students' perspectives on **storytelling**. We can see the effect for the participating group for family stories – there is a significant change with more students considering family stories a good way to tell stories. Among the control group, it is important to highlight that we can see one of the largest effects (in comparison to the other variables) for considering personal testimonies a good way to tell stories. This effect is statistically significant and among the strongest for both the 'testimony control group' and the 'full control group'. Additionally, the preferences of the control group for movies and museums as good ways to tell a story declined by the end of the project duration.

In terms of **attitudes**, the largest changes can be observed concerning civic responsibility, although among the smaller effect sizes. Students participating in the project felt more that people have a responsibility to be active citizens in their communities (compared to before the project took place). At the same time, surprisingly, fewer students agreed that they themselves feel called to support and help others – slightly fewer participating students indicated that if they see someone get hurt, they feel the need to help them.

As Table 1 and Table 2 show below, the strongest effects are in the area of (self-assessed) skill development and learning modes for the participating students, while they are related to storytelling methods and openness for the control group.

Table 1 Changes between the pre- and post-surveys: most notable effects for the participant group, presented in order of effect size (from largest to smallest)*

	Thematic category	Variable	Direction of change	Statistical significance**
PARTICIPANT GROUP	Learning	I think it is easier to learn with the use of digital tools	↑	Yes
	Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.)	↑	Yes
	Self-assessment of skills	Ability to use and create content (blogs videos, etc.) using new media (websites, Facebook, Twitter, Wordpress, etc.)	↑	Yes
	History	Interest in historical topics in general	↓	Yes
	Storytelling	Best way to tell a story: Family stories	↑	Yes
	Learning	Method of information gathering: Watching a movie	↓	Yes
	Self-assessment of skills	Academic knowledge	↑	Yes
	Skills: communication	It is difficult for me to express myself and my thoughts in front of others.	↑	Yes
	Social/civic attitudes	I think that people have a responsibility to be active citizens in their communities.	↑	No
	Arts	Art helps me to understand the world around me.	↑	No
	Social/civic attitudes	If I see someone get hurt, I feel the need to help them.	↓	No

Source: own compilation based on the data of the students' pre- and post-surveys of the project

* Based on paired samples T-test. An effect is considered notable if the effect size is above 0,2 (Cohen's *d* with Hedges' correction).

** Effects are considered statistically significant if $p < = 0,05$

Table 2 Changes between the pre- and post-surveys: most notable effects for the control group, presented in order of effect size (from largest to smallest)*

	Thematic category	Variable	Direction of change	Statistical significance**
CONTROL GROUP	Storytelling	Best way to tell a story: Personal testimonies (in the form of video interview)	↑	Yes
	Storytelling	Best way to tell a story: Movie	↓	Yes
	Skills: openness	I am open to having my own views challenged.	↑	No
	Storytelling	Best way to tell a story: Museum	↓	No
	Skills: media and information literacy	When I read something online, I always check the credibility of the source.	↑	No
	Learning	Method of information gathering: Using Internet sources	↓	No
	Self-assessment of skills	Academic knowledge	↑	No
	Skills: empathy	I feel bad when someone gets their feelings hurt.	↑	No

Source: own compilation based on the data of the students' pre- and post-surveys of the project

* Based on paired samples T-test. An effect is considered notable if the effect size is above 0,2 (Cohen's *d* with Hedges' correction).

** Effects are considered statistically significant if $p < = 0,05$

EFFECTS ACCORDING TO PARTICIPATION IN THE PROJECT

We can also measure the strength of the impact of the learning process of the project by comparing the averages of the post-questionnaire responses according to the different groups⁵ – project participants and the control group. In this case, the measured effect is not in comparison to the situation before the project, but the extent to which participation in the project had an impact on the answers to a given question. In this section, we analyse the effect of participation, first in comparison to the overall control group and then to the testimony control group specifically. For consistency reasons, the sample of 150 students is considered for this section: 80 participants and 70 control group members, while for the second part, the 80 participants are compared to the 50 students who comprise the testimony control group.

In the analysis, the effect size indicator⁶ provides information about the percentage of the difference in values of a variable between the groups explained by group affiliation only. Typically, the analysis and interpretation of these effect sizes consider the following benchmarks: 1-6% small effect, 6-14% moderate effect and above 14% strong effect. At the same time, in social science research as well as in the context of education research effect sizes above 6% can be meaningful, and thus interpreted more strongly. All of the results – thus the effects – presented below are statistically significant.

As a result of the analysis, we see strong(er) effects for several variables considering a variety of aspects, such as the development or improvement of specific skills, the interest of students, their modes of learning, attitudes towards history, testimonies and personal history, or the role of art in their learning. In the following, we provide a thematic summary of the key results, first comparing participation to the control group (see Table 3), and then to the testimony control group (see Table 4). The detailed statistical overview is shown in Table 6 and Table 7 in the Annex.

First of all, considering students' **self-assessed knowledge and skill level** in many different areas, we can see that the 7% of the difference in their level of academic knowledge can be explained by whether they are in the participant or the control group, with this figure rising to 9% when considering all three groups separately – participants, testimony control group, and full control group. The variance of self-assessed creativity is explained in 4% by group affiliation, similarly to the ability to understand people from different cultures. At the same time, one of the strongest effects is shown by the difference between the two groups in the ability to find and use information (whether online, in a library, or using books): 12% of the variation of averages is explained by participation in the project.

⁵ With the help of ANOVA tables.

⁶ Eta squared

When it comes to **students' interests**, the topic of the Holocaust holds significant weight, with 14% of the variation explained by project participation. 8% of the difference is explained for interest in arts, while 7% of the variance for civic or social issues, particularly regarding community involvement.

Looking at **transversal skills**, 4% of the variation between the groups is explained for (online) communication skills⁷ – when considering all three groups separately. In this case, the testimony control group has the lowest average, while the other two groups are rather similar. For variables indicative of the skill of empathy – considering the willingness and tendency to understand how others feel and think –, we can see that 3% of the difference is explained by participation in the project. Furthermore, for the ability to stick to what they believe is right, even when pressured by friends – indicating independent thinking and a sense of civic responsibility – 6% of the difference is explained by group affiliation when considering all three groups, with the full control group having the highest average.

In the survey, students reflected on certain **modes and methods of learning**. 4% of the difference in the averages for the belief that digital tools facilitate learning is explained by group affiliation, while for the thought that art supports them to deepen their knowledge, 8% of the variance is explained (9% when comparing all three groups). Additionally, we can also see a significant effect according to participation in the project regarding students' belief that historical events are better understood by visiting historical locations in person (5% when comparing participation to the control group in general, rising to 7% when including all three groups in the analysis). In relation, visiting locations in person (such as museums, memorial sights or just generally sightseeing) was more often indicated for learning more about a certain topic by project participants after the project compared to the control group – and while the effect is rather small (only 3% of the difference is attributed to group affiliation), it is an important indication of the project's impact on students' perception on site-based learning.

Different items related to **personal history and testimonies** specifically, are especially relevant since they constitute a significant element of the project activities. While the extent students consider that learning about (any) subject by watching videos of individuals sharing their experiences, would have/had a strong impact on them, is higher among participants than the control group (3% of the variance explained by group membership), the effect is more pronounced for the belief that personal stories have a key place among other types of sources of history (they are an 'important component of history'): 9% of the difference is explained by project participation, rising to 14% when considering all three groups separately.

⁷ Measured by the statement 'I find it fairly easy to use various online communication platforms'.

Another key thematic group of items from the survey are students' **attitudes**. We can say here that the strongest effect can be seen concerning art, history and stereotypes, while further items related to learning and social attitudes show some notable variations between groups. For example, 7% of the belief that learning about historical events is not important because they happened long ago is explained by group affiliation – which rises to 13% when comparing the averages for all three groups. The 'art' element of the project also seems to show effect as 11% of the variance of students indicating that artworks affect them is explained by participation in the project (15% when comparing all three groups), and 7% of the difference is explained for students' perception that art helps them to understand the world. The results also show that 8% of the variation in students' perception that stereotypes help understand people is linked to participation in the project, increasing to 11% with all three groups. Finally, students' views on discrimination also reveal some divergence – indicated by the statement whether they believe that there are times when discrimination (based on factors like culture, race, or gender) may be acceptable: 4% of the variance for agreement with this sentence is explained by project participation (rising to 6% when comparing all three groups). For a detailed summary of the statistics, see Table 6 in the Annex.

Table 3 Variables with an effect size of at least 6%, by group affiliation (participant vs. control group), presented in order of effect size

Category	Variable	Effect size*
History	Interest in the topic of the Holocaust	strong
Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.)	moderately strong
Arts	Artworks affect me.	moderately strong
Personal history	Personal stories are important components of history.	moderate
Social/civic attitudes	Stereotypes are true and help us to understand other people.	moderate
Arts	Art helps me to deepen my knowledge	moderately weak
Arts	Interest in arts.	moderately weak
History	It's not that important to learn about historical events because they happened a long time ago and aren't that relevant to our lives today.	moderately weak
Civic/social issues	Interest in civic/social issues	moderately weak
Self-assessment of skills	Academic knowledge	moderately weak
Arts	Art helps me to understand the world around me	moderately weak

Source: authors

*Categorisation of effect sizes by the authors. All effects are statistically significant.

There are fewer variables which show at least a moderate effect (6% or above) when comparing participants only to the narrower testimony control group. Those students who did not participate in any activities are thus not included here: on one side we have those students who participated in the

project and all of its activities, and on the other side there are the students who did not participate in the project but attended the lessons using testimony-based learning materials. As explained before, some of these lessons were led by the participating students themselves, while in other cases the teachers held the lessons.

The three variables with the strongest effect size are the same when comparing participation to the testimony control group directly. The first one – **interest** in the Holocaust – shows even the same effect size: 14% of the difference between the means of the two groups is explained by participation in the project. Participating students were also more interested in social/civic issues and arts compared to the testimony control group, although only 5-6% of the variance is explained by group affiliation – showing a moderately weak or weak effect size.

The second strongest was the relative ability to find and use information when conducting research (with 11% explained), which shows the crucial impact of the project on research and information literacy skills. Other **self-assessed skills** of students do not show such a notable effect, although there are still some that are statistically significant. Project participation explains approximately 3-4% of the variance between participant and testimony control group for the self-assessed ability to understand other people, academic knowledge and creativity. Additionally, some of the **transversal skills** discussed in the previous section, also show significant differences between participant and testimony control group. For example, 4% of the variance is explained by group affiliation for communication skills, while 5% for independent thinking (not giving in to peer-pressure).

The third strongest was related to **arts**, considering the extent artworks affect the students – although here the effect size is a lot weaker than for the previous two: slightly below 6%. At the same time, there are multiple variables relevant for the theme of arts showing significant, although slightly weaker effects (around 5%), which is relevant to highlight as arts and the museum were a key element of the project. Students participating in the project were more interested in the topic of arts and agreed more strongly that arts help them to understand the world around them, while it also helps them to learn.

The theme of **storytelling** also appears among the strongest effects: participants considered family stories to be a better way to tell a story – 6% of this difference is explained by their participation. This shows that even though all students considered here participated in a testimony-based lesson, personal (family) stories had a crucial impact on participating students through other project activities. At the same time, the theme of **personal history** is not among the most notable effects. Participation in the project only explains 4% of the difference in students' belief that personal stories are important components of history (see Table 7), suggesting that the effect of using testimonies and integrating

personal stories into history teaching had a meaningful impact on the students of the testimony control group as well – while there is still a significant difference.

Finally, it is also important to reflect on the theme of **learning methods**, even though these show smaller effect sizes. Similar to the comparison with the complete control group, 4% of the difference in the averages for the preference for learning with digital tools is explained by project participation, while it is 5% for learning with/through arts. The difference in students' responses for variables reflecting place-based learning is explained by project participation in 3-4%, a small, but significant effect.

Table 4 Variables with an effect size of at least 6%, by group affiliation (participant vs. testimony control group), presented in order of effect size

Category	Variable	Effect size*
History	Interest in the topic of the Holocaust	strong
Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.)	moderately strong
Arts	Artworks affect me.	moderately weak
Social/civic issues	Interest in civic/social issues	moderately weak
Storytelling	Best way to tell a story: Family stories	moderately weak

Source: authors

*Categorisation of effect sizes by the authors. All effects are statistically significant.

4 Evaluation results: the teacher interviews

Based on the teachers' perspective and their answers to the interviews, participation in the Arks project had a significant impact on students' attitudes and skill sets, as a result of the activities that they participated in, including international travel, historical site visits, and collaborative tasks. When the teachers were asked what they saw as the main impact of the project overall on students' attitudes, skills, knowledge or behaviour, they were broadly unanimous in saying that the project had a very complex impact. They highlighted how it is difficult to rank these effects and they have experienced a change in the students' overall attitude. It also came up that the experiences that the students have gained are nothing compared to what they can get in the traditional classroom setting and how this has shaped their thinking and worldview. Furthermore, the teachers also articulated the interdependent nature of the complex effects of the project and their experience that, for example, the knowledge acquired is also linked to the development of students' attitudes and skills and that these can also feed back into knowledge. In the following subsections, the complex impacts of the project and different segments of the project are explained in more detail.

4.1 ATTITUDINAL SHIFTS

Students from diverse personal and family backgrounds were required to work together, which promoted acceptance, teamwork, and openness – as illustrated by the following quote from one of the teachers:

“The project certainly changed their attitude in terms of acceptance. (...) They learned to cooperate and support each other despite their backgrounds and personal challenges”.

Engaging in these activities broadened their horizons, shaped their attitudes, and provided life-changing experiences, particularly in terms of openness, empathy and, in general, emotional intelligence (EQ) development.

“We educate them to be accepting, to be open to the colourfulness of the world”

said a participating teacher, and according to the reports, there has indeed been a change in openness and acceptance in this direction, as explained in more detail below.

Experiences such as holding historical walks, teaching, and engaging with local history deepened empathy, encouraged a more nuanced understanding of others, and fostered a sense of belonging and global citizenship. According to the teachers' reports throughout these opportunities that allowed them to be guides of local historical walks the students' self-confidence increased visibly and their attitudes towards belonging to a local community strengthened. The teachers also emphasised how being able to learn from peers via the iWalks, students experienced both extremes of teaching and learning. Since they were put in a situation where they had to present and guide other students, they became more open, accepting and supportive of the other students. The walks also allowed them to make a connection between their own everyday lives and local history, which increased their personal involvement and local identity.

Visits abroad and interactions with peers from different schools and countries opened the world for them and broke down social and cultural barriers, helping students find common ground while working together. During these visits, they met with peers from other cultures, which became a formative experience for them. One of the teachers even mentioned how life-changing and personality-developing it was to be given to opportunity to travel for the first time for some students: *“It was a huge experience for them to be able to travel to the west”*. All the impressions of the foreign students and the new country resulted in gaining more viewpoints and helped increase the openness and the students' accepting mindset. It also emerged that during their visits abroad, when they were in rooms with students from

different schools, they were better able to develop relationships that were both attitude-forming and life-shaping. The teachers have reported how in the course of these visits abroad at the beginning the students were shyer and more careful, however as the project went on as a result of multiple exposures to the multicultural nature of the project, they became more open and excited about the programs abroad. This progress was especially visible in their attitudes towards their social relations and their approach to challenges. It also emerged that when they were in rooms with students from different schools, they were better able to develop relationships that were both attitude-forming and life-shaping. In addition to interacting with students from abroad, meeting students from other schools in Hungary has also triggered attitudinal changes. One of the participating schools was a prestigious high school in Budapest, their teacher highlighted that the project gave his students the opportunity to "get out of their bubble". Through meeting students from different regions of Hungary, and visiting their cities they realized, that there are other schools too with students from different backgrounds, other than their quite elite high school. The encounters with peers from different backgrounds, norms and standards of behaviour were somewhat of a "culture shock" as one of the teachers has described it. However, these encounters and realizations greatly improved their view of themselves and others and promoted a more understanding worldview and acceptance towards others from different backgrounds. This is how one of the teachers described this sensitisation through learning:

"I think they learned a lot about themselves (...) It was a very-very big learning process for them (...); how to accept somebody, how not to discriminate against others".

The teachers have also reported that there was some rivalry between students of the more prestigious schools, but through mutual activities and programmes, they were able to find common ground. In addition, a teacher of students from a less prestigious school also reported that interacting with students from a "better" school had a very significant impact on his students. He explained how motivating these encounters were for his students and that many who had not planned to continue their studies had changed their minds as a result of the new impressions.

The atmosphere of site visits also contributed to a deeper engagement with history, and subtle changes in attitudes and sensitiveness towards others, promoting a need to "walk in the world with open eyes". The teachers emphasized that even though the students who applied for the program most likely have a fundamentally more open nature, they have shown signs of further deepening their openness, their knowledge of how not to discriminate against others and their attitudes around acceptance. Experiences like the ones mentioned above like collaborating on tasks, holding iWalks and so on all contributed to learning about other perspectives, and this process seemingly cultivated deeper understanding and

empathy in the students. One of the teachers summarized the attitudinal impact of the project in the following way:

"The children learned a lot, whether about history or about themselves, there were very good communication opportunities, they made a lot of friends, they learned exciting things about the world, about accepting themselves and each other".

This quote illustrates well that attitudinal shifts and all that the students have learnt about acceptance came about through learning about the world and getting to know different kinds of people.

4.2 ENHANCED HISTORICAL AND CULTURAL KNOWLEDGE

Through this project, students developed a deeper understanding of local history, particularly regarding the history of local Jewry and the Holocaust. Activities such as archival research and site visits provided a new perspective on historical events, emphasising the importance of seeing the common ground in history and encouraging a proactive approach to learning.

One of the teachers has shared a quote from a student that showcases how this alternative way of learning, for instance holding walks in their hometown has shaped the students' view on history and learning about history: *"keep your eyes open, because history can be around every corner"*. These local walks allowed students to learn more about the history of their own city, and gain a new perspective on history, as one of the teachers highlighted:

"They learned a lot about the history of the Jews in [city⁸] (...) They started to see these places differently, not just as places they pass by daily, but as places with history".

Learning on-site was particularly effective in helping students to understand different aspects of local history and to compare this with the history of other cities. For example, students learned about the history of Sopron in ninth grade and used this knowledge in other locations. Furthermore, the students were able to discover cultural relics that have directly affected their own communities. Local Jewish memories, for example, were particularly important to them because connecting these historical facts to their own personal experiences made a deeper impact on them. This knowledge and experience helped to make the students more sensitive to local history and culture. Visiting different cities also gave the students the opportunity to compare the cultural and architectural characteristics. This understanding

⁸ The name of the city was removed to ensure anonymity of the interviewee.

of differences deepened their cultural knowledge and helped them to better appreciate regional differences in Hungarian history.

Through their tasks in the project, like assembling a roll-up for the exhibition students learned that historical research is not a simple task, but requires deeper reflection and critical thinking, as shown in the quote below:

"They could definitely see that a historical research project is not an easy thing. It's not like a simple school assignment (...) somehow it has to be filtered, thought through, looked into more carefully, sources have to be indicated".

As a result of the project, they learned how to search for authentic sources, collect data and organise them. In this way, they have developed their ability to work with sources. The opportunity to deepen their knowledge of a specific topic also helped them appreciate the process of research and made them proactive in acquiring even more information. Furthermore, this has helped them implement the practice of reading up on things on their own. Teachers have also reported that students' lexical knowledge has increased very substantially.

For some students, the program and the newly gained view of history and learning also helped define career paths. As illustrated by the following quote, the knowledge and experiences that the students have gained have had a lasting impact on them:

"Everything is connected here. It's got an emotional component, it's got a cognitive component, it's got a social component and so on. As a result of that, the knowledge learned becomes a very strong knowledge. Because it moves so many strings, not only their hands move, not only their feet move, the whole organism moves together, as a result of that it becomes a lasting experience".

Besides the whole lasting experience and the large amount of lexical knowledge that they have acquired the following quote illustrates how they have also gained a new view on the process of learning:

"So this learning thing, it's not something that comes from above, but on the one hand I am learning myself, so to say I am doing it myself, and on the other hand I can learn from my peers as well".

Some teachers also emphasized how the above-detailed learning experiences and the newly gained knowledge students also acquired a deeper understanding and insight into these historical and cultural topics, which implied attitudinal shifts as well.

4.3 SKILLS DEVELOPMENT

Based on the teachers' observations the students have shown visible progress in many key skill areas. Working in an international environment, travelling abroad, and performing publicly improved students' ability to communicate effectively across different cultural and linguistic contexts. Students also gained confidence and a sense of responsibility by making decisions in preparing exhibition materials, leading local history walks, and creating content for the exhibition.

Leading the local walks was a big responsibility for the students, as they were not only showing the sites to their peers but also to students from other schools. The teachers reported that it was very interesting to see how these experiences greatly increased their sense of autonomy and responsibility, as they were representing the history of their own community. In addition, during the walks, students had to communicate clearly and concisely, which improved their presentation and speaking skills. Throughout the guided tour, they experienced the challenge of keeping the attention of others and delivering the content in a comprehensible way. It was particularly important for them to perform in front of their peers, and this encouraged them to prepare even better and pay more attention to each other, thus improving their social skills as well. By solving unexpected situations during the walks, students also developed their critical thinking and problem-solving skills.

Furthermore, the task of deciding what to include in the exhibition also provided them with a sense of duty and improved their decision-making and critical thinking skills. The teachers have also reported that because the students had to carry out in-depth research in compiling the material for the exhibition, there had been an improvement in their source collection and analysis skills. Organising the exhibition and putting it together also required the students to work in a structured way, making plans and understanding every step of the process. A quote from one of the teachers illustrates this well:

"The project certainly developed their cooperation skills, their research work and teamwork skills (...); these skills were essential to putting together the final product".

Multiple teachers emphasized how great it was to experience the students' proactiveness in these processes and their involvement in executing new and creative ideas about the exhibition materials. They worked together in creating these exhibits, which also developed their cooperation skills and taught them how to work effectively in a team. A quote by one of the teachers illustrates well how the joy of creating something lasting has influenced the students:

"The joy of discovery or recognition, that they can make something, put something on the table, that will last".

According to the teachers, interactions with adults as their equals were a new and exciting experience for the students,

“they had to manage different tasks themselves, like going to the deputy headteacher, asking for paperwork to be printed (...). It really built their soft skills in communication and responsibility”,

and it further increased their self-assurance, autonomy, and pride. Some teachers highlighted that it was an interesting observation for them how purely the fact that during the site visit, all students had the opportunity to talk about what they have done throughout the year, and the organizers all listened and honoured their work, increased the students' confidence and faith in their capabilities.

The teachers also highlighted how the whole experience, through gaining more confidence, a sense of responsibility and broader horizons, facilitated the maturing and growing up of the students. In addition, the participating students learned to cooperate effectively with peers from different backgrounds and age groups, developed patience, and cultivated the ability to work with people who may not share common ground. The experience fostered empathy and openness, encouraging a culture of shared thinking and mutual respect.

4.4 CONCLUSION

In conclusion, the Arks project had a great and complex impact on students, enhancing their attitudes, knowledge, and skills. Through international collaboration, historical exploration, and hands-on activities, students experienced significant growth in empathy, openness, and emotional intelligence. Their participation in site visits and cross-cultural interactions facilitated a deeper understanding of history, cultural heritage, and the importance of tolerance. Additionally, the project equipped students with vital skills such as critical thinking, communication, and leadership, while strengthening their confidence and sense of responsibility. Overall, the program not only enriched their academic and personal development but also helped shape them into more thoughtful, informed, and globally conscious individuals.

5 Summary

The results of the evaluation presented in this report highlight the substantial impacts the project had on students' learning, attitudes, and skills. The project aimed to enhance students' understanding of history through a combination of site-based learning, digital testimonies, and a collaborative co-creation process, involving participants from multiple European countries.

One of the key outcomes of the project was an **enhancement in students' knowledge**, particularly in their understanding of historical events like the Holocaust and Jewish history in various local settings. This was achieved through activities such as visits to historical sites, conducting archival research, and using video testimonies from Holocaust survivors. Students also reported improved academic skills, especially in conducting research using various sources, including online platforms and libraries. Many participants expressed greater confidence in their ability to use new media tools to create and share content, such as blogs and videos, further broadening their digital literacy.

In addition to knowledge gains, the project **fostered the development of essential skills** such as critical thinking, communication, and teamwork. Students worked collaboratively across cultural and national boundaries, enhancing their ability to communicate effectively in diverse environments. They also gained leadership experience by taking charge of peer-led activities, such as guided historical walks, which contributed to their growth in public speaking and presentation skills. The co-creation aspect of the project, which involved students in creating materials for the museum, helped foster a sense of responsibility and autonomy. By making decisions about what content to include in their projects, students were able to refine their critical thinking and problem-solving abilities.

Another key impact of the project was the **attitudinal shift** observed among participants. Teachers noted that students became more open, empathetic, and aware of the broader social and historical contexts surrounding the events they studied. The cross-cultural collaboration, particularly during site visits and joint activities, broke down cultural barriers and promoted a more global perspective. Students also developed a stronger sense of local identity and pride, as they represented their cities through the creation of museum materials, leading to a deeper connection with their communities and a greater understanding of the importance of historical preservation.

The project's use of **testimony-based learning materials**, such as video interviews with Holocaust survivors, was especially effective in engaging students both emotionally and cognitively. Many students reported that these personal narratives made the historical events more relatable and helped them think more deeply about the subject matter. This format was found to be more engaging than traditional history lessons, offering students a richer and more thought-provoking learning experience.

In terms of **learning preferences**, the project revealed that a significant number of students favoured the use of digital tools and personal testimonies when studying history. The hybrid learning methods employed in the project, which combined digital and in-person experiences, were particularly successful in deepening students' engagement and understanding. The **site visits** were highly valued, with the majority of students agreeing that visiting historical locations helped them better grasp the events discussed during the project.

Overall, the project had a notable impact on its participants' knowledge, skills, attitudes and behaviour. It enriched their historical knowledge, empathy, and critical thinking, while also strengthening their communication and leadership skills. Through a combination of digital learning, personal testimonies, and site-based experiences, the project provided students with a meaningful and lasting educational experience. It successfully fostered a sense of responsibility and collaboration, shaping participants into more thoughtful, informed, and globally aware individuals. The observed impact and overall evaluation of the project were overwhelmingly positive, suggesting its potential for broader implementation in educational settings.

6 Annex

Table 5 Summary of statistics on the changes between the pre- and post-surveys: most notable effects*, by participation in the project

	Thematic category	Variable	Pre-survey mean	Post-survey mean	Direction of change	Significance level**	Effect size***
PARTICIPANT GROUP	Learning	I think it is easier to learn with the use of digital tools	3,81	4,14	↑	0,001	0,377
	Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.	2,71	2,99	↑	0,002	0,357
	Self-assessment of skills	Ability to use and create content (blogs videos, etc.) using new media (websites, Facebook, Twitter, Wordpress, etc.)	2,30	2,60	↑	0,002	0,350
	History	Interest in historical topics in general	4,08	3,90	↓	0,022	0,258
	Storytelling	Best way to tell a story: Family stories	2,36	2,86	↑	0,024	0,258
	Learning	Method of information gathering: Watching a movie	0,64	0,50	↓	0,033	0,243
	Self-assessment of skills	Academic knowledge	2,74	2,93	↑	0,035	0,238
	Skills: communication	It is difficult for me to express myself and my thoughts in front of others	2,65	2,86	↑	0,046	0,225
	Social/civic attitudes	I think that people have a responsibility to be active citizens in their communities	3,67	3,86	↑	0,058	0,216
	Arts	Art helps me to understand the world around me	3,74	3,96	↑	0,062	0,213
	Social/civic attitudes	If I see someone get hurt, I feel the need to help them	4,22	4,06	↓	0,070	0,206
CONTROL GROUP	Storytelling	Best way to tell a story: Personal testimonies (in the form of video interview)	2,64	3,49	↑	0,001	0,398
	Storytelling	Best way to tell a story: Movie	3,58	3,17	↓	0,025	0,273
	Skills: openness	I am open to having my own views challenged	3,27	3,51	↑	0,052	0,234
	Storytelling	Best way to tell a story: Museum	2,16	1,75	↓	0,060	0,228
	Skills: media and information literacy	When I read something online, I always check the credibility of the source	2,73	2,96	↑	0,066	0,221
	Learning	Method of information gathering: Using Internet sources	0,81	0,71	↓	0,090	0,206
	Self-assessment of skills	Academic knowledge	2,36	2,50	↑	0,086	0,206
	Skills: empathy	I feel bad when someone gets their feelings hurt	3,62	3,80	↑	0,103	0,201

Source: own compilation based on the pre- and post-survey database of the project

* Based on paired samples T-test. An effect is considered notable if the effect size is above 0,2.

** Effects are considered statistically significant if $p < 0,05$

***Effect size is measured via the indicator of Cohen's d with Hedges' correction.

Table 6 Summary of statistics on the variables showing statistically significant effect, by group affiliation (participant vs. control group)*

Category	Variable	Participant group mean	Control group mean	Effect size (eta ²)
History	Interest in the topic of the Holocaust	4,23	3,61	0,139
Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.)	2,99	2,40	0,121
Arts	Artworks affect me.	4,01	3,29	0,108
Personal history	Personal stories are important components of history.	4,36	3,92	0,092
Social/civic attitudes	Stereotypes are true and help us to understand other people.	2,24	2,79	0,084
Arts	Art helps me to deepen my knowledge	3,88	3,24	0,077
Arts	Interest in arts.	3,99	3,39	0,075
History	It's not that important to learn about historical events because they happened a long time ago and aren't that relevant to our lives today.	1,49	1,97	0,074
Civic/social issues	Interest in civic/social issues	3,90	3,44	0,072
Self-assessment of skills	Academic knowledge	2,93	2,50	0,069
Arts	Art helps me to understand the world around me	3,96	3,42	0,068
Learning: place-based	Historical events can be better understood by visiting historical locations in person.	4,15	3,76	0,054
Social attitudes	It is important to me that I stand up for others	4,23	3,88	0,052
History lesson	Only the teacher is speaking during class.	2,36	1,93	0,051
Learning: digital	I think it is easier to learn with the use of digital tools	4,14	3,77	0,042
Social attitudes	There are times in society when discrimination is acceptable (based on differences of culture, race, gender or some other factor)	2,05	2,47	0,042
Storytelling	Best way to tell a story: Family stories	2,86	2,16	0,039
Self-assessment of skills	Ability to understand people from different backgrounds/cultures	2,85	2,50	0,037
Self-assessment of skills	Creativity	2,74	2,39	0,036
Learning: place-based	Visiting the location (museum, memorial sight, sightseeing, etc.)	0,46	0,29	0,029
Skills: empathy	It upsets me to see someone being treated disrespectfully	4,37	4,12	0,029
School	I enjoy being in school.	3,60	3,30	0,029
Learning: place-based	It is important for me to know about the people who lived in the past where we live now	3,88	3,58	0,028
Personal history	I think that learning about a subject by watching a video of someone telling his or her personal story would have/had a strong impact on me	3,99	3,69	0,027
Skills: Empathy	I try to understand how other people feel and think.	4,15	3,89	0,027

Source: own compilation based on the pre- and post-survey database of the project

*Based on the comparison of means (ANOVA table). All effects are statistically significant ($p < 0,05$).

Table 7 Summary of statistics on the variables showing statistically significant effect, by group affiliation (participant vs. testimony control group)*

Category	Variable	Participant group mean	Testimony control group mean	Effect size (eta ²)
History	Interest in the topic of the Holocaust	4,23	3,64	0,135
Self-assessment of skills	Ability to find and use information when conducting research (online, in a library, using books, etc.)	2,99	2,42	0,109
Arts	Artworks affect me.	4,01	3,49	0,059
Civic/Social issues	Interest in civic/social issues (involvement in activities to make a difference in the community)	3,90	3,48	0,057
Storytelling	Best way to tell a story: Family stories	2,86	2,00	0,056
Attitudes: civic engagement	It is important to me that I stand up for others	4,23	3,87	0,052
Skill: independence	I always choose what I think is the right thing to do, even when my friends are pushing me to act otherwise	3,60	3,16	0,051
Arts	Art helps me to understand the world around me.	3,96	3,49	0,050
Arts	Interest in arts	3,99	3,50	0,050
Arts	Art helps me to deepen my knowledge	3,88	3,36	0,047
Social attitudes	Stereotypes are true and help us to understand other people	2,24	2,64	0,043
Personal history	Personal stories are important components of history.	4,36	4,06	0,043
Skills: communication	I find it easy to use different kinds of online communication platforms	4,08	3,72	0,041
Self-assessment of skills	Academic knowledge	2,93	2,60	0,039
Place-based learning	Visiting the location (museum, memorial sight, sightseeing, etc.):	0,46	0,27	0,036
Self-assessment of skills	Ability to understand people from different backgrounds/cultures:	2,85	2,50	0,035
Learning	I think it is easier to learn with the use of digital tools.	4,14	3,80	0,035
Place-based learning	Historical events can be better understood by visiting historical locations in person	4,15	3,84	0,033
Self-assessment of skills	Creativity	2,74	2,40	0,031

Source: own compilation based on the pre- and post-survey database of the project

*Based on the comparison of means (ANOVA table). All effects are statistically significant ($p < 0,05$).