INSTITUTE
OF NATIONAL
REMEMBRANCE

IMMERSIVE HISTORY EDUCATION

– where we are and what lies ahead

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INTRODUCTION

We are pleased to present to you research report of 2024 on the future of teaching history in the age of the ongoing technological revolution. In our first report, entitled "Immersive History Education – Towards New Educational Paths", published in 2022, we presented research results indicating the need for a change in thinking about education, showing not only the distinctiveness, but also the internal diversity of young people, functioning from childhood in the so-called "nanosecond culture" and communicating with each other through virtual reality. Another publication "Education for Remembrance" (Warsaw, 2023), which contains the results of a survey of the historical awareness of Poles, presents a picture of young people who are noticeably less able to recognize and understand the most important historical processes in Poland's history. On the other hand, the same young people show interest in the educational offer in the field of history available in places of living memory and in virtual spaces. Thanks to the research to date, we have both a clear recognition of the problem of insufficiently effective history education and an indication of how to solve it by offering young people, as well as teachers, attractive tools and methods for learning about our past.

From the beginning of the functioning of the New Technology Division of the Institute of National Remembrance, created on 13 September 2021, we were, and still are, aware that mere openness to innovative educational solutions is not enough, that – given the pace and scope of the changes taking place – it is no less important to continue the research effort, constantly monitor young people"s attitudes and support educators. Our aim has never been to unreflectively follow technological novelties, but to consciously use modern solutions to effectively fulfil the mission of the Institute of National Remembrance, which is to educate future generations to become conscious patriots and citizens, aware of their past and concerned about preserving their common heritage. Based on the results of research and analysis, we can propose solutions in the form of the use of new technologies in education and also new educational pathways.

We dedicate this report in particular to teachers who wish to meet the expectations of young people and provide activities in which pupils will be happy to participate. On our website, all those interested will find additional materials to help prepare immersive history lessons.

When presenting our games, applications, short films and other immersive projects: from the "Cyphers Game" to "Warsaw Rising – City of Heroes", "Aviators – War in the Skies", "Szybowcowa'87" or "Testimony of Help", we paid particular attention to the reactions and comments of young users. Now, in the report on the future of teaching history, we also present an objectified – based on analytical research: quantitative and qualitative – characterisation of young people's attitudes and preferred educational paths. While in the first report we asked whether there was a need for a wide and bold use of new technologies in history education, during the work on the second report our attention was focused on finding answers to the following questions: how to use new educational opportunities, how to use new technologies, what educational teaching methods to use, how remote learning affects education, and finally: what needs of young people are met by history education. A key role in the research process, the results of which are included in the presented report, was the identification and observation of trends and changes among teenagers.

We are aware that further challenges lie ahead, including the development of AI and the problems associated with the functioning of new technologies in our daily lives. The pace of change means that, as we wrote in the Introduction to the first report, "today, systems are implemented first and only then their impact on us, the recipients, is examined". In other words, the impact of new technologies on our lives is so significant that it is an absolute necessity to carry out cyclical research and analysis. The report presented to you is a further attempt to answer questions that do not lose relevance but require constant attention and commitment in our daily work.

Karol Nawrocki, PhD
President of the Institute of National Remembrance

In 2022, the New Technology Division of the Institute of National Remembrance, at the start of its activities, published a report entitled “Immersive Historical Education – Towards New Educational Paths” and developed the first multiplatform, educational game “Cyphers Game”. In the following years, we tried to ensure that our efforts were focused on creating new products entering the digital world with educational messages, but at the same time, an equally important sphere of our interest was to recognise the expectations of young people, to create various educational pathways, and to encourage teachers to take advantage of the educational opportunities that new technologies offer us today. We have completed numerous immersive projects, while also taking part in gaming fairs, events dedicated to schoolchildren, meeting and talking to students and their teachers.

I am aware that we cannot just make do with providing effective education for young Poles, but we must at the same time make an effort to recognise new trends and challenges in the age of the technological revolution. We are therefore responding to the changes that are taking place and are making changes as we develop further products that take advantage of digital technology. At the same time, we realise that we should strive to broaden our understanding of the social and cultural changes taking place under the growing impact of virtual reality on young people. The publication presented here, entitled “Immersive Historical Education - Where We Are and What Lies Ahead”, is the result of research and analysis aimed at identifying challenges and optimal solutions in the sphere of historical education. I encourage you to read it and see that, over time, we are getting better at defining trends and identifying potential risks, responding flexibly to the changes observed and revising recommended educational methods and proposals. For example, we are paying more attention to the problem of tackling digital poverty, to ethical issues, and to promoting healthy habits in the use of digital technology.

What I want most is for this publication to reach the desks of teachers and educators. I believe that the time spent reading it will bring tangible benefits: it will help them to become more aware of the scale and importance of the changes taking place and will encourage them to modify their current teaching methods, not only through greater use of new technologies, but also through the use of differentiated pathways of immersive history education, helping create modern programmes, more engaging forms of learning, combining the study and understanding of history with the possibilities of new technologies.

The issue of immersive historical education has not been described clearly and conclusively, and probably will not be in the near future. This is not possible. In a situation of dynamic, revolutionary change, there is no doubt that the wisest policy is to constantly monitor trends and challenges over the long term and respond flexibly to them. As far as possible, the New Technology Division will continue to carry out its tasks, the tangible result of which will be the preparation of a further publication with new recommendations.

Magdalena Hajduk
Director of the New Technology Division INR

The past cannot be changed, the present is happening here and now - the future is the only time frame we have influence over. When we realize that actions - however small - are the beginning of what will happen in the future, we can get extra motivation to implement them.

We need to actively focus today on finding real solutions to the challenges of education. We need solutions that bring us closer to the future. We need a future that is better than the present. Such a shift in thinking about the future has been proposed by Kevin Kelly, a prominent technology thinker and one of the founders of “Wired” magazine. Kelly refers to the state of continuous, incremental improvement of human life as protopia. In protopia, people seek to continually improve their environment, but do not assume that they will bring it to a perfect state. In protopia, we solve problems step by step without expecting revolutionary changes.

"Immersive history education – towards new educational pathways" report was produced in 2022. Its main axis was the needs and expectations of representatives of the young generations in the context of the study of contemporary history and education in general. The report was summarized in a set of recommendations including:

- creating new educational models drawing on the concept of Phygital Edutainment,
- building multi-channel ways to reach learners,
- taking into account the new role of teachers in history education,
- adapting the educational offer to diverse audiences.

Today, two years after the publication of the report, we look at the changes that have taken place in the field of immersive education, analyze good practices and point out current challenges.

With wishes for inspiring reading,
infuture.institute team

Scan the QR code and read the report
"Immersive History Education
- towards new educational paths"

PURPOSE AND METHODOLOGY

OF THE STUDY

The analysis sought answers to questions about the educational needs of the young generations (generation alpha and generation Z), particularly in the context of history education. The report consists of five parts. The first presents research findings on the use of digital technologies in education. The second discusses the three stages of immersive education designed to comprehensively take care of the needs of young generations in the use of technology in education (including history). The third part presents the so-called critical points in the field of education and technology. These are: generational gaps, digital poverty, behavioral addictions 2.0 and functional illiteracy. The next section describes new pathways for history education, developed on the basis of trend analysis and the results of the qualitative research carried out within the project. The final section of the report defines recommendations relevant to the implementation of immersive educational methods.

Stage 1

desk research

The aim of the desk research was to define new methods of engaging with science, particularly the study of history. The analysis also identified key developments that are redefining the way audiences are engaged by combining art, entertainment and education with advanced technologies and rich sensory experiences.

Stage 2

Qualitative research

Workshops and individual interviews

The aim of the study was to understand if and how generation Z and generation alpha use new technologies for learning and entertainment, including the context of history education. Twenty-six representatives of generation Z and alpha took part in the study. 17 people from generation Z participated in 3 research workshops, 6 people from generation alpha took part in individual interviews. The research took place between 12 and 20 September 2024.

Participatory observation

The aim of the observation was to assess the educational effectiveness of modern tools and solutions used by the INR in teaching history to schoolchildren. The observation also focused on the way students interacted with the technology and the historical material conveyed in it. The research was conducted during the Mobile Future History Stop tour (Włoszczowa), the Film Festival Niepokorni Niezłomni Wyklęci (Gdynia) and at the Central History Stop INR (Warsaw) between 17 September and 9 October 2024.

Stage 3

Quantitative research

The quantitative survey was conducted from 11 September to 9 October 2024 on a group of 849 people aged 10-20. The survey was carried out during educational activities carried out by the New Technology Division of the INR - at the Mobile Future History Stop, the Festival Niepokorni Niezłomni Wyklęci in Gdynia and at the Central History Point INR in Warsaw. The survey aimed to identify young people's preferences regarding the use of technology in history education, as well as to understand their needs and expectations of interactive and immersive methods of history teaching.

DIGITAL TECHNOLOGIES IN EDUCATION

– RESEARCH FINDINGS

Today's students are citizens of two worlds, digital and physical, accustomed to information being available anywhere at any time. Knowledge, according to them, should be largely practical, condensed and quickly accessible.

TECHNOCULTURE

One in three students surveyed (33%) confirmed that they always use technology while studying at home, 29% use technology most of the time, 28% of respondents use technology sometimes while studying[1]. The data shows that the vast majority of students (90%) use technology at least sometimes during learning, which indicates its significant impact on educational processes[2]. Only 10% of respondents limit or completely exclude technology when studying at home (6% rarely use technology while studying and only 4% never use technology)[3].

The most commonly used tool that students use when learning at home is social media (46%)[4]. Their large role in the learning process is increasingly challenging for teachers and the education system. Short, often entertaining content is now competing with longer and more difficult to comprehend school content. However, there are still no coherent ideas on how to use the potential of social media for educational purposes.

In second place among the tools that students use for learning are search engines (41%) in third place are educational apps (31%)[5]. Knowing that social media and search engines are among the most important sources of information for students, it is important to continuously develop students' critical thinking and information validation skills. In the in-depth interviews, students indicated that they often choose the first link available on the list or the one that simply has a high number of views or high reach, often without verifying the sources.

I just type in what I need on the internet, for example: a video on trig, a video on order of operations and the first one that pops up has the most views, the most likes and I just click, turn it on and listen. If I feel something is not translated very well, I change it to something else[6].

Kasia,
participant in qualitative research

1. Quantitative survey conducted on a group of n = 849 people aged 10-20 during educational activities carried out by the New Technology Division of the INR on the route of the Mobile History Stop of the Future, the Festival Niepokorni Niezłomni Wyklęci in Gdynia and at the Central History Stop INR in Warsaw, September-October 2024.
2. Ibid.
3. Ibid.
4. Ibid.
5. Ibid.
6. Qualitative study conducted with 17 representatives of generation Z (research workshop) and 6 representatives of generation alpha (individual interviews), 12-20 September 2024. All quotes in this report are from this study.

Chart 1
Do you use technology when you study at home?

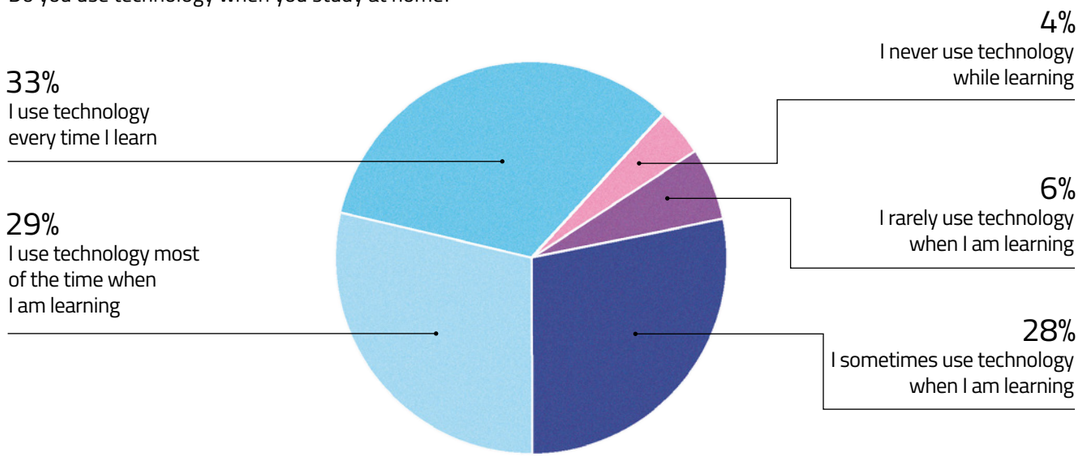
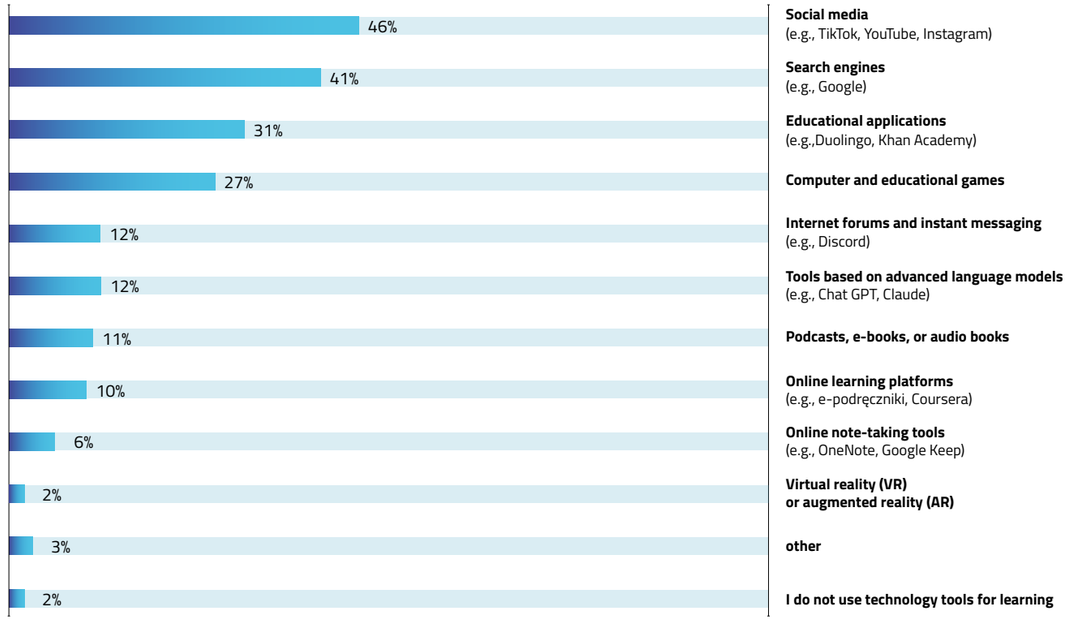


Chart 2
What technology tools do you use most often when learning?



EDUTAINMENT

The rise in popularity of educational apps and online platforms indicates the changing preferences of students in terms of access to educational content and tools to support learning. Computer and educational games for learning are used by 27%, indicating that learning through play and interaction is becoming increasingly attractive to students[7]. The popularity of educational games for learning may suggest the need to integrate gamification into curricula to increase students' motivation and engagement in learning in an era of declining attention spans. In contrast, tools related to virtual and augmented reality (2%) are still marginal, which may be due to the limited availability of the technology, the high cost or the lack of sufficient educational applications[8].

Hackathon HISTHACK, Congress of National Memory, Institute of National Remembrance, Warsaw, April 2023

INR's New Technology Division is active in the field of immersive history education. The aim of the projects created is to respond to the needs of younger generations for more interactive educational methods. Below are some current examples of the use of the edutainment concept in the activities of the New Technology Division INR.

"Aviators – war in the skies" is a game containing arcade, educational and logical elements. It is based on real events and characters of Polish aviators fighting during World War II (including Jan Zumbach, Stanisław Skalski and Anna Leska). A version of the game using virtual reality (VR) technology is also available. In total, the game has already been downloaded almost 500,000 times (476,637), of which just under 50,000 times (49,746) in the virtual reality version of the game. Significantly, the game is not only popular in Poland. More than 20% of the game"s downloads come from China (11.4%) and the United States (11.3%).

"Cyphers game", an interactive game developed by INR's New Technology Division, is recommended as part of the ministerial programe Games in Education. The aim of the programe is to promote selected educational games that allow the transfer of knowledge in a way that is attractive to the learner, develop soft skills and expand the limits of imagination.

It is worth mentioning that both "Aviators - war in the skies" and the "Cyphers game" are also available in Polish and American Sign Language, which greatly enhances the accessibility of solutions designed in the spirit of edutainment, also for people with disabilities.

In turn, the first edition of the HISTHACK hackathon, organized by the Institute of National Remembrance, showed how young people are getting involved in learning history through new technologies. Working in interdisciplinary teams, participants created new ideas for educational games on Polish history.

7. Quantitative survey conducted on a group of n = 849 people aged 10-20 during educational activities carried out by the New Technology Division of the INR on the route of the Mobile History Stop of the Future, the Festival Niepokorni Niezłomni Wyklęci in Gdynia and at the Central History Stop in Warsaw, September-October 2024.
8. Ibid.
9. Ibid.
10. Ibid.
11. Ibid.

AI ASSISTANTS

Tools based on advanced language models, such as chatbots or AI assistants, are still moderately popular (12%), although qualitative research shows that students are increasingly using them for learning[9].

The GPT chat didn't write the whole paper for me, but I used it to systematize my knowledge because you don't have to search through books, you can just ask a specific question and get an answer.

Filip,
participant in qualitative research

Being able to use technology, such as Chat GPT, allows me to systematize and reduce my learning time by accessing key information quickly.

Laura,
participant in qualitative research

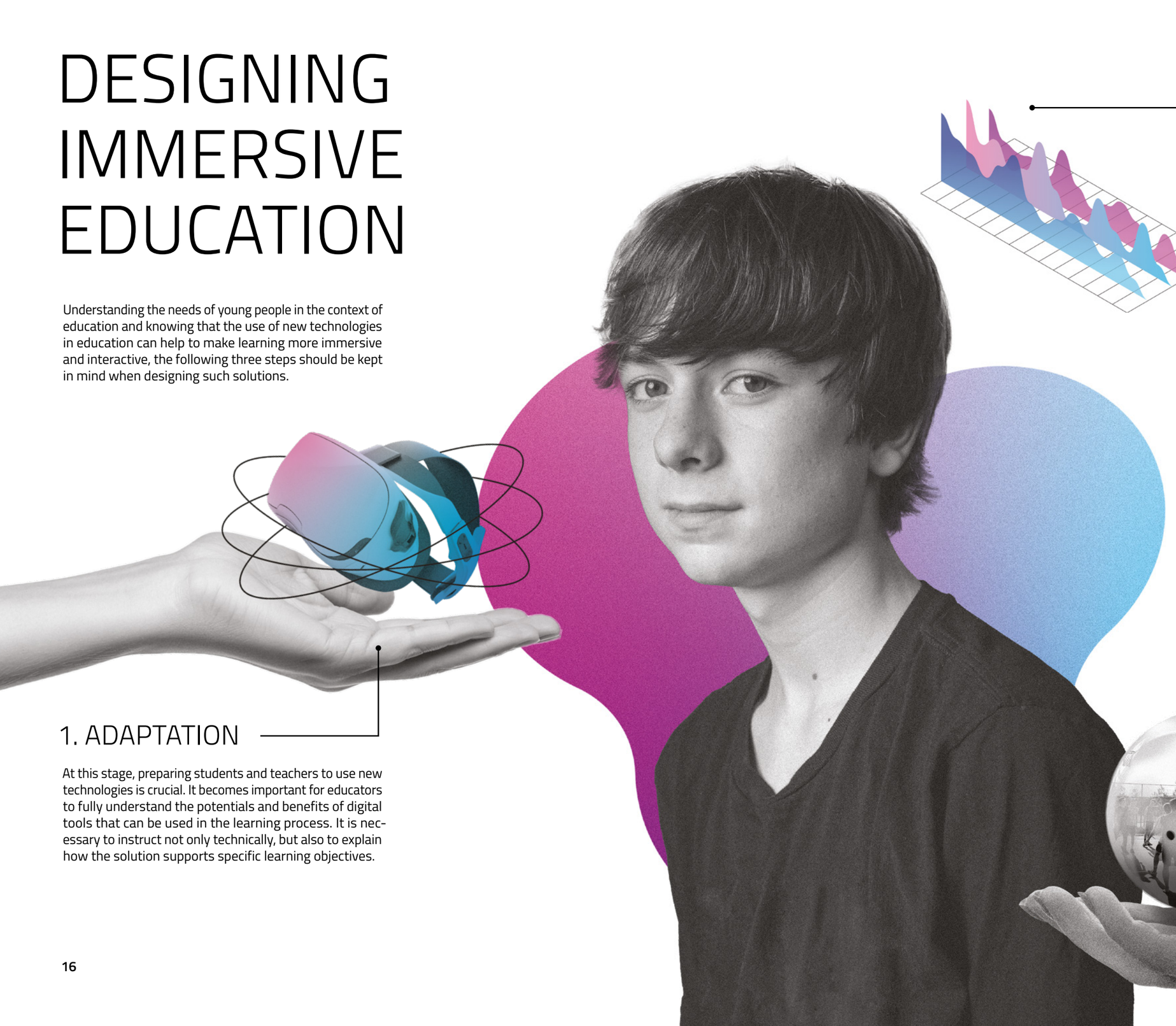
MULTITOOL

Online learning platforms (10%), podcasts, e-books and audiobooks (11%) or online note-taking tools (6%), used by almost one in ten respondents, indicate the increasing role of multimedia content and organizational tools in daily learning.[10] Only 3% said they do not use any technological tools when learning[11].

The findings show that in such a rapidly changing reality, the need to continuously adapt educational tools to the changing needs and expectations of students and to integrate new technologies in a smart and critical way is evident.

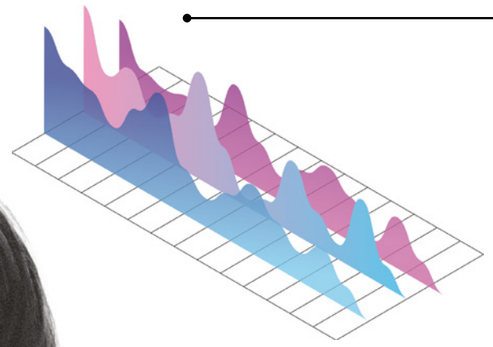
DESIGNING IMMERSIVE EDUCATION

Understanding the needs of young people in the context of education and knowing that the use of new technologies in education can help to make learning more immersive and interactive, the following three steps should be kept in mind when designing such solutions.



1. ADAPTATION

At this stage, preparing students and teachers to use new technologies is crucial. It becomes important for educators to fully understand the potentials and benefits of digital tools that can be used in the learning process. It is necessary to instruct not only technically, but also to explain how the solution supports specific learning objectives.



2. EVALUATION

At this point, it is important to practice and check whether the new technologies actually support the learning objectives of the group. It is important to evaluate the knowledge and competences gained, to answer the question of whether interactive tools really help to improve the learning of the material. Therefore, constant analysis is necessary as to whether technology supports education or is just an attractive addition.

3. REGENERATION

The aim of this stage is to take care to maintain a balance between the digital and physical worlds in students. Digital education can be exciting, but it can also become taxing for students and teachers. It is therefore important to ensure that students have access to physical space where they can take a break from screens and digital stimuli.

It is important to remember that a person born and raised in the digital age need not be confined to the world of technology – digital native does not mean digital only. It is important to encourage students to be physically and socially active to counteract the negative effects of excessive time spent online. It is also necessary to nurture emotional support, such as conversations about digital experiences and their impact on mental health.

CASE STUDY:

IMMERSIVE HISTORY EDUCATION – MODERN EDUCATIONAL PATHWAYS OF THE INR

CONTEXT AND PURPOSE

The New Technology Division of the Institute of National Remembrance has set itself an ambitious goal: to make the study of Poland's contemporary history more modern, engaging, and accessible. The activities were based on the conclusions and recommendations from the report "Immersive History Education – Towards New Educational Pathways". The aim was not only to increase interest in history among young people, but also to counteract digital exclusion and use the latest technologies in education.

PROCESS AND INITIATIVES

1. Projects

The New Technology Division has focused on innovative forms of online education. Projects such as "Cyphers Game", "Aviators", and "Warsaw Rising" are available for free on the Steam platform. By using VR technology and gamification elements, users around the world can learn history in an immersive way, at a time and place convenient for them. Games offer achievement systems and interactive materials that enhance the learning process. Additionally, each game has been translated into several languages. Thanks to ready-made lesson plans and interactive quizzes, the projects have become a valuable educational tool in schools. Additionally, the New Technology Division of the Institute of National Remembrance provides schools and institutions with access to mobile boxes with VR sets, enabling classes to be conducted without the need to purchase expensive equipment.

2. Live Events & Meetings

Since spring 2022, the New Technology Division of the Institute of National Remembrance has been participating in international gaming and educational fairs such as PAX East in Boston, PAX West in Seattle, GAMESCOM in Cologne, Bett London, and PGA in Poznań. Premiere events, such as the presentation of the game "Aviators" in London, and concerts of music from "Cyphers Game" attracted thousands of participants.
In addition, the New Technology Division of the Institute of National Remembrance regularly organises various initiatives, e.g. "Mobile History of the Future Point" – a mobile truck featuring immersive educational projects that visited nearly 30 cities and towns across Poland; "Testimony of Help" – a VR film depicting the tragic story of the Ulma family combined with an immersive exhibition housed in a mobile container, which was presented in 2023 in Rzeszów and attracted nearly 1,500 visitors.

3. Hackathon

In April 2023, the Institute of National Remembrance organised the Congress of National Remembrance at the PGE National Stadium in Warsaw. The Zone prepared by the New Technology Division has been visited by thousands of fans of computer games and history – both older and younger. The first HISTHACK hackathon was also organised as part of the Congress, addressed to students and teachers from schools across Poland. During the first stage, which took place before the beginning of the Congress, the task of six-person teams consisting of students and a supervisor was to develop a concept for a scenario of a historical and educational computer game related to the history of Poland in the years 1917-1990. There were 75 applications submitted, from which the 16 best final teams were selected. The project participants' task was to create a concept and prototype of a historical and educational game. Nearly 100 participants spent two days trying to prepare a historical education project using new technologies. The hackathon not only promoted creativity, but also highlighted how technology can support the learning of history.

Above: New Technologies Zone, PEC INR, Warsaw, May 2024

On the left: Premiere Screening of the Short Film "Testimony of Help", Rzeszów, September 2023

RESULTS

- **Reach:** Over 1.5 million people have benefited from the initiatives of the New Technology Division of the Institute of National Remembrance, both online and offline.
- **Education in practice:** Thanks to games, VR exhibitions, and mobile solutions, young people acquire knowledge in an engaging and modern way.
- **Teacher development:** Workshops, podcasts, and lesson plans support educators in using technology in teaching.

CONCLUSIONS AND RECOMMENDATIONS

The activities of the New Technology Division prove that the use of technologies such as VR and gamification can significantly increase young people's interest in learning history. The key to success seems to be the commitment to creating immersive projects with high educational value as well as the use of all sorts of diverse distribution channels to reach children and young people with modern lessons in the history of Poland. Close inter-institutional cooperation in sharing knowledge and projects can bring tangible benefits to society.

EDUCATION AND TECHNOLOGY

– CRITICAL POINTS

The report "Immersive history education - towards new educational pathways" highlighted the need to work on bridging generational gaps, i.e. the increasingly pronounced differences between generations in terms of aspirations, goals and key needs. Today, we turn our attention to a further three challenges that represent critical points in the context of developing immersive education.

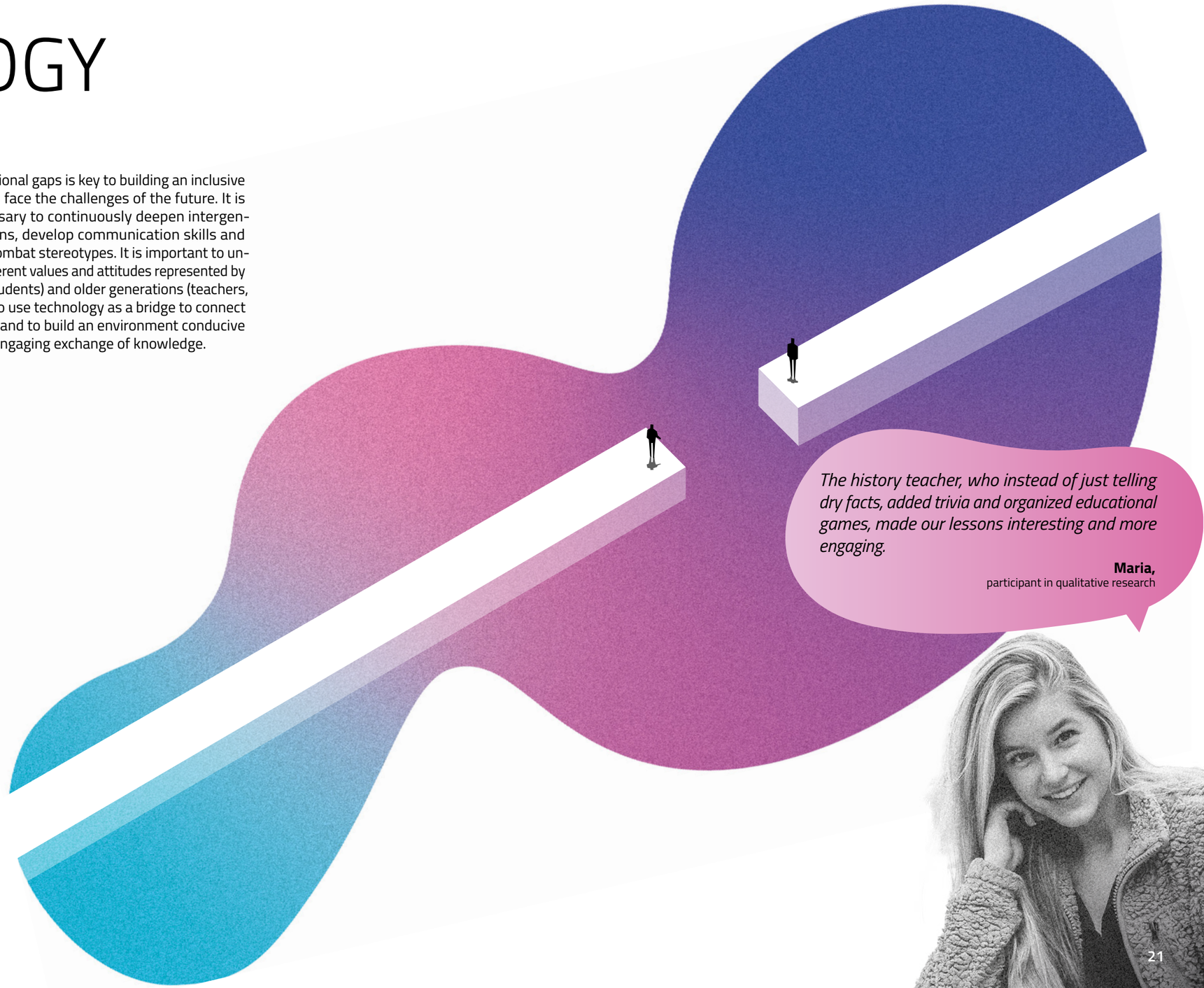
Scan the QR code and read the report "Immersive History Education - towards new educational paths"

Bridging generational gaps is key to building an inclusive society, ready to face the challenges of the future. It is therefore necessary to continuously deepen intergenerational relations, develop communication skills and openness, and combat stereotypes. It is important to understand the different values and attitudes represented by both younger (students) and older generations (teachers, educators) and to use technology as a bridge to connect different groups and to build an environment conducive to an open and engaging exchange of knowledge.

GENERATION GAP

A trend called Intergenerational Wars appeared on the Trend Map 2024, published by infuture.institute, for the first time this year. It refers to increasing tensions and conflicts between generations, especially between generations X, Y and Z. It covers differences in values, beliefs, attitudes as well as economic inequalities and digital competences. At school, this can lead to growing misunderstandings and challenges in communication, including those regarding the methods of teaching. The qualitative research provided for this report shows that students value activities that engage not only the exchange of ideas and opinions but also involve different senses or allow for experimentation and exploration.

Scan the QR code and see the Trend Map.



The history teacher, who instead of just telling dry facts, added trivia and organized educational games, made our lessons interesting and more engaging.

Maria,
participant in qualitative research

DIGITAL POVERTY

We are also confronted today with a challenge referred to as digital poverty. This is a broad phenomenon that, in addition to a lack of access to technology, includes a lack of financial resources to purchase equipment, a lack of adequate housing for learning, and a lack of social and educational support in terms of using technology wisely. It is a lack of opportunity for the full interaction that a person needs.

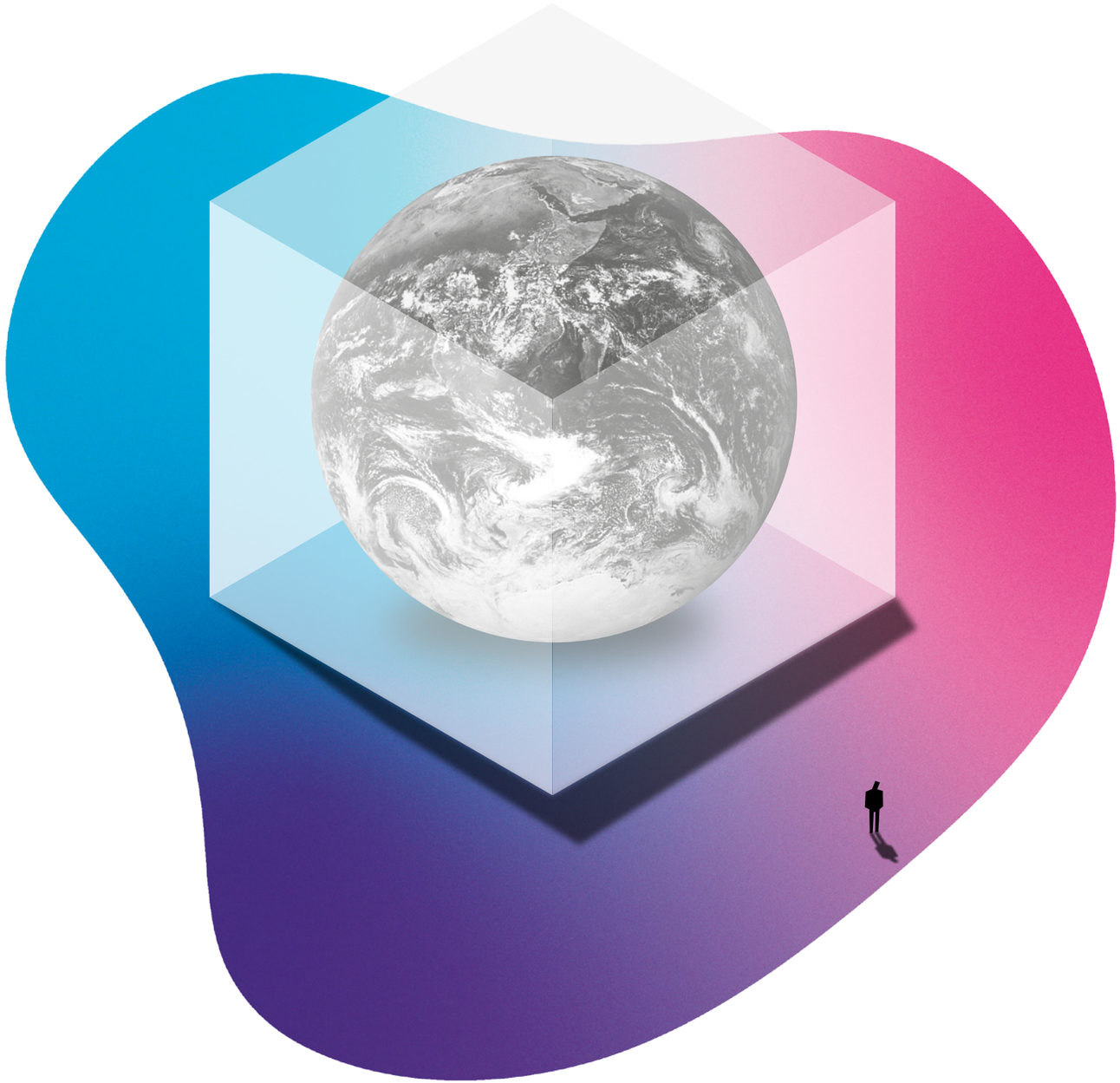
According to the Central Statistical Office (CSO), in 2024 almost 96% of households in Poland will have access to the Internet[12]. The survey conducted for this report shows that one in three students admit that the technological equipment they use while learning sometimes freezes or runs slower, and 5% of respondents indicate that they have serious problems with the performance of their equipment that significantly hinders their learning[13].

However, bridging the digital divide by providing access to the internet and technological equipment only partially addresses the problem of digital poverty. The greater challenge today is to equip both learners (pupils, students) and educators (teachers, educators, tutors) with digital competences. We are talking about having the skills and knowledge to not only make basic use of technology, but also to critically analyze data and content searched online. It is worth paying special attention here to teachers and educators who need systemic support in the context of a changing environment.

Addressing different stakeholder groups is important here, as the digital gap between the digital nomad generation and those born and raised in a world without regular access to technology will widen. Regular work on bridging this gap should be a strategic goal of both government, business and NGOs.

12. Statistics Poland, "Information society in Poland in 2024 – Use of information and communication technologies in households and among individuals", 21 October 2024, accessed online: 21.11.2024.

13. Quantitative survey conducted on a group of n = 849 people aged 10-20 during educational activities carried out by the New Technology Division of the INR on the route of the Mobile History Stop of the Future, the Festival Niepokorni Niezłomni Wyklęci in Gdynia and at the Central History Stop in Warsaw, September-October 2024.



Examples of actions addressing the challenge

The podcast "The newest history, the newest technology" published by the New Technology Division of the INR was created primarily as a support for educators who would like to start or continue introducing new technology-based teaching methods and projects into their classrooms. Each podcast focuses on a different topic, including virtual and augmented reality, metaverse or the future of education.

Andorra has adopted the Digital Strategy for Education 2022-2025, which focuses on developing digital skills among both students and teachers. The strategy emphasizes security, accessibility and quality of digital tools.

"The newest history, the newest technology" podcast

Digital gap – a gap resulting from differences in access to technology and use of the internet.

BEHAVIORAL ADDICTIONS 2.0

The increasing digitalization of our lives is linked, among other things, to the rise of addictions to technology, particularly smartphones and tablets. This phenomenon, known as behavioral addictions 2.0, is affecting more and more people, including children and young people. The report Teens 3.0 indicates that young people now spend an average of 5 hours and 36 minutes a day online, an increase of almost 50 minutes compared to 2020[14].

The biggest concern at the moment is the growing addiction to social media. Among children aged 10-13 surveyed, as many as 90% admitted to browsing social media every morning[15]. In addition, the research points to fading interpersonal and peer relationships and declines in creative activity[16].

A consequence of behavioral addictions 2.0 is also the declining physical fitness of children. Data shows that physical condition in Poland has deteriorated dramatically over the last 10 years. It is estimated that 88% of children in grades I-III cannot perform a forward roll, and 57% cannot jump over a skipping rope[17]. For the young, the digital world has become the new playground. Excessive stimuli and the huge amount of information coming in from various sources are causing young people to feel increasingly cognitively overloaded and exposed to the phenomenon known as information stress. This, in turn, leads to difficulties in processing and selecting information and makes it difficult to focus, maintain attention and remember effectively.

The problem of behavioral addictions 2.0 was certainly highlighted by the COVID-19 pandemic. In qualitative research, students have negative memories of the remote learning period.

14. National Research Institute NASK, "Teenagers 3.0", 2023, accessed online: 21.11.2024.
15. The Ombudsman for Children, "Journal of daily activities for children and young people", 2023, accessed online: 21.11.2024
16. Ibid.
17. Pulse of Medicine, 12.09.2024, accessed online: 21.11.2024.

In the pandemic, learning was very easy because it was easy to download. It was difficult to focus because there were no consequences for inactivity. I felt I didn't have to go to school. After the pandemic, I had a lot of deficiencies.

Kaja,
participant in qualitative research

I think it was worse for the teachers because they had to sit in front of the computer all day, knowing that most of the students were not listening to them. Probably only a few were actively participating in the lessons.

Maria,
participant in qualitative research

Studying during the pandemic was horrible because you had to sit at home, and I was bored with the tablet.

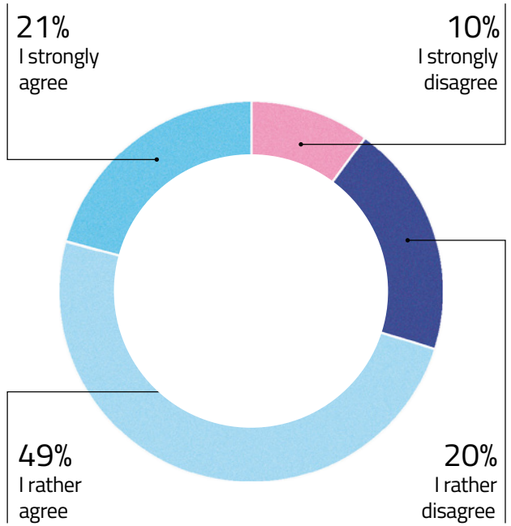
Łukasz,
participant in qualitative research

While studying remotely, I found it hard to concentrate on my lessons.

Michał,
participant in qualitative research

Chart 3
To what extent do you agree with the statementt:

People's life stories are a real inspiration to me

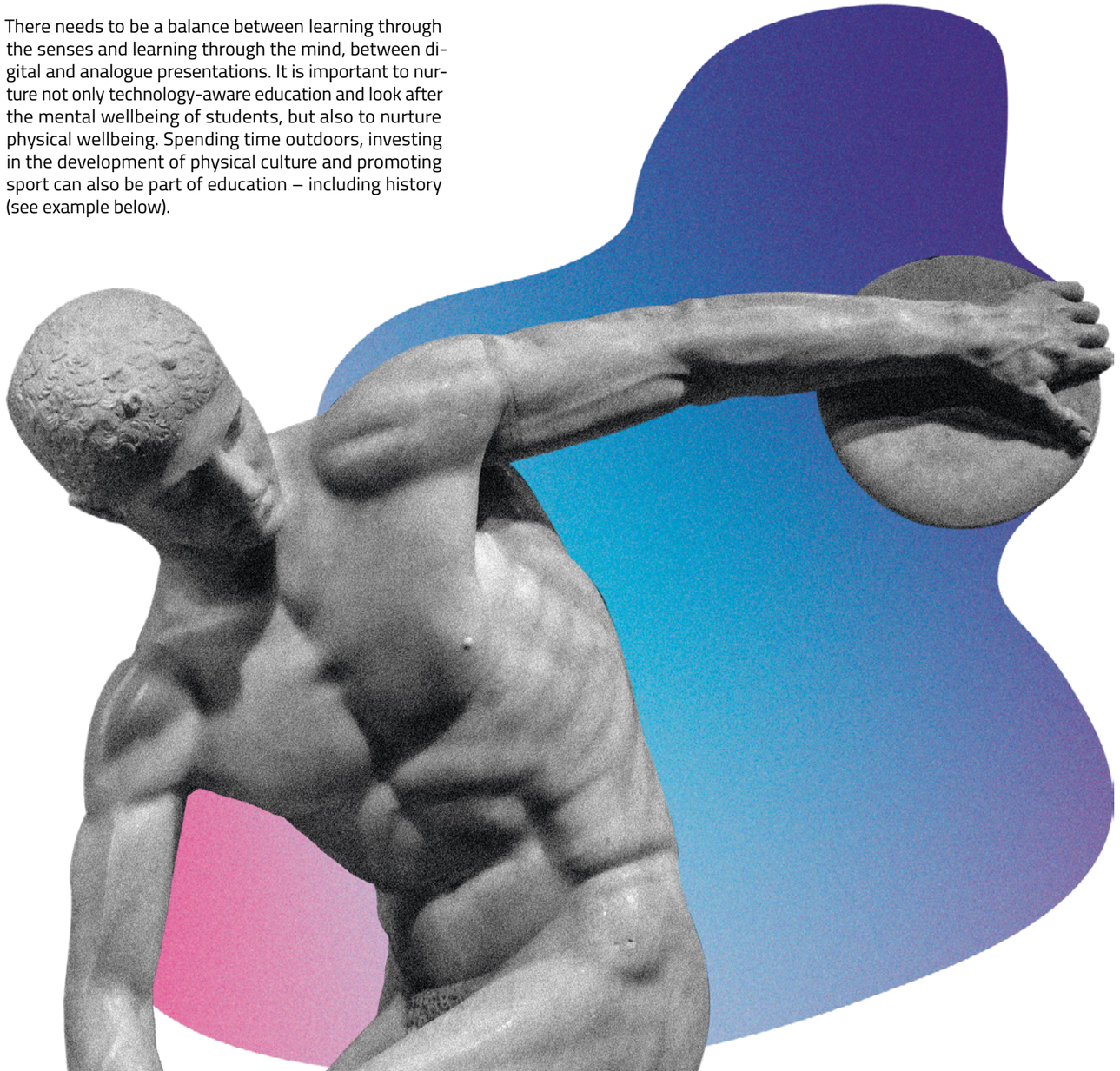


However, it is important to remember that although technology supports the learning process, it is not crucial for students. This is evident from the results of the study, in which most respondents agree with the statement that it is the stories of people's lives that are a true inspiration for them[18].

18. Quantitative survey conducted on a group of n = 849 people aged 10-20 during educational activities carried out by the New Technology Division of the INR on the route of the Mobile History Stop of the Future, the Festival Niepokorni Niezłomni Wyklęci in Gdynia and at the Central History Stop in Warsaw, September-October 2024.

Addiction 2.0 and increasing cognitive overload are complex challenges that require a multifaceted approach – both at an individual and systemic level. Comprehensive action involving government, educational units, educators, and carers is required. It is crucial to work together not only in addressing behavioral addiction 2.0 and cognitive overload, but also in early intervention and support for young children.

There needs to be a balance between learning through the senses and learning through the mind, between digital and analogue presentations. It is important to nurture not only technology-aware education and look after the mental wellbeing of students, but also to nurture physical wellbeing. Spending time outdoors, investing in the development of physical culture and promoting sport can also be part of education – including history (see example below).



Examples of initiatives addressing this challenge

Following on its exhibition "Games for the Gods", MuséoParc Alésia offered activities to middle school students that actively explored the history and traditions of the Games. The project was designed to help them build a bridge between the ancient and modern Games and understand the cultural significance of these events. Part of the activities included participating in ancient sporting competitions. In August, an event was organized where athletes introduced young people to the Olympic disciplines from more than 2,000 years ago (including combat sports, javelin and discus throw, long jump). Visitors were able to try their hand at these competitions. Combining different fields of knowledge – history, culture and sport – allows pupils to see the connections between different aspects of life in antiquity, and the hands-on experience gives a tangible experience of history.

In many countries, governments, local authorities or educational establishments themselves regulate the use of digital devices in schools. In France, mobile phones are banned in primary schools and similar restrictions are being experimented with in secondary schools. A comparable ban has been in place since 1st January 2024 in the Netherlands. In Spain, decisions on restrictions on mobile phone use are taken at the level of autonomous communities. In Finland, on the other hand, phones are allowed in most schools, but their use depends on the teacher. They are sometimes used as an educational tool, making students learn critical thinking and social media rules during lessons. It becomes important to find a balance and a healthy balance between the use of technology and the social and emotional development of students.

FUNCTIONAL ILLITERACY

Functional illiteracy is a phenomenon that encompasses a substantial reduction in reading skills, writing abilities, and and the ability to articulate one's thoughts clearly. It is the result of a variety of factors, including, among others, increasing digitization, changes in the way we communicate (abbreviated information, fake news) and an education system unsuited to modern realities. Functional illiteracy hinders people's full participation in socio-political life and affects the functioning of democracy worldwide.

According to the PISA study – an international survey of 15-year-old pupils in the areas of reading literacy, mathematics and science knowledge, 22% of the pupils surveyed in Poland understand only simple messages[19]. These students do not read with comprehension and have difficulty in cause-and-effect thinking. Both of these aspects are crucial not only in developing critical thinking, decision-making and effective problem-solving skills (it should be noted that nearly 70% of children that are currently enrolled in primary schools will be working in professions that do not yet exist), but should form the basis of learning in general, including the study of history.
Given the increasing phenomenon of functional illiteracy and the dynamic digitalization of all areas of our lives (including education), a digital literacy strategy that addresses, among other things: critical thinking, online safety, information literacy or digital identity management, should be addressed as a priority.

Infoxication – so-called information poisoning, an excess of information that leads to superficial processing.

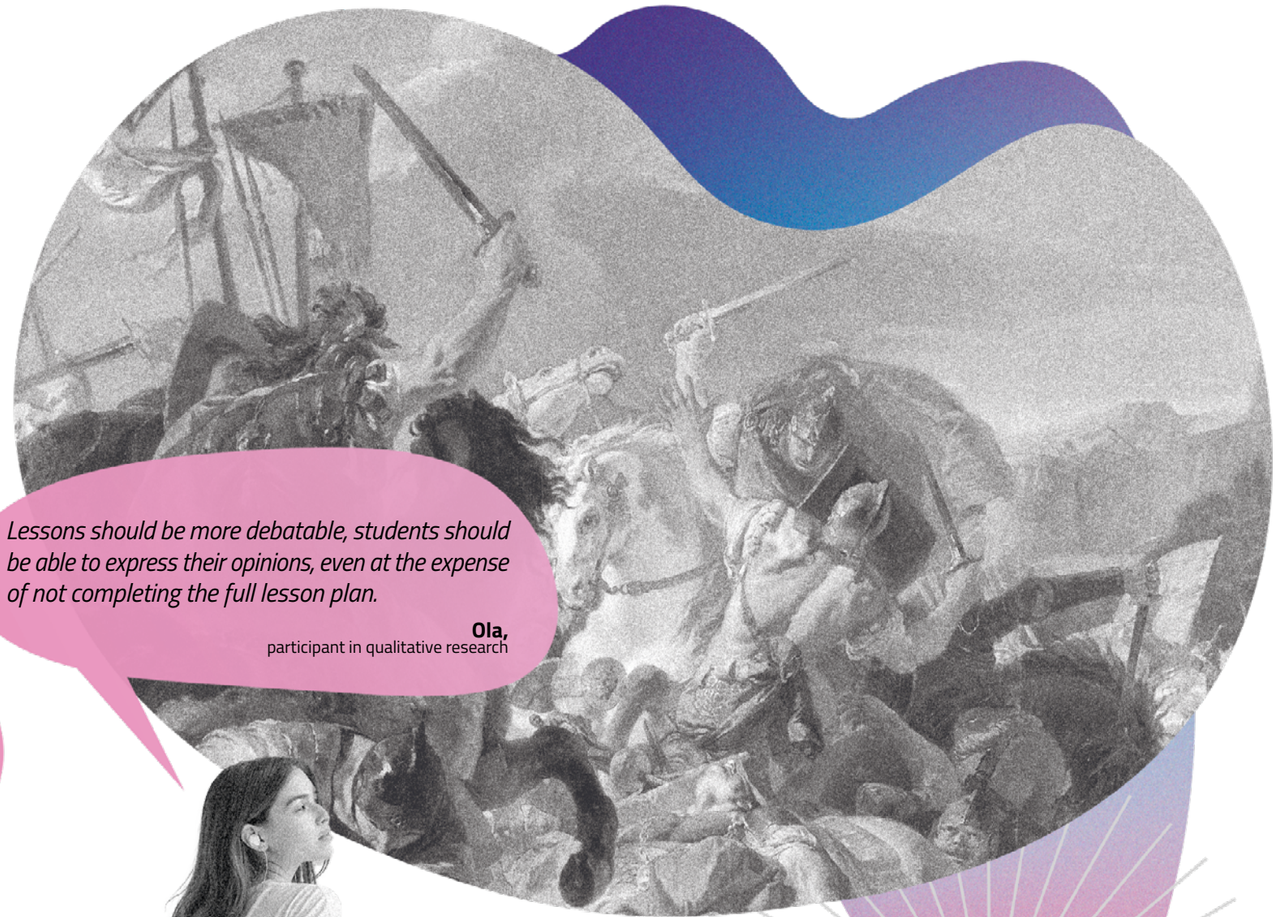
I wish the teacher knew how to impart knowledge. Because sometimes we were learning about some wars, I didn't even know afterwards what there was to what, where something came from and how to tell it in sequence. Maybe you could do some kind of virtual walk-through so we could get more of a feel for what it was like back then. We won't remember the dates if we don't have a reference of what it was for, why it was there.

Laura,
participant in qualitative research

19. OECD, "PISA 2022 Results (Volume V): Effective Policies, Successful Schools, 2023", accessed online: 22.11.2024.

Digital literacy – a set of skills and behaviors vital to functioning in an increasingly technologized society.

The issue of cognitive overload for students should also be kept in mind. This theme was repeatedly cited by young people during workshops and in-depth interviews. Students point out the overabundance of dates and facts necessary to remember. However, it is important to remember that storytelling is of particular educational value in the study of history. We are talking about stories that engage and evoke emotions. Young people want to discuss, they want to know the answers to difficult questions, they need a critical appraisal of reality. They want to ask questions: "What if?". It therefore becomes particularly important to prepare teachers for this role, so history can be a subject that continually interests and engages students in further inquiry and exploration. In the age of full access to digital tools, students increasingly expect their teachers to provide a human element to it – personal approach, a conversation, an opportunity to ask difficult questions, a discussion.



Lessons should be more debatable, students should be able to express their opinions, even at the expense of not completing the full lesson plan.

Ola,
participant in qualitative research

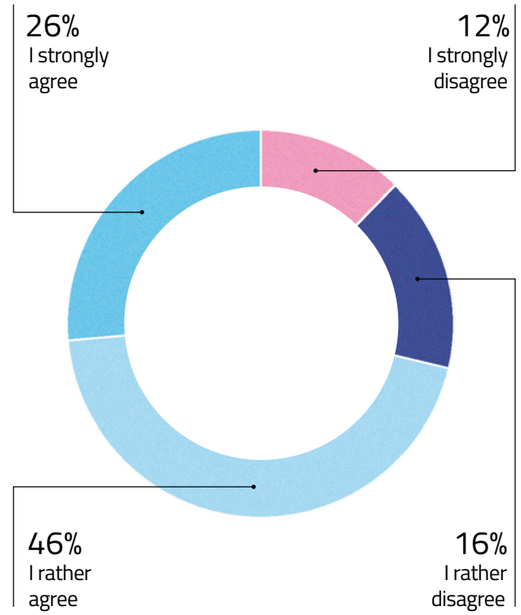
I have noticed how much of a role the teacher plays in getting the student interested in the subject. Before, when I had a different teacher, history ceased to interest me, even though I was interested in it before.'

Kaja,
participant in qualitative research

However, it is important to remember that although technology supports the learning process, it is not crucial for students. This is evident from the results of the study, in which most respondents agree with the statement that it is the stories of people's lives that are a true inspiration for them.

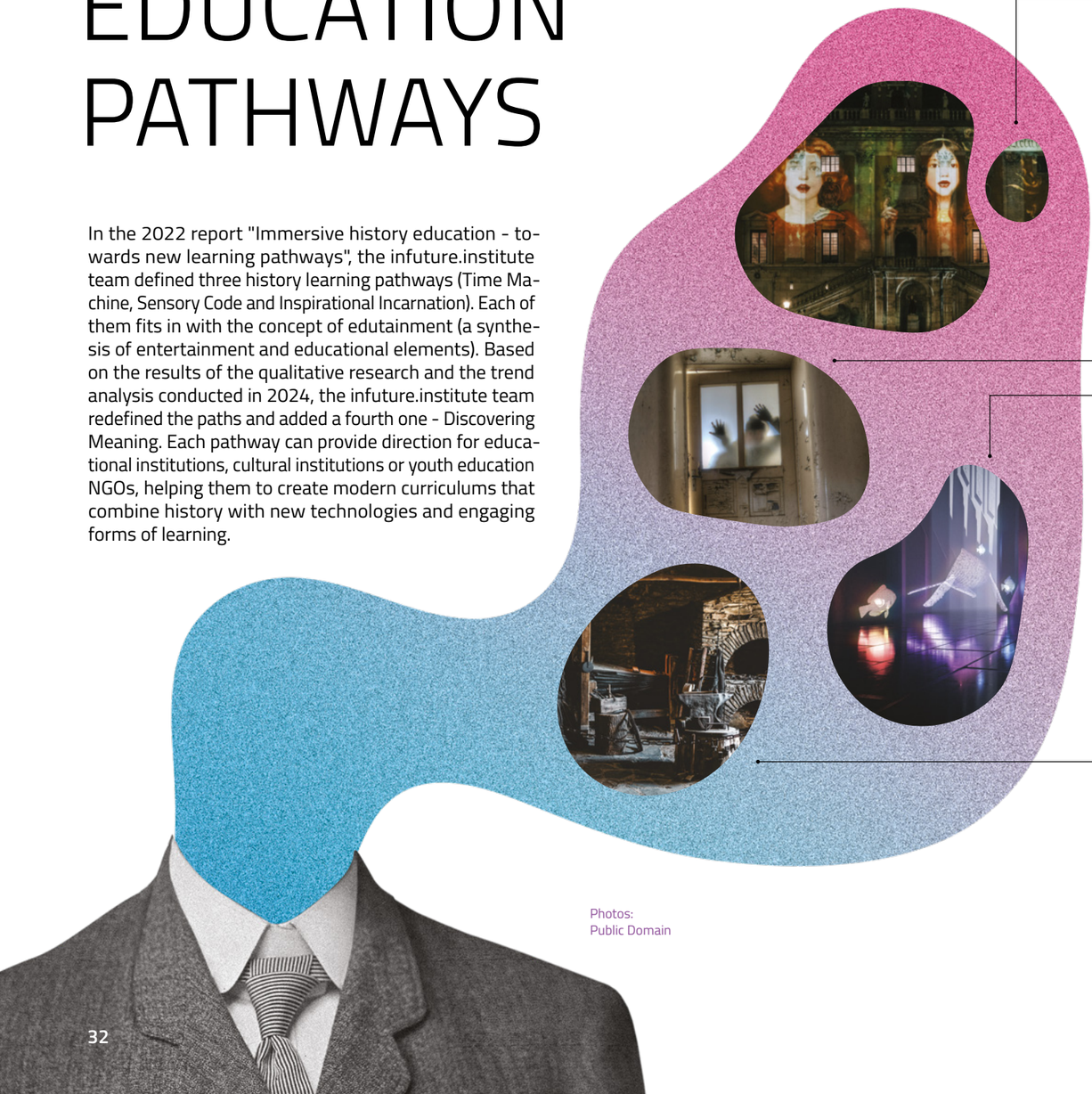
Chart 4
To what extent do you agree with the statement?

Studying history allows me to better understand current social, economic and political events.



IMMERSIVE HISTORY EDUCATION PATHWAYS

In the 2022 report "Immersive history education - towards new learning pathways", the infuture.institute team defined three history learning pathways (Time Machine, Sensory Code and Inspirational Incarnation). Each of them fits in with the concept of edutainment (a synthesis of entertainment and educational elements). Based on the results of the qualitative research and the trend analysis conducted in 2024, the infuture.institute team redefined the paths and added a fourth one - Discovering Meaning. Each pathway can provide direction for educational institutions, cultural institutions or youth education NGOs, helping them to create modern curriculums that combine history with new technologies and engaging forms of learning.



Photos:
Public Domain

In addition to the four pathways, the analysis also identified key developments that are redefining the way audiences are engaged by combining art, entertainment and education with advanced technologies and intense sensory experiences. These are:

Artainment

Forms that combine art in various forms with entertainment. This is a growing trend in education and industries involving audience experience.

Recreational Fear

A phenomenon investigated by researchers at the Recreational Fear Lab, a research institute at Aarhus University in Denmark. Their experiments on audiences at the Liseberg amusement park showed that feelings of fear experienced during an amusement park tour can increase visitor satisfaction.

Layered Reality

It combines digital technology (virtual reality, mapping or holograms) with live theatre (live actors, sets, costumes and special effects) and physical sensations (touch, temperature, smell, sound and music, physical movement and taste) to create an immersive experience.

Bygone Reality

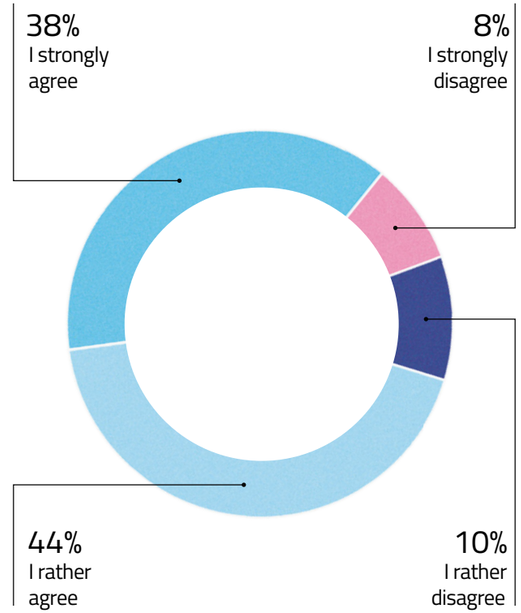
An approach to teaching history that allows users to immerse themselves in the past by offering interactive historical experiences in a realistic setting.

20. Ibid.

Research carried out for this report shows that generation Z and alpha representatives consider technology as a tool to better learn history. 82% of respondents strongly agree or tend to agree with this statement[20].

Chart 5
To what extent do you agree with the statement?

Technology can help me learn history better



PATHWAY 1:
TIME MACHINE TRAIL

Interactivity is at the heart of many exhibitions and educational projects that appeal to the need for an immersive experience of history. Technology can intensify this experience, allowing people to learn about and participate in historical events.

This pathway is changing the interiors of museums – with the help of holograms, sensors or glasses, immersive installations can be recreated in any space. Also, within this pathway, the phenomenon of artainment . In pursuing this pathway, it is crucial to set experiences in context and to build connections between the past and the present, along with pointing out cause-and-effect relationships. przyczynowo-skutkowych.

RELEVANT TRENDS

Digital inequalities

Democratizing access to immersive forms of history learning can contribute to reducing digital inequalities. However, it is important to remember that simply providing access to technology is not synonymous with reducing digital inequalities.

Hybrid society

This pathway combines experiences in physical and digital spaces. The engagement of audiences through technology, but also the use of artainment elements reflects the hybrid nature of society, where the boundaries between the physical and digital worlds are blurred.

I was at an exhibition dedicated to van Gogh. There was one room where you put on VR goggles and the goggles took you from painting to painting. There was also music accompanying it, and it was super fascinating, and I think it would be interesting, for example, to present the communist era to children in this way. They could move to some city in communist Poland, where there are shops all around, queues and so on. And they would have the feeling that they were stepping into it for a moment. Such a reference to reality.

Ola,
participant in qualitative research

I would like to see how people lived without phones, when they made appointments and went out into the world instead of playing games.

Kasia,
participant in qualitative research

If I could move back to that time, I would want to be someone important, but not a king – maybe a lawyer or a doctor.

Adam,
participant in qualitative research

INSPIRING EXAMPLES

Mobile Future History Stop,
September 2024

CENTRAL HISTORY POINT

Mobile Future History Stop is an initiative designed by INR's New Technology Division. It is an interactive exhibition equipped with stations with computers and VR devices. The entire exhibition is housed in a specially adapted truck which, together with a team of educators, set off on a tour of 10 Polish cities. The games and applications presented there are aimed at deepening historical knowledge, developing civic attitudes, increasing emotional sensitivity and bridging the gap related to digital exclusion of young generations.

All New Technology Division INR projects are available at the Central History Point, namely:

"Aviators – war in the skies" – the latest educational adventure game to debut on 24 January 2024 in London at the prestigious Bett London education and technology fair. The production tells the story of the achievements of Polish aviators fighting during the Second World War. Available on PC and VR. Total downloads - 476 637.

"Cyphers game" – the first production of New Technology Division. The game is set during the Polish-Bolshevik War and the player's task is to break enemy ciphers and neutralize armored trains. Available on PC and VR. Total downloads - 192 070.

"Warsaw Rising" - a strategy game telling the story of the fate of the Warsaw insurgents. The story of fighting Warsaw remains true to history, so the uprising cannot be won. The production allows students to learn about history, develop values and shape civic attitudes. Available on PC. Total downloads - 205 803.

"Szybowcowa '87" – an app created for VR devices that takes the user to a communist-era flat in Wrocław, where the underground press was printed. The flat is rendered faithfully to the original and is additionally interactive. It is therefore easy to duplicate successive pages of the print run or to listen to a conversation between SB officers (pol. Służba Bezpieczenstwa, "security services") over the radio. Total number of downloads - 42 669.

"Testimony of Help" – A film etude available on VR. It tells the story of the Ulm family, who gave shelter to Jews during World War II. As a result of a denunciation, the whole family, together with the Jews they were hiding, was executed. The story is presented from the perspective of six-year-old Basia, daughter of Józef and Wiktoria Ulm. Total number of downloads - 33 090.

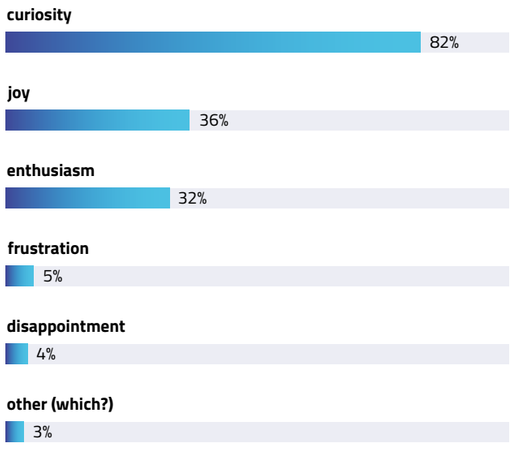
During the research process, the young people's declarations were verified during participant observation. By being in the environment they are analyzing, the observer has the opportunity to have a direct experience, which allows for a deeper understanding of the context and nuances, often imperceptible (transparent) to those who are constantly in it.

The research was carried out, among others, during the Mobile Future History Stop tour. Most respondents (72%) declared that they had not encountered a similar way of learning history before, which may mean that the event was innovative for them[21]. Only 28% of participants had previous experience with a similar approach to history learning[22].

Chart 6
Have you encountered a similar way of learning history?

The largest number of students at the event felt curiosity (82%). 36% indicated enjoyment, 32% enthusiasm[23].

Chart 7
What feelings did the event evoke in you?



Mobile Future History Stop, September 2024

The average event rating was 8.6/10, so participants rated the event very highly. Almost half (49%) of respondents gave the event the highest rating of 10, and 16% rated the event 9[24].

The positive evaluation of the students also influenced the high level of recommending similar events to their colleagues. Most participants (87%) would be happy to recommend them to others (52% "definitely yes" and 35% "rather yes")[25].

Chart 8
How much did you enjoy the event you attended today? (in scale 1-10)

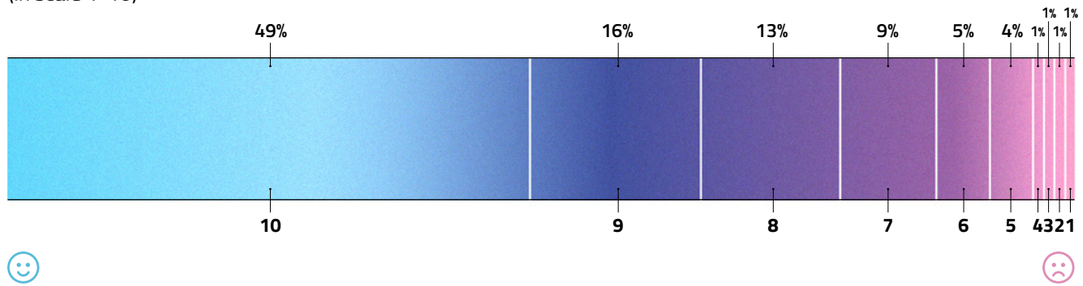
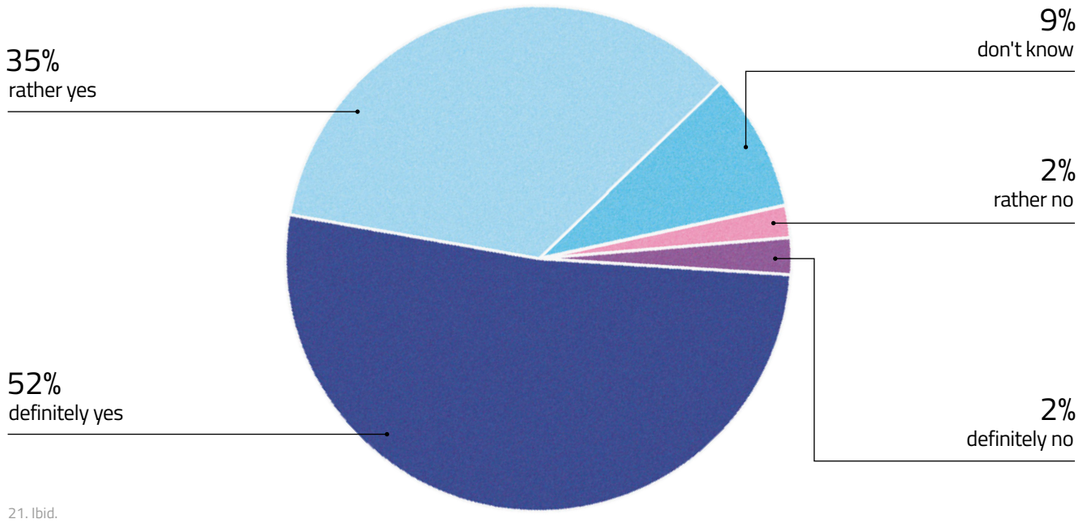


Chart 9
Would you recommend this event to your colleagues?



21. Ibid.
22. Ibid.
23. Ibid.
24. Ibid.
25. Ibid.

Photo: Kennedy Center, Public Domain

HEROES & LEGENDS

The "Heroes & Legends" exhibition at the Kennedy Centre uses AR technology to showcase key moments in the history of the US space programme. The main example is a reconstruction of the second-ever space-walk performed by astronaut Gene Cernan in June 1966. The AR allows visitors to see a hologram of Cernan above the Gemini 9 capsule and his dramatic struggles during the event (his suit overheated, and the astronaut himself began to rotate in space not being able to stop). It allows you to experience events that would normally be inaccessible (such as a spacewalk), and the emotions it will evoke (under safe and controlled conditions) will allow you to experience and remember history.

Photo: Public Domain

COMMUNICATION USING AI

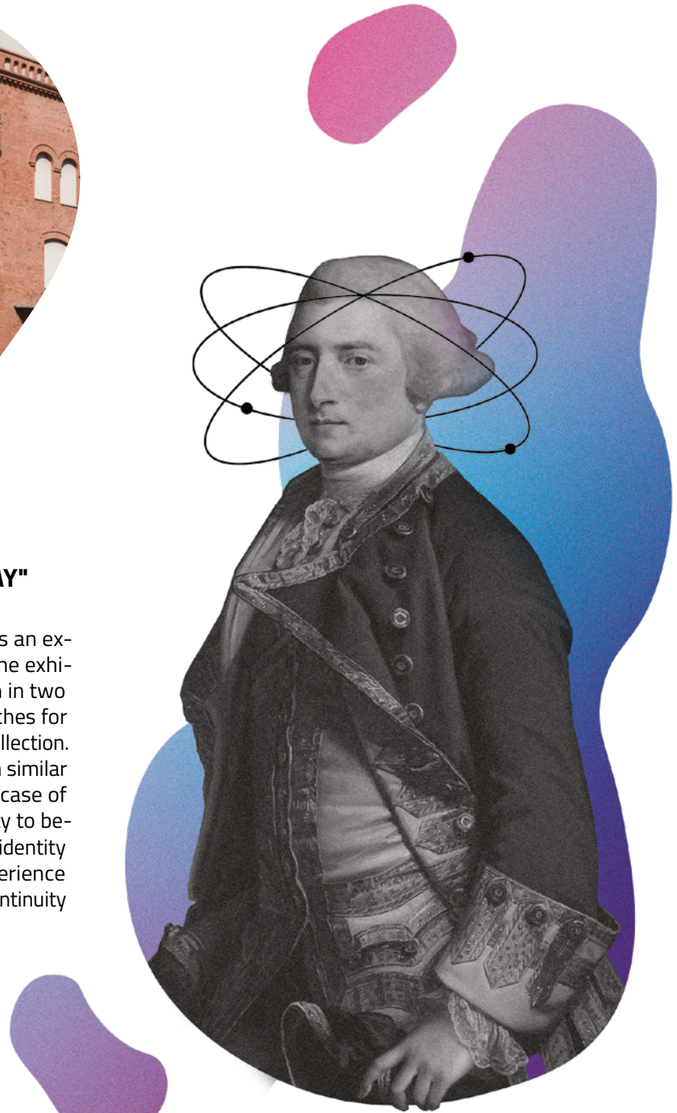
Swamp Motel has teamed up with startup Charisma.ai to create an immersive experience that takes place in a fictional hospital called St Jude's (patron saint of hopeless cases) in London. Participants take on the role of volunteers who communicate with people in comas using AI technology. They receive instructions from the doctor on duty and then sit at a patient station to communicate with the Sleeper. AI enables them to talk and interact with him or her, which can lead to waking him or her from a coma. Participants have about an hour to complete various tasks and uncover the disturbing secrets that the Sleeper carries.

The experience has a dark, surreal atmosphere and is a combination of theatre and advanced technology. Such an arrangement can be useful in history education as it engages participants by allowing them to (safely) be in unusual conditions and situations.

Photo: Warsaw Uprising Museum Building, Public Domain

"REFLECTION. I AM LIKE YOU, I DARESAY"

Installation at the Warsaw Uprising Museum is an experience in which the visitor becomes part of the exhibition. The visitor sees his or her own reflection in two mirrors, and a facial recognition algorithm searches for that person's historical "twin" in the museum's collection. As a result, an image of a Warsaw insurgent with similar facial features is displayed in the mirror. In the case of unidentified insurgents, we have the opportunity to become involved in the process of discovering their identity by contacting the museum by e-mail. This experience prompts a deeper reflection on identity and the continuity of history.



PATHWAY 2: SENSORY CODE

The impact of the senses on memory is undeniable. For example, odor molecules that we inhale end up in the limbic system (responsible for emotion and memory), where they become encoded for the future. Sensory history, as a research field, in turn analyses the ways in which the senses are incorporated into our understanding of the past. Sensory coding is a learning path in which the senses become the key to learning about history. They are the ones that unlock memories and provide the natural interface for learning about the world. The aim of this pathway is to involve the audience in receiving and recreating history through their bodies and senses. Here, the body is the mediator between the past and the present. Creating methods of teaching history that engage both body and mind significantly supports the acquisition of historical knowledge.

This path pays particular attention to everyday life as key elements of history. Recreating them can be a new way of interacting. Although Sensory Code does not exclude the use of digital tools, their role is secondary.

RELEVANT TRENDS

Human+

Instead of relying solely on intellectual analysis, this pathway relies on human perception – the senses of touch, smell, taste, as well as movement and interaction. The holistic approach allows for a deeper assimilation of historical knowledge, going beyond traditional methods.

Emotion technology

This path is based on the use of the senses, which have a strong connection to human emotionality. Smells, sounds or touch evoke emotional reactions and open access to memories. In this sense, it allows a deeper understanding of the experiences of historical figures and creates an emotional connection between the viewer and the past.

We were at the re-enactment of the Battle of Grunwald, there I could see and touch. It was something different. If history lessons were like that, it would definitely be my favorite subject.

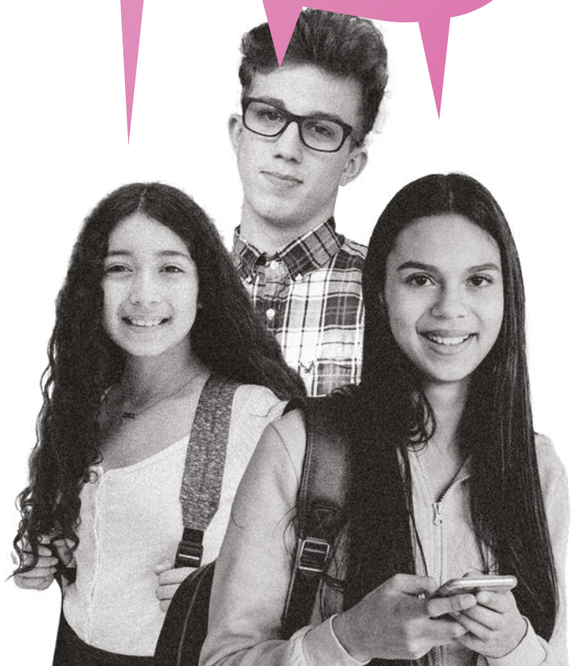
Maria,
participant in qualitative research

I'd like to visit the castle and see what life was like inside a thousand years ago and discover treasures and hidden rooms like labyrinths and secret passages.

Szymon,
participant in qualitative research

I like it when there are interactive elements in the exhibitions, such as holograms or artists' stories are projected alongside the paintings, which makes the visit more interesting.

Laura,
participant in qualitative research



INSPIRING EXAMPLES

Photo: Exhibit from the "More-than-Human Wellbeing" exhibition, CC BY-NC-ND 4.0

„MORE-THAN-HUMAN WELLBEING"

The "More-than-Human Wellbeing" exhibition was organized by a team of researchers from the University of New South Wales in Sydney. It aimed to present new ways of understanding human health and wellbeing, including from a non-human perspective – planetary wellbeing and technology. It used multimedia and multisensory methods to show how human health is connected to the world around us, both real and digital.

Engaging different senses in the presentation of historical material can help students better understand and remember information. An approach that combines different disciplines (in this case, health, technology and ecology) can be applied to the teaching of history by showing connections between historical events and other disciplines such as science, art or economics, ensuring interdisciplinarity. The more-than-human perspective can be used in the teaching of history to show how historical events affected not only people, but also their environment: the environment or cities.

Photo: Notre-Dame Cathedral, Public Domain

"WHISPERS OF NOTRE DAME"

Following the fire at the Paris Cathedral in 2019, several projects were created to recreate the interior of Notre Dame in VR and AR technologies. This allowed tourists to visit the monument while it was being renovated. The "Notre-Dame Whispers" project focuses on the sounds of this building, and it is through these sounds that it presents its atmosphere and history. A key element of this experience is an app called "Ekko of Notre-Dame de Paris". During the tour, users have the opportunity to hear twelve different memories of the cathedral (including sounds from the period of its construction, organ concerts and the characteristic ringing of bells). The app has been designed in a way that gamifies the whole experience. The user's progress is visualized by means of a stylized rose, whose design is reminiscent of the cathedral's stained-glass windows.

This solution demonstrates that sound has an extraordinary ability to evoke emotion and create a unique and fleeting atmosphere. Hearing is an often-overlooked sense, especially in history education, which is dominated by visual and textual forms of communication. Introducing an auditory element opens new pathways for perceiving and interpreting the past. Exploring history through hearing can be particularly valuable for those with learning difficulties with traditional methods or for those who prefer auditory learning.

PATHWAY 3:
INSPIRATIONAL EMBODIMENT

It is a way that includes the participation of an intermediary in the transfer of knowledge. This could be a family member, a historical figure or the impersonation of a specific character. Role-playing and impersonation, as well as the organization of fictional debates, requires careful research, extending the context and using knowledge already acquired. Life stories of specific people, such as family members or witnesses to history, provide inspiration for exploring the past. In this pathway, students are treated as subjects, have freedom of exploration and are encouraged to conduct analysis of different perspectives and sources.

RELEVANT TRENDS

Relationship crisis

This pathway includes activities to build connections, a sense of community and understanding. Learning history in this way allows us to find and understand points of commonality between generations and different cultures.

Generational tensions

The trail can provide a platform for intergenerational dialogue. It allows the younger generations to draw inspiration from the history and experiences of their elders, and the older generations to better understand the younger ones.

Loneliness

Creating face-to-face relationships and interactions around common historical themes can foster a sense of belonging and social connectedness.

The guide to the past could be my cat. Cats go their own way, we would have toured all those roads.

Kasia,
participant in qualitative research

Grandma Tela would be a good guide to history because she has knowledge and life experience.

Ola,
participant in qualitative research

I know it's very hard to organize, as far as a school in Poland is concerned, but this kind of performance came to my mind: the students would be asked to prepare themselves to play some historical figure.

Michał,
participant in qualitative research

INSPIRING EXAMPLES

Photo: 1921 Tulsa Massacre exhibition, author: Robert Stinnett / CC BY 2.0

GREENWOOD RISING EXHIBITION

The Greenwood Rising Museum was faced with the challenge of telling the difficult story of the 1921 Tulsa Massacre in a way that would engage visitors, while keeping an appropriate emotional distance and not overwhelming them. The museum created an immersive experience divided into three sections: exploring the lives and voices of the African American community living in Greenwood; presenting the events leading up to the massacre (racial tensions); and a concluding section on remembrance and reconciliation.

The museum's unique approach is to use immersive storytelling techniques in a way that allows visitors to empathize with the experiences of individual characters, rather than simply listening to their narrative. It is an attempt to restore the memory of a difficult history and encourage visitors to reflect on the social challenges of the time and today.

Photo: Yves Henri Donat Mathieu-Saint-Laurent, Public Domain

„FASHIONING SAN FRANCISCO WITH STYLE"

The first fashion exhibition of women's clothing from the 20th and 21st centuries in 35 years is designed to reflect the tradition of expression of San Francisco residents through fashion. The exhibition was created in collaboration with the Snapchat app. Mirrors equipped with augmented reality (AR) technology allow you to try on three styles from the collection: a 1955 Soirée de Paris dress by Yves Saint Laurent, a 1985 outfit by San Francisco-based Kaisik Wong and a 1987 velvet Valentino gown. The use of the popular app and advanced AR technology captures the attention of young people and allows teenagers to experience the history of the city and fashion in person.

PATHWAY 4: EXPLORING MEANING

The basis of this learning pathway is to develop critical thinking in the process of acquiring historical knowledge. It includes encouraging the analysis of different perspectives, understanding how specific historical narratives are created, what interests are behind them and which social groups are left out of these stories. Emphasis is placed on verifying historical sources, recognizing information manipulation and critically evaluating media content. These skills are particularly relevant in the digital age, where disinformation and false historical narratives can spread rapidly. Both advanced technologies such as AI (to examine sentiment in large collections of texts, for example) and oral history methods can be used in this pathway. The common goal of simulation, analytical tools or field research is to better understand the decisions and dilemmas people faced in the past.

RELEVANT TRENDS

Ethical AI

A key element of this pathway is the use of advanced technologies to verify historical sources and analyze media messages for manipulation or bias.

Polarization

The focus is on analyzing different perspectives, understanding the interests behind specific narratives and identifying groups left out of stories. Developing critical thinking skills can help counteract the misinformation that often contributes to deepening social divisions.

Synthetic media

The ability to critically evaluate content, including synthetically generated content, is crucial in the face of the challenges of disinformation and invasion of privacy. This pathway can familiarize audiences with an environment dominated by synthetic media.

Interactive and personalized things are memorable. For example, if the teacher had said: 'create a map of the countries of Europe as you like', and then we would critically discuss them, that would have been interesting.

Łukasz,
participant in qualitative research

It is important to talk about the darker sides of Polish history in the teaching of history and not just present Poles as victims. We should present the full picture, including difficult topics like Volhynia, in a wise and objective way.

Filip,
participant in qualitative research

AI is already being used to fake politicians' speeches, which can look very authentic and be difficult to distinguish.

Laura,
participant in qualitative research

INSPIRING EXAMPLES

Photo: Public Domain

COMBATING DISINFORMATION ON TIKTOK

TikTok has partnered with Polish fact-checking organization Demagog.org.pl to combat disinformation. TikTok's collaboration with Demagog.org.pl, although focused on the Polish market and disinformation in Poland, is part of the platform's wider global fact-checking programme. Social media, despite being a source of knowledge for young people, often spread disinformation, which can mislead young people. TikTok's partnership with fact-checking organization Demagog.org.co.uk aims to ensure that children and young people have access to reliable information and develop critical thinking skills in using the internet and social media as sources of knowledge.

Demagog will assess potentially misleading content and inform the platform about disinformation incidents and threats in the Polish digital space.

"GUNPOWDER PLOT"

The Gunpowder Plot is set in 1605, where participants take on the roles of conspirators who want to blow up parliament and kill the king. The event is based on Layered Reality (LR) technology, which combines digital technology and live theatre to create an immersive and memorable experience. LR technology and tools allow the participant to direct the story themselves and explore alternative endings.

"ACT THE THOUGHT"

Since its foundation, the Lello Bookshop in Porto has sought to strengthen information literacy and combat disinformation. The first exhibition Act the Thought, organized in the bookshop space, is designed to promote critical thinking and the ability to analyze information. The connection between the bookshop and contemporary social media consumption is intended to show the continuity of information acquisition and the perennial problem of combating disinformation.

The project involves inviting residents to take a photo of themselves in a mobile photo booth in the city center and then using these portraits in a public art installation. In the project, the captured image of the participants is intended to symbolize individual responsibility for verifying information and actively participating in shaping a true picture of reality.

The project's multidisciplinary approach (combining art, technology and education) corresponds to a holistic model of history teaching that incorporates a variety of perspectives and cognitive methods. It is also noteworthy that the involvement of the whole community in the project creates a valuable learning experience, allowing students to observe and participate in a community dialogue about history and its interpretation. In addition, the installation in the historic monastery creates a unique space to connect contemporary activities with the historical context, enabling students to gain a deeper understanding of continuity and change in history.

RECOMMENDATIONS

Digital immersion - how to implement immersive education methods?

1. Implementing the digital poverty strategy

The first step in building immersive education is to implement a strategy against digital poverty. We are not only talking about providing access to the internet and digital technologies, but also about developing digital competences, especially in terms of critical thinking and recognizing misinformation. One of the steps in the implementation of such a strategy should be the introduction of digital education into curricula. Here, it is important to remember to provide comprehensive support in the context of practical knowledge about technologies, both in the formal education system (including in humanities subjects) and in bottom-up initiatives.

2. Integrating ethical and social issues into the development of educational digital technologies

We know that technology is an integral part of youth education today. Clear guidance and support is needed to ensure responsible and informed use of them in education. Consultation and guidelines for teachers and educators should be developed to support the ethical use of digital technologies by all stakeholders. At the same time, it is worth initiating cross-sectoral dialogue in the area of the social consequences of implementing modern technologies in education. In the context of design, it is worth building on the concept of design for values, the premise of which is to design digital solutions that minimize their negative impact on human relations and health.

3. Promoting healthy digital habits

Maintaining a digital balance is becoming one of the key skills of our time. It is therefore an important step to introduce activities related to the effective use of technology into curricula, while promoting healthy habits of use. It is also crucial to create formal and informal initiatives that encourage interaction without the use of technology, supporting the building of interpersonal relationships and the development of social skills.

4. Comprehensive support for educators

There is now a need to provide systemic support to teachers and educators in the knowledge, use and implementation of new technologies in education. Such support can not only increase student engagement and enable more interactive, personalized teaching methods, but also help to reduce the digital gap and inequalities in access and use of innovative educational tools. Indeed, these inequalities today stem not only from differences in access to funding, but also from a lack of sufficient teacher knowledge on how to effectively integrate new technologies into the curriculum. It is therefore necessary to support educators to effectively exploit the potential of immersive education - starting from the stage of studies, throughout their professional life, including regular updating of their competences.

5. Long-term thinking

With increasing digitalization, greater public investment in the development of digital technologies in education is becoming necessary. This will allow us to keep up with global changes and better prepare students for the challenges of the modern world. However, long-term thinking about education requires consideration of the impact of innovations. It is necessary to support local and national research programmes that evaluate the effectiveness of the technologies being implemented and their impact on the mental and cognitive health of children and young people. It is also crucial to analyze the effectiveness of new immersive technology-based materials and tools to ensure that the solutions being introduced improve learning.
Given the scale of the challenge, the process of change in education can be compared to a marathon. A long distance, but the preparation starts long before the actual running. On the other hand, it is a relay race. Institutional cooperation, exchange of competences and resources is important. Education is an area that concerns us all. Good education means a more informed society and a better quality of life.