



Teaching History for Disabled Students through Digitalized Gamification Tools

Project reference number: **2021-1-PL01-KA220-SCH-000023916**

Start date: 01-11-2021 End date: 01-11-2023

PROJECT RESULT 1 **FINAL REPORT - Short summary**

Created by the project consortium 2022

Executive summary

The incorporation of technology in education has improved learning for students with disabilities (SWD). E-learning is posited to positively impact SWD's learning outcomes (Waight & Oldreive, 2020) while equipping organizations with the necessary tools to capture and retain their interest (Babeley, 2016). Despite these benefits, researchers have found a reluctance of teachers to integrate technology while teaching in the classroom. Arguments have ranged from weak technical competence, insufficient teaching material, diminished control, and lack of time (Tallvid, 2016) to feelings of inadequacy (Atanga et al., 2020). In response, educational administrators have countered with interventions such as peer support, and requests for technical and financial assistance (Tusiime et al., 2020).

On the other hand, the study conducted by Catalano et al. (2021) has found that in the era of the Covid-19 pandemic disabled students have had various difficulties because of e-learning. It has been determined that students with disabilities face different issues with e-learning because they did not have access to the resources required to access the learning material, nor were they given a sufficient level of support from their mentors and teachers to learn successfully at their respective educational institutes (source? *ibid*?). On the other hand, the authors (?) have further determined that disabled students did not have a significant level of the skill-set that could be used accordingly for online learning skills. Furthermore, disabled students also faced different issues grasping a sufficient level of understanding from the lectures that were prepared for them because the teachers lacked efficiency in developing the lectures that could be used accordingly for teaching disabled students. Moreover, the teachers did not have a sufficient level of training that could be used for teaching the disabled students in e-learning environment and the desired level of learning is not achieved (Tonks et al., 2021). Another issue faced by disabled students was related to the stay-at-home order that resulted in adverse effects in their psychological and mental health. This has produced an additional negative impact besides the e-learning issues that were already present. As a result some disabled students have lost their coping abilities with the uncertainties caused by the covid-19 pandemic (Gin et al., 2021).

Also, the issues associated with the transition from physical to online educational environment frequently cause difficulties for students with disabilities since the facilities provided in respective educational institutes were not present at their homes. Furthermore, financial issues appeared to be an important obstacle because disabled students needed to buy new devices to attain a sufficient level of participation in online media. All these aspects result in

barriers that both disabled students and their teachers had to face to attain a necessary level of learning (Coleman-Jensen, 2020; Gundersen et al., 2020; Rabbitt & Smith, 2021).

1. Introduction of the project

Information and communication technologies provide young people with disabilities and their teachers with tools and resources that can transform the history class. Helped along by their teachers, disabled young people thus learn to ascertain the degree of validity and reliability of the documentary sources consulted. They must also learn to transcend the essentially narrative aspect of history to secure a transverse and comparative type of history. Basically, the educational support needed for such learning processes requires teachers to adopt new roles and become, amongst other things, guides and mediators. The EU 2025 education strategy states that the EU urgently needs to address emerging trends in digital tools and prepare for socio-economic changes by encouraging modernization of education and training systems. Additionally, the European Union Youth Strategy 2019-2027 strives to enable young people to be architects of their own lives, support their personal development and growth to autonomy, build their resilience and equip them with life skills to cope with the changing world. Therefore, the EU's strategies for future technologies and data aim to encourage businesses to work with and develop these new technologies, while at the same time making sure that they earn citizens' trust. Nearly in all of the EU countries, disabled young people are typically taught history through tutorials and classical methods. There are millions of Open Education Resources (OERs) to promote these. Yet, 80% of them fail in the process because it is not understood what gamification tools are. The Eurostat 2020 statistics found that 23,9 % of disabled young people face with lack of the full basic digital skills. 4.3 million (8%) have no basic digital skills at all. Two thirds of large enterprises indicate a shortage of ICT specialists on the labour market (DESI 2020). The overall objective of the project is to implement the blended learning approach to develop an understanding of teaching history through gamification to disabled young students.

The concrete objectives of the project are:

- Supporting the capacity building of mainstream and special education history teachers in primary and secondary education;

- Supporting teachers and improving their key competencies by using gamification in the history classroom;
- Creation of gamification software and tools related to history topics;
- Digitalization of the gamification tools by the creation of a gamification platform and a mobile application;
- Supporting teachers in using and sharing effective methods in learning and recognizing history for students with fewer opportunities (visual problems, hearing problems, intellectual problems and dyslexia), addressing the opportunities and implications of digitalization;
- Fostering inclusion of students with fewer opportunities; – Fostering equality in learning history for students with fewer opportunities;
- Promoting intercultural dialogue and strengthening knowledge and acceptance of diversity in society;
- Recognizing and validating the work of history teachers in non-formal and informal learning on European, national, regional and local levels;
- Promoting diversity, intercultural and inter-religious dialogue, as well as the common values of freedom, tolerance and respect of the human and social right.

2. Project consortium

<p><u>Applicant organization:</u></p> <p>University of Applied Sciences in Tarnow - Poland</p>
<p><u>Partner organisations:</u></p> <ol style="list-style-type: none"> 1. Community development institute - The Republic of North Macedonia 2. Istituto d'Istruzione Superiore Mandralisca - Italy 3. Stichting International Excellence Reserve - Netherlands 4. Scoala gimnaziala speciala pentru deficiente de vedere - Romania 5. Avrupa Yenilikçi Toplum Derneği - Turkey

Chapters 3-5 have been omitted from this version of the report

6. Description of project result 1

The first project result refer to the production of gamification content with historical facts. It will not turn the content into a game but rather it will add game elements or activities to the content.

The focus will be to increase user engagement by adding interactive elements. The applicant organization will be the leader of the activity and will work jointly with the partner organizations in creating and developing of these tools.

Needs assessments showed that gamification is widely used in business and management environments. Lately, its use in education settings has increased. Nevertheless, there are not many educational resources for students with disabilities that include elements of gamification. The elements of innovation in this output are related to the fact that all the gamification content will be made accessible for different types of disabilities by creating audio and Braille materials, materials supported with sign language, materials developed with the use of a dyslexic font and specially modified books.

This output will result in the creation of game-based content with game-like elements for history classes for students with disabilities. This output methodologically will cover desk-top studies and focus groups research to search for best practices related to gamification induction programs, the enhancement of the professional skills in history teachers, compliance, soft skills enhancement, behavioral change, and the gamified assessments for traditional eLearning courses (the partial type of gamification).

The created content will be published in six languages (English, Macedonian, Dutch, Romanian, Italian and Turkish). Here is the transferability potential of this output.

Final conclusions:

From the research it is evident that in all partner countries the process of inclusion is developed with a different approach and with different dynamics and speed. The countries in transition, Northern Macedonia and Romania, can be mentioned here, and Turkey still does not have a strictly defined inclusion system and is still trying to establish full inclusion. In contrast, Italy, the Netherlands and Poland are more advanced in this regard, both in terms of legislation and examples from practice.

Regarding the study of the subject history, it can be concluded that in almost all partner countries the way and time of study of this subject is similar.

Regarding the application of gamification in the educational process of people with disabilities, it can be concluded that in certain countries there is more work on the application of this method in the work, there are more game develop, applications, software, games created, etc.

When it comes to the application of gamification in the subject of history then we can say that there are no concrete examples and that the teachers with whom the focus group was realized believe that the application of gamification for the subject of history is important and useful.

Using the practices of gamification and storytelling can be an effective support to teaching and a useful strategy to involve children in learning. two possible different experiences based on this type of approach: a gamification laboratory and an educational video game (serious game). In both cases, interest in history is stimulated through game and identification; in doing so, children are transformed from passive storers of notions into active protagonists of their learning.

Some others have a certain experience in the use of gamification; here are their comments and suggestions:

- Involving the class group in a role play also through a performance (drama).
- Creating maps related to a battle.
- Combination game-study image-study allows the disabled student to better memorize concepts.
- Storytelling.
- Team games and group work.
- Dates to be guessed.
- using flashcards to memorize dates and events.
- Role-playing: the disabled student plays the role of a historical character which allows him to relive his life and enterprises. With game-learning the pupil becomes the protagonist of the historical contents that he is studying. Making the pupil the historical character in question, creating the historical scenario of the period with other characters played by his classmates. In this way, the memory and understanding of the pupil with disabilities is strengthened. To make everything even more interesting, prizes or points should be introduced just like a game.

- The Cold War, a complicated set of interrelated events, in a complex mechanism aimed at contention, by two superpowers. By means of some game design techniques it is possible to transform this process into a system of rules and scores. Through a game between two players, you can simulate the war between the Soviet Union and the United States.

The online platform called 'Wordwall' where you can find games on different subjects, levels and types, created by colleagues from all over the world. It is also possible, in the demo version, to create games (but in limited numbers) for free. Then, there is the classic but timeless kahoot. On 'kidpass' you can find the description of history applications for children; in any case, the web is full of ideas and information to select.

Recomendations:

Countries that are still working to achieve and build quality inclusive education should follow the example of countries that are already successful and through practical examples proven in this field.

Regarding the application of gamification and the subject of history in the education of persons with disabilities, new tools should be created that will suit the age and the type of disability and will be adapted to the needs and capabilities of this target group.

Some of the existing gamification tools can be adapted and accessible to people with disabilities.

BIBLIOGRAPHY

- 1) <https://dexonline.ro/>
- 2) <https://www.reginamaria.ro/utile/dictionar-de-afectiuni/dislexia>
- 3) <https://en.wikipedia.org/wiki/Dyslexia>
- 4) ANNE HENDERSON - Dyslexia Dyscalculia and Mathematics -A practical guide , Ed :ROUTLEDGE, 2012
- 5) How to Study with Dyslexia, Paperback-Editura: How2become.
- 6) Abilitatea de a citi. Dezvoltare si dificultati –
- 7) https://jucarii-vorbarete.ro/product/abilitatea-de-a-citi-dezvoltare-si-dificulta-ti/?gclid=Cj0KCQIAjc2QBhDgARIsAMc3SqTC7NGnNuzvkU2CCVHxKmIkSkfd09yUn45PkwgSaOscPRDlwBllzekaAnpjEALw_wcB
- 8) <https://fingernal.ru/ro/materials/disleksiya-opredelenie-prichiny-simptomy-i-lechenie-disleksiya-u-mladshih/>
- 9) https://edubh.ro/upload/red/GIMNAZIAL/CONSILIERE_SI_ORIENTARE/GHID%20pentru%20profesori.pdf
- 10) <https://dexonline.ro/>
- 11) <https://www.reginamaria.ro/utile/dictionar-de-afectiuni/dislexia>
- 12) <https://en.wikipedia.org/wiki/Dyslexia>
dislexic.ro/despre-dislexie/terapia-dislexiei/psihoterapia/
- 13) en.wikipedia.org/wiki/Anna_Jean_Ayres
- 14) www.sindelar.at/
- 15) www.meixner.hu/
- 16) <https://ik-ptz.ru/ro/fizika/testy-na-vyyavlenie-problem-s-chteniem-disleksiya-batareya-testov-na.html>
- 17) <https://idecide-project.eu/translations/ro/Dyslexia-ro.pdf>
- 18) <http://www.cjraems.ro/seosp/Copiluldislexicorespcomuna.pdf>
- 19) <https://teleseict.com/ro/metodologie-pentru-ajutorul-persoanelor-cu-dislexie/>
- 20) <http://www.abletech.ro/en/communication-software.html>
- 21) <https://www.robobracille.org/>
- 22) <http://www.cjraems.ro/seosp/Copiluldislexicorespcomuna.pdf>
- 23) <http://www.isjiasi.ro/documente/RED/proiecte/Orientari%20teoretice%20si%20practic-aplicative%20privind%20interventia%20educa%C8%9Bional%C4%83%20asupra%20copilului%20dislexic.pdf>
- 24) <https://fingernal.ru/ro/materials/disleksiya-opredelenie-prichiny-simptomy-i-lechenie-disleksiya-u-mladshih/>
- 25) <http://www.euroblind.org/about-blindness-and-partial-sight/facts-and-figures>
- 26) <https://www.who.int/en/news-room/fact-sheets/detail/blindness-and-visual-impairment>
- 27) <https://equalsims.blogspot.com/p/the-guide-for-subject-teachers-in.html>
- 28) <https://eda508lowvisionblindness.weebly.com/general-characteristics.html>
- 29) <http://ombudsman.mk/upload/Posebni%20izvestai/2020/Poseben%20izvestajDeca%20so%20poprecenost-2020.pdf>
- 30) https://gem-report-2020.unesco.org/wp-content/uploads/2021/02/North_Macedonia.pdf
- 31) <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/83296NED/table?ts=1641728567714>
- 32) Education of people with disabilities in Poland: <https://rampa.net.pl/edukacja-osob-z-niepelnosprawnosciami/>
- 33) <http://abc.lzinr.lublin.pl/edukacja/ksztalcenie-przedszkolne-i-szkolne>
- 34) IT Education Center: <https://cie.gov.pl/>
- 35) Education of people with disabilities (Serafin Teresa)
: <http://orka.sejm.gov.pl/wydbas.nsf/0/33550F47E661F69CC1257E7300368C7A/%24File/Serafin.pdf>
- 36) Statistics Poland: <https://stat.gov.pl/>

- 37) IT Education Center: <https://cie.gov.pl/>
- 38) www.sejm.gov.pl
- 39) www.senat.gov.pl
- 40) www.senat.edu.pl
- 41) www.gov.pl
- 42) www.prezydent.pl
- 43) <https://bip.brpo.gov.pl/>
- 44) <https://brpd.gov.pl/>
- 45) <https://niepelnosprawni.gov.pl/>