



## **Integrating (Digital) Cultural Heritage into Secondary School Education**

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### **Abstract**

*The integration of digital cultural heritage into compulsory secondary education has become quite topical in recent years and several European Commission-supported projects aimed at professional development of secondary school teachers have been initiated in order to improve their digital skills. This study will focus on the results obtained through qualitative research related to the integration of digital cultural heritage into the compulsory education at lower and upper secondary level schools by selected teachers who were involved in the Erasmus+Cherished project. Our research cohort, i.e. 15 secondary school teachers, participated in a professional development activity (LTTA – Learning and Teacher Training Activity) in Nicosia, Cyprus in the period from 6th to 9th July 2022. This workshop was organized by Synthesis (Centre for Research and Education) and attended by other EU cultural and educational institutions such as Matej Bel University (by Faculty of Arts' members, one of them is the author of this article) - Slovakia, SPEL - Portugal, SDT - Belgium, Instituto Ikigai - Spain and Ki Culture - Netherlands. The LTTA emerged as one of the outcomes of Erasmus+Cherished project no. 1. 2020-1-BE02-KA226-SCH-083039, coordinated by Square Dot Team from Belgium. In addition to interviewing Slovak teachers, we also reflected on the views and opinions of teachers from other project countries, i.e. Spain, Portugal, Belgium and the Netherlands. Thanks to our interviews and online questionnaire, being the primary research techniques, we explored the challenges, experiences, as well as strengths and weaknesses that secondary school teachers face when applying digital cultural heritage into their teaching. Using the mentioned methods of qualitative research, we were able to reveal more about the secondary school teachers' opinions on LTTA in Cyprus, especially what benefits they gained in terms of their professional development, what specific skills they improved and what needs they still have in terms of digital cultural heritage integration into their lessons. We built the study on the premise that using digital sources of cultural heritage can foster not only teachers' digital skills, but also students' global skills, cultural awareness and cultural intelligence.*

**Keywords:** secondary school teachers, professional development, digital sources of cultural heritage, Learning and Teacher Training Activity (LTTA)

### **1. Introduction**

Teachers world wide have been facing a variety of educational, cultural, and socio-political challenges which impact their pedagogical work. One of these challenges lies in the application of digital sources to teaching at secondary schools. In our study, we focus on digital cultural heritage sources, which, if used effectively in class, can contribute to enhancing global skills, as well as the cultural and emotional intelligence of learners. We presume, based the Digital Education Action Plan for 2021-2027 and the Education in Cultural Heritage report [9], that there is an increasing need for developing educators' digital skills as part of their lifelong pedagogical learning to adapt teaching to new conditions, based on the significant changes in education in the last 3 years since the COVID-19 outbreak.

### **2. Digital cultural heritage**

The integration of digital cultural heritage into secondary school education is more important than ever. Digital sources provide teachers with a range of ideas and tips, but also challenges. We consider digital cultural heritage sources as an effective tool which can be used in a wide range of subjects, starting with the best known platforms such as Europeana and continuing with various other digital databases. EU initiatives, such as Erasmus+ projects, are responding to the need to introduce digital



cultural heritage into compulsory education curricula. In this study, we view digital cultural heritage as cultural heritage which has been digitized in order to be kept for future generations. [6] "Digital materials include texts, databases, still and moving images, audio, graphics, software, and web pages, among a wide and growing range of formats. They are frequently ephemeral, and require purposeful production, maintenance and management to be retained." [7] There is a probability that digital cultural heritage will become more important in the future based on the fact that many organizations and communities are using digital technologies in order to preserve their valuable materials (galleries, museums) and share them with current as well as future generations.

### **3. Professional development of teachers in the 21st century**

Starting from the mission of the teacher's work, it is probably right to note that the teaching profession requires lifelong learning and continuous development. Pedagogical thinking is therefore subject to constant transformation and the teachers themselves should (ideally) use the opportunity to reflect the challenges that 21st century brings. A characteristic feature of such transformative thinking and education is based on the fact that the teacher does not overload pupils with an excessive new information in the belief that the pupil will absorb it over time. [1] If we start with transformation, the change should be in grasping the knowledge that the learner has and using his/her skills to transform/change it into something new, something to create, design, construct, etc. in accordance with Bloom's taxonomy. [5] The premise of such learning is that the learner is personally engaged, participating in a task that is close to his or her heart, drawing on real life, so that he or she sees the potential of connecting to what he or she is experiencing, dealing with, perceiving, struggling with, etc. Our learners benefit from creative use of information, applying their critical thinking, reflection, and activating their other higher cognitive processes (analysis, synthesis, comparison, etc.). All learning is individual and each pupil must be treated individually. Transformative education has the potential to encourage pupil autonomy (responsibility for one's own learning), to increase intellect, to develop relationships, to promote social and emotional learning, to make the core values of education visible, and last but not least, to encourage pupils to be active. [2], [8] We believe that the implementation of digital cultural heritage sources within compulsory education at secondary level can contribute to the holistic development of the learner.

The application of digital cultural heritage sources to teaching might be quite challenging. It is up to the teacher how much use he/she makes of digital sources in the classroom; it is important to know how to use these digital resources effectively and appropriately. The selected teachers from five EU countries attended an interactive educational and practical workshop in Cyprus between the 6th and the 8th July 2022 to test their digital skills and support their further (lifelong) pedagogical development in the area of digital cultural heritage. Arising out of the fact that the teachers are educating future empowered citizens and leaders, their profession today can hardly do without basic digital skills that help them to effectively manage not only online learning but also the application of digital resources in their classroom. Based on this requirement and challenge, the Learning and Teacher-Training Activity (abbr. LTTA) in Cyprus has attempted to meet these needs through supporting the pedagogical development of teachers via micro-learning course, e-learning platform, pedagogical framework and self-assessment tool.

#### **3.1 Innovative steps in education in the 21st century**

The integration of digital cultural heritage resources into the curriculum of compulsory education appears to be innovative and effective enough to enhance students' global skills, as well as their cultural and emotional intelligence. New challenges in education, and challenges arising in the context of the COVID-19 outbreak, have resulted in the emergence of new online educational resources and e-learning methods. The cultural and educational sector has had to adapt to this challenge and step forward towards the creation of digital content materials usable in education in order to facilitate the work of the teachers and to offer new ways to convey content in a different, less traditional, digital form, which is already viewed as part of our lives and the educational system. [3]

The question is, however, what innovative steps can teachers take to motivate pupils to go further, to progress and not to lose interest in learning and in their own development of knowledge and honing their skills? To this end, a workshop in Cyprus for teachers was designed to help teachers in lower



and upper secondary education to effectively integrate digital resources of cultural heritage into their teaching. The workshop's primary aim was to help teachers navigate the different types of digital cultural heritage related to their subject's educational objectives. It was intended to develop teachers' skills in designing and creating their own digital resources for teaching purposes. [3]

### **3.1 Learning and Teacher Training Activity (LTTA) in Cyprus**

Fifteen teachers from 5 EU countries, i.e. Spain, Portugal, Slovakia, Belgium and the Netherlands, to participate in the LTTA as part of the Erasmus+Cherished project. [4] The condition for participation was that the teachers should teach pupils aged between 11 and 18. The selected teachers had to fulfill several requirements, namely: an active interest in the use of digital heritage resources and in inclusive digital education, and a willingness to share the methods and techniques used in the integration of digital cultural heritage from the curriculum. In addition to improving teachers' digital skills in using digital cultural heritage resources, the workshop had several other sub-objectives. These included: intensifying contact between workshop members regarding the application of digital heritage resources in the curriculum; highlighting adequate digital cultural heritage resources that could be applied in humanities and science subjects; training teachers in the use of digital cultural heritage resources via a newly designed microlearning course developed by Erasmus+Cherished members; improving teachers' digital skills in using digital cultural heritage resources with regard to inclusive approaches; taking advantage of opportunities for teachers to self-assess their own skills after the workshop; encouraging collaboration among teachers, helping them increase their self-confidence in the reuse of digital cultural heritage resources and in the use of inclusive approaches in education; initiating teacher collaboration after the Erasmus+Cherished project. [3] In terms of professional development, the workshop was also beneficial because it facilitated teachers' understanding of the following topics: Inclusive digital learning; Benefits of using digital heritage resources in the classroom; Methods and techniques for teaching with digital material; Navigation in digital heritage resources; Teaching sensitive "complex" cultural heritage through digital resources; Interdisciplinary approaches in teaching; Cooperation between schools and cultural institutions; Collaboration of secondary school teachers in the integration of digital cultural heritage resources; Reflection on pedagogical principles and methods used in teaching sensitive "complex" heritage; Developing lesson plans using digital heritage resources in lower and upper secondary education. The topics above are also beneficial in that they provide the 21st century teachers with the opportunity to improve their digital (technical) skills, working with digital material on a variety of topics, all in line with inclusive and global education and culturally-responsive pedagogy which are crucial in terms of school curriculum.

## **4. Methodology**

Since the aim of this study was to convey teachers' views on how they perceive the integration of digital cultural heritage resources into their teaching, what they struggle with, what challenges they face, and what their strengths and weaknesses are in using digital resources, etc., we decided to carry out an anonymous questionnaire and subsequent interviews with teachers participating in the workshop. The workshop was organized by Synthesis, Centre for Research and Education, one of the partner institutions in the Erasmus+Cherished project. The research material collected from fifteen teachers from different EU countries was subjected to a detailed analysis. In the corpus we tried to identify key themes such as: professional development, successes, failures, evaluation, change, transformation, challenges, digital resources, cultural heritage, and others. For our purposes, we also classified respondents' answers in terms of whether they reflected the educator's knowledge, actions, awareness, and development. Respondents were also given the opportunity to comment on the pedagogical framework and microlearning course that was developed by project members to facilitate the implementation of cultural heritage digital resources in compulsory education. Finally, they were able to assess their digital skills through a self-assessment tool developed by Synthesis (Centre for Education and Research in Cyprus) in collaboration with other members of the Erasmus+ Cherished project. All respondents were from lower and upper secondary schools employed Belgium, the Netherlands, Slovakia, Spain and Portugal. Members from the following institutions were present too: Matej Bel University in Slovakia, Instituto Ikigai in Spain, SPEL in Portugal, Stichting Ki Culture in Netherlands, and Square Dot Team in Belgium.

### **4.1 Survey results**



The first item in the questionnaire was the pedagogical framework proposed by the Erasmus+Cherished project members. Respondents were asked to rate which items are most important to them in their daily practice. 90% of respondents considered professional development (professional engagement) and the same percentage considered empowering learners as key items. Also worth mentioning is the item connected with facilitating learner's digital competence, which was viewed as a key aspect by up to 60% of respondents. An interesting finding was that all respondents perceived positively the implementation of digital cultural heritage resources in teaching and also positively evaluated the important role of cultural institutions (galleries, museums) in this area. In this context, the respondents also had the chance to comment in a semi-structured interview on the microlearning activities carried out during the workshop in Cyprus. Teachers evaluated the microlearning course as follows:

*"I enjoyed my time spent doing micro-learning activities. The most valuable source was to learn how education works in other countries and how they apply digital cultural heritage sources in their classes."*

*"I appreciate sharing of knowledge among the colleagues from different countries with different history, cultural heritage and different points of view. I felt very inspired."*

It is evident from the respondents' answers that during the workshop it was not only their knowledge in the field of digital resources but also their digital skills which were enhanced by sharing experiences and examples from practice with other workshop members. The majority of respondents expressed that the microlearning course met their expectations and that they would like to attend a similar course in the future as can be viewed here:

*"This was one of my best learning experiences. I learnt a lot about how to integrate effectively digital cultural heritage sources into my teaching. "*

*"I had a chance to cooperate with my colleagues on creating a lesson plan in which the central idea evolved around integration of digital sources. This was very useful, a nice hands-on experience. "*

As the micro-learning course was a success, we asked respondents which lessons within the course they liked best. Obviously, respondents saw the most benefit in the following topics: difficult heritage, pedagogical approaches to teaching with digital cultural heritage, and best practices in using digital cultural heritage. The last item was the opportunity to assess their digital skills after the course, which again was seen positively by respondents as an opportunity to reflect on their own development. The final discussion was along the lines of recommendations from course participants that may take the microlearning course to a higher level in the future.

*"Thanks to the LTTA in Cyprus I reached a better understanding of digital cultural heritage and its application in teaching. "*

*"I feel I am taking progress in integrating digital cultural heritage sources into my courses."*

#### **4.1 Discussion**

The results of the survey indicate that the digital and cultural competences of the selected teachers in the use of digital cultural heritage resources have improved, which, in addition to the educational activity in Cyprus itself, was also contributed to by the two previous pilot workshops carried out in each of the partner countries in the winter term 2021 and in the summer term 2022. For the integration of digital cultural heritage into the compulsory school curriculum to be successful, support is also needed from the school leadership at the local scale, and especially support from the Ministry of Education, and policy makers in the respective country at the national scale. Indeed, digital cultural heritage provides teachers with a variety of material that they can work with effectively (including lesson plans such as the Europeana platform or the Centropa digital archive, and others) in developing students' global skills, ranging from critical thinking, creativity, global citizenship, to values education such as respect, tolerance and supporting overall inclusion. The research corpus revealed that the educators who participated in the workshop have knowledge about different digital cultural heritage resources.





However, they lack concrete examples, suggestions and tools to work with the material in the classroom in the form of worksheets and lesson plans. According to their statements and the findings of the questionnaire, we conclude that the workshop in Cyprus was successful. It provided teachers with the opportunity to actively participate in the development of the curriculum using digital heritage resources and also provided teachers with concrete opportunities to improve in this area, to navigate the vast range of internet resources, especially in how to work with them and where to look for them.

## Conclusion

Every educational institution is to some extent exposed to the challenges of the 21st century. Among such challenges which we have included in the study is the gradual implementation of digital cultural heritage resources in teaching at lower and upper secondary levels. In order to face this challenge and to deal with it creatively, various European projects (e.g. Erasmus+project Cherished) funded by the EU have been developed to help the teachers of the schools in question to manage the often difficult transition from traditional education to an innovative form of education. These projects use digital cultural heritage resources, delivered by teachers trained in this field. Based on a questionnaire and interviews with teachers from five EU Member States, we concluded that while digital heritage resources provide a myriad of material for the teacher. unless the material is used logically and in parallel with the lesson plan, its effect on improving pupils' key competences is only minimal. This challenge was also reflected in an educational and practical workshop held in Cyprus (as part of the Erasmus+ project Cherished), which, in addition to providing an orientation on the various digital cultural heritage resources, also provided teachers with concrete examples of how to work with this type of teaching material. Developing digital skills is not easy. Teachers' power to apply digital cultural heritage sources in their classes is conditioned by their digital skills, professional competences, and reflective capabilities. The activities carried out by educators in order to hone their pedagogical competencies can contribute to the overall improvement of teaching and learning. To sum up, the LTTA in Cyprus helped remove some obstacles teachers face in integrating digital cultural heritage sources in mainstream compulsory secondary education. It also offered the list of best practices which can be cascaded in their institutions in the future. Selected educators from five EU countries showed not only their expertise and skills, but also enthusiasm and willingness to integrate the digital cultural heritage modules into their own teaching, which we consider as the most successful output of the Erasmus+Cherished project.

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