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Heritage conservation in secondary education curriculum
A didactic proposal based on the application of ICT

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Abstract

This proposal seeks the involvement of secondary education students in the enjoyment, knowledge, and therefore, preservation and dissemination of cultural heritage. The research focuses on the field of heritage conservation in secondary education to try to understand the proper incorporation of these educational contents in curricular and extracurricular school activities. To appreciate and respect the cultural heritage it is essential that students understand the structure of the territory, learn to make hypotheses on its functioning and be trained to promote actions to improve it. The aim is to fill a potential gap in the educational curriculum by creating heritage-related contents and diffusion methods. In addition to the competencies of art education, we have included characteristics of the appropriate use of ICT that, as we shall see, are fundamental tools to carry out this proposal successfully. These competencies are focused on a Web-based office suite (Google Docs) and other Google free online applications: Google Maps and Google Art Project.

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Keywords: Heritage, secondary education, art education, ICT;

1. Introduction

This proposal seeks the involvement of secondary education students in the enjoyment, knowledge, and therefore, preservation and dissemination of cultural heritage. The structure of this entire document aims to introduce content and training packages in the so-called hidden curriculum.

The aim is to fill a potential gap in the educational curriculum by creating heritage-related contents and diffusion methods. In addition to the competencies of art education, we have included characteristics of the appropriate use of ICT (Information and communications technology or information and communication technology) that, as we shall see, are fundamental tools to carry out this proposal successfully.

2. Methodology

The methodology proposed here follows the application of three teaching units that make up the educational proposal about heritage. The first deals with content concepts like "urban art, graffiti and vandalism". The second
goes into the profession of conservator-restorer of cultural heritage and its role in a gallery or museum. The third introduces the mural painting, promoting the creation of the students very own heritage at the high school, a clear reflection of reality and a reference for the learner, which is identified in his/her own creation, and simply for this reason, begins to assess and promote the conservation of the item created.

Specifically in unit number two entitled "Google Art Project" learners are working from a model that follows the strategy/cycle of any research process, organized into three phases: an initial "Problem-definition phase (hypothesis)"; the most responsible during the problem development. In this case, the organization of a teaching sequence aimed at facilitating the learning process of a group of students known and in a given context. This phase requires the work plan, the unit design and the development and evaluation plan. Followed by an "Implementation-analysis phase"; empirical, contrast to the reality: matches the planned unit development in the real world of teaching. Throughout this phase we monitored the unit and the data collected that allowed the evaluation. And ending with an "Interpretation-assessment phase"; discussion and conclusion, validation of hypotheses, suggestions for improvement: this is the phase of analysis and reflexion of the data. From this reflexion process we determined the validity of the didactical proposal (until then a mere working hypothesis) and defined the improvements.

2.1. Problem-definition phase (hypothesis)

In this unit, we seek to apply ICT to the proposal on heritage that we want to implement. It should be noted that ICT should be used both as a source of support for academic learning curriculum of different subjects and for the acquisition and development of specific skills in digital technology and information.

It can be used both as a tool for discovery, access and information processing as well as for communication with others. It can be applied to the individual work of each student and also helps develop collaborative learning processes between groups of students both face-to-face and virtually.

Indeed, the emergence of the free software created by Google™ called "Art Project", has led to the design of this unit and its direct application in the classroom, where it perfectly combines the art, the artistic heritage and ICT within the subject Art.

We planned a series of activities starting with an introduction to Google Art Project, its usefulness and its antecedents in Google Maps, and an introduction to the profession of conservators and restorers, their basic functions in museums and galleries and their role as researchers. In the second part of the unit, a visit to a computer lab was scheduled for the first contact with Art Project, then the teacher provided a tutorial and suggested the main activity that justifies this unit.

2.2. Implementation-analysis phase

The actual development of this unit was carried out with students from secondary education high schools in Tenerife, Canary Islands.

The practice was focused in Google Art Project, showing its basic usage and possibilities step by step. The lesson was based on a tutorial, addressing doubts that could rise as students are working on it: creation of a private collection of art through Google Art Project based on a point of interest (which may be from a particular colour range, a common element in different compositions, or even the same artist).
Students were then asked to create a route in Google Maps with Tenerife as its point of departure and arrival, so that each stop corresponded to one of the galleries where they could find one or more paintings from the private collection previously designed.

All this was then to be shared by sending both URL (Uniform resource locator or universal resource locator) via e-mail to an address created specifically for this purpose: visitamuseos@gmail.com.

Thanks to the free software application "Google Docs", a tutorial was made available to the students. This detailed online document (in a .Pdf format) could be downloaded or viewed by them.

2.3. Interpretation-assessment phase

Google’s platform has clearly been in favour of innovation and the application of ICT, because through its application "Docs" it has been possible to completely eliminate the role of paper commonly used in the performance evaluations of the students.

In addition, the students made use of daily tutoring through the virtual email address provided, which could be considered as a step to take into account not only for implementing this unit, but in any other required extra sessions of teaching, mentoring and monitoring.

The graphs generated from the information in the spreadsheet application in Google docs indicate that the percentages of improvement in the activity are 100% in all cases in which the task has been given, this being a positive indicator about the viability of the unit.

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<th>Detalle ruta (salida-llegada)</th>
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100%
Moreover, statistics were generated from the evaluation standards, designing a virtual rubric. These standards were:

- Number of artists in the art collection
- Justification of the works (paintings or sculptures) selected
- Path generated using Google Maps
- Details of the route

Minimum and maximum improvement levels were set as objectives, of which at least 3 or 4 needed to be met in order to achieve a total positive outcome in the activity.

In Figure 4, we observe that in the earliest level of secondary education for teaching unit 2: Google Art Project, the number of justifications and implementation of routes in Google Maps activity decreases, while in the intermediate levels we found fully uniform data for all assessment standards. However, if you look at the same data for each course separately, it’s obvious that in both cases the justifications rated as "very good" far exceed the data rated as "regular" or "good". On the other hand the detail of the route made with Google Maps was not performed well in many cases.
3. Conclusions

What can we extract from this data, and the methodology carried out in this proposal?
- Enthusiasm in activities based on linguistic communication competences (at least written), clearly drops in the early levels of secondary education.
- The level of reflection and self-criticism increases progressively in students as content and skill levels are raised, being very poor in the early levels, but consistent and realistic in the highest ones.
- Heritage contents proposed here were perfectly assimilated by the students, being a good indicator of success in 100% of the activities in all cases, regardless of starting.
- We may conclude that the direct application (both in secondary education curriculum and in the classroom) of this proposal "Heritage conservation in secondary education curriculum" has proved to be fully viable and positive. Not only were the main objectives intended from the beginning achieved but due to the large number of universal skills involved, it can also be applied to any discipline.

References