Article
Eco-Didactic Project for the Knowledge of a Community Museum

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Abstract: The aim of this was is to identify the educational competences and training of third-year students taking the degree in Primary Education at the University of Cordoba, in relation to the protection and conservation of community museums and from an eco-didactic and historical point of view. In this study, the collection of information was validated by means of a Likert-type questionnaire (1–5) with which we collected data from five academic years by handing it out to a sample (n = 332). Among the results obtained, we can emphasize both the degree of involvement and the opinions of the students with respect to valuing the cultural and natural heritage of their environment, as well as the didactic use of the ecomuseum in the area where it is placed. Finally, the conclusions highlight the perceptions of university students regarding the educational impact of ecomuseums as cultural and sustainability elements, in addition to their being an eco-didactic resource for teaching and implementing projects about historical heritage.

Keywords: civic participation; eco-didactic project; educational practices; heritage; museum; teacher training; university education; sustainability

1. Introduction

The evolution of the concept of cultural heritage in relation to the role of museums has given way to the constitution of the first ecomuseums [1]. From an informative and educational point of view, didactics is an essential factor of cultural heritage that aims to enable people to learn about heritage, communicate about it, and make heritage assets both accessible and understandable to everyone, from a particular user to the general public [2]. In order to achieve these changes at the community level, and thereby promote both sustainability and social responsibility, it is crucial to implement them in an educational setting. Moreover, the personal training of university students makes them get involved in these types of proposals, which also guide their professional practices [3]. Among the recent studies from the literature we can find plenty that provide valuable information on the importance of heritage as part of teacher training [4–11].

In this sense, ecomuseums act as community museums and places with multi- and interdisciplinary characters [13], focusing on the particularities of a territory and a defined...
community, taking into account the cultural and historical elements that shape them, in addition to their most relevant traditional characteristics [14]. Community museums are an alternative to the museum institution model for the preservation, study, and interpretation of cultural landscapes [15]. From this point of view, ecomuseums emerge in response to the needs of those who are actively involved in the place they live, as well as in the stages of a community development museum project [16].

One of the strengths of an ecomuseum is its ability to enhance and expose historical, cultural, and environmental resources to the community [17]. In this respect, Rivière [18] stated that ecomuseums are open museums—they become the driving force for the development of the territory and the mechanism that allows the people to participate; they are often located in economically depressed areas, sometimes rural, although examples can also be found in urban centers. Navajas [19] added that the ecomuseum is one of the experiences that serves to bear witness, both theoretically and practically, to this reality, and will end up becoming an international organization for the New Museology.

Likewise, whilst the traditional museum deals with the acquisition, conservation, study, value enhancement, and exhibition of both material testimonies and their socio-cultural context, the ecomuseum focuses on the historical territory as an element linked to social processes [20]. The advantages of establishing links between the community and the territory lead to the use of sustainable development in new ways, giving rise to two different models of the ecomuseum: one linked to the environment and the other focused on the development of both the community and the local area [21]. The purpose of ecomuseums is to revive the customs and history of the area where the traditions are based and to reinforce the collective memory by acting as an enabler of the dynamics of the territory [22]. This requires the commitment, collaboration, and involvement of the community, as shown in the Figure 1.

![Figure 1. Indicators for configuring an ecomuseum. Source: drawn by the author.](image)

From this historical perspective, the didactic dimension of cultural heritage is a challenge in relation to the archaeological, urban, sustainable, and ethnographic management of the heritage legacy. This challenge is in large part due to educational strategies that do not involve citizens directly in their dissemination measures [23]. In relation to this, sustainable education focuses on the recovery and preservation of heritage resources. For this process to be carried out, both individual and collective knowledge of the community is necessary in order to value the existence of local heritage, with research practice favoring these reflective experiences and the development of the professional identity of university students along with their heritage identity [24].

Therefore, the main objective of this study was to analyzing the beliefs of university students with regard to the possibilities that both eco-didactics and historical ecomuseums provide. In order to meet this objective, the following specific objectives (SO) were included: (SO1) to understand the educational considerations of ecomuseums and cultural sustainability;
(SO2) to test students’ knowledge about cultural spaces and their educational potential in different contexts;
(SO3) to identify the interest of students in relation to their university training in heritage education;
(SO4) to assess the importance of heritage education, together with that of the cultural and natural environment.

2. Materials and Methods

2.1. Participants and Sample

The study population consisted of students who were taking the subject Didactics of Social Sciences during the third year of the degree in Primary Education at the University of Cordoba. The sample selection \( (n = 332) \) was comprised of 188 females (56.6%) and 144 males (43.4%) and included data from five academic years (Table 1). The average age of the participants was 22.8 years. For the selection of the sample, a type of non-probabilistic convenience sample was carried out. The participants were selected from among groups of students whose teacher was directly involved in the educational study.

Table 1. Students who participated in the research during the five academic years.

| Course Number | Number | %  |
|---------------|--------|----|
| 2015–2016     | 62     | 18.6|
| 2016–2017     | 63     | 19  |
| 2017–2018     | 117    | 35.2|
| 2018–2019     | 46     | 13.9|
| 2019–2020     | 44     | 13.3|

2.2. Design of the Research

This research relied on a non-experimental quantitative survey based on the work of Burke and Christensen [25]. These types of studies are common in research related to the fields of education and social science didactics, since they can provide answers relating to the amount of learning acquired, together with an evaluation of different variables [26,27]. The aim of this methodological approach was to assess the degree of involvement and commitment of the undergraduate students of the degree in Primary Education, in relation to both the historical environment of their municipality and the heritage assets of an ecomuseum. Before the implementation of the research questionnaire, the students watched videos presenting Almedinilla and its heritage in order to have an overview of the subject matter, as shown in the Figure 2.

2.3. Data Collection and Analysis Instrument

A Likert-type questionnaire was used consisting of five values, from 1 (strongly disagree) to 5 (totally agree). The aim was to collect data and process the information. The questionnaire was called “University students’ beliefs on the educational dissemination of an ecomuseum”\(^\text{1}\). In the classification and development of the 15 questionnaire items, the work of Meschede, Fiebranz, Möller, and Steffensky [28] was taken into account. The instrument described by these authors is divided into three categories: (1) conceptions about cultural sustainability, (2) perspectives on heritage education, and (3) beliefs related to learning about sustainable culture and history teaching (see Table 2).
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The students answered 15 questions divided into three categories and they received the necessary explanations on how to respond. This instrument was anonymous in order to allow them to answer naturally and without feeling identified. The collection was carried out during the students' school hours and in the classroom. The structure was approved by six renowned experts from different Spanish universities, specializing in the didactics of history and heritage education, who helped with the configuration and validation of the field knowledge of this study. At all times, the main objective was to assess the items and categories related to the content of the research project. Finally, an Excel table was used as a technical support to analyze and interpret the information collected for the graphs and calculations, with the final goal of meeting the objectives set out in the research. Furthermore, it was necessary to add basic descriptive statistics, such as percentages, frequencies, means, and the standard deviation, to validate the results of the questionnaire.

Figure 2. Website of the Ecomuseum of Almedinilla, Cordoba, Spain.

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Table 2. Scale for evaluating students’ opinions: “University students’ beliefs on the educational dissemination of an eco-museum”.

| Conceptions about cultural sustainability                                                                 | 1 | 2 | 3 | 4 | 5 |
|-----------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 1. I wouldn’t know how to define the meaning of “ecomuseum”                                              | 1 | 2 | 3 | 4 | 5 |
| 2. I would like learning about sustainable education to promote sustainability at school.                | 1 | 2 | 3 | 4 | 5 |
| 3. I believe that university education in sustainability can improve my professional skills.             | 1 | 2 | 3 | 4 | 5 |
| 4. I believe that basic knowledge about cultural sustainability is not taught in the degree in Primary Education. | 1 | 2 | 3 | 4 | 5 |
| 5. I think that current educational regulations should include content on sustainable education.        | 1 | 2 | 3 | 4 | 5 |

| Perspectives on heritage education                                                                       | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 6. I consider that I have not had the opportunity to learn about the concept of an ecomuseum during the course of my studies. | 1 | 2 | 3 | 4 | 5 |
| 7. I think that heritage education does not appear as curricular content in the teaching guides at my university degree. | 1 | 2 | 3 | 4 | 5 |
| 8. I would not be able to recognize the cultural and natural heritage of an ecomuseum.                   | 1 | 2 | 3 | 4 | 5 |
| 9. I believe that the teaching of cultural and historical heritage enriches our knowledge about the heritage environment. | 1 | 2 | 3 | 4 | 5 |
| 10. I would like university training in heritage education to improve the acquisition of teaching skills. | 1 | 2 | 3 | 4 | 5 |

| Beliefs related to learning about sustainable culture and history teaching                                 | 1 | 2 | 3 | 4 | 5 |
|---------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| 11. I believe that my training in history and sustainable education is not satisfactory.                 | 1 | 2 | 3 | 4 | 5 |
| 12. I would like to know more about the history of my city/town and its historical development.         | 1 | 2 | 3 | 4 | 5 |
| 13. I think that heritage and natural elements should be studied together.                              | 1 | 2 | 3 | 4 | 5 |
| 14. I believe that historical heritage and cultural sustainability are related terms.                    | 1 | 2 | 3 | 4 | 5 |
| 15. I believe that the teaching of history and heritage culture should share a subject in the degree in Primary Education. | 1 | 2 | 3 | 4 | 5 |

3. Results

In order to respond to the first objective focused on the students’ conceptions of ecomuseums and cultural sustainability, items 1 and 6 were selected. In Table 3, we can see that almost 90% of respondents would not know how to define the concept of an “ecomuseum”. Similarly, we found a high percentage (91%) who considered that they had not had the opportunity to learn more about what an ecomuseum is. This reveals that the concept of an ecomuseum was unknown in students’ educational training from school to university.

Table 3. Educational considerations of ecomuseums.

|                      | Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M    | Sd. |
|----------------------|-------------------|----------|---------------------------|-------|---------------|------|-----|
| 1. I wouldn’t know how to define the meaning of “ecomuseum” | 100               | 0.6      | 2.1                       | 0.9   | 6.6           | 89.8 | 0.600 |
|                      | Frq 332           | 7        | 3                         | 22    | 298           |      |     |
| 6. I consider that I have not had the opportunity to learn about the concept of an ecomuseum during the course of my studies | 100             | 0.3      | 3.3                       | 2.4   | 3             | 91   | 0.662 |
|                      | Frq 332           | 11       | 8                         | 10    | 302           |      |     |

As for the second objective, regarding testing students’ knowledge about cultural spaces and their educational potential in different contexts, we selected items 2 and 9. The results in Table 4 show modest percentages (56.6% and 62.1%) with respect to heritage education and the contribution of sustainable education at school. However, incorporating heritage into higher education teaching does not necessarily mean adding theoretical–
practical content to current teaching syllabi. In this context, it is necessary to practice educational outings to get to know the environment.

Table 4. Contributions on cultural spaces and their educational potential.

| Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M   | Sd.  |
|-------------------|----------|---------------------------|-------|---------------|-----|------|
| 2. I would like learning about sustainable education to promote sustainability at school. | %       | Frq           |       |               |     |      |
| % 100             | 4.2      | 14            | 6     | 22            | 102 | 188  |
| Frq 332           | 8        | 5             | 82    | 31            | 206 |      |

9. I believe that the teaching of cultural and historical heritage enriches our knowledge about the heritage environment.

| Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M   | Sd.  |
|-------------------|----------|---------------------------|-------|---------------|-----|------|
| % 100             | 2.4      | 8             | 5      | 82            | 31  | 206  |
| Frq 332           | 14       | 6             | 22     | 102           | 188 |      |

In order to meet the third objective, which aimed at identifying the students' interests in relation to their university training in heritage education, we selected items 7 and 10 (see Table 5). A total of 45.7% of the students thought that heritage education did not appear in the curriculum of the degree in Primary Education, and 70.2% who responded that they would like their teacher training in historical heritage education to improve the development of their professional skills. This time, university students showed that their training in skills was not adequate to carry out their teaching practice in heritage education.

Table 5. Students' interests regarding their university training in heritage education.

| Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M   | Sd.  |
|-------------------|----------|---------------------------|-------|---------------|-----|------|
| 7. I think that heritage education does not appear as curricular content in the teaching guides at my university degree. | %       | Frq           |       |               |     |      |
| % 100             | 12.1     | 4.2           | 21.4  | 16.6          | 45.7|      |
| Frq 332           | 55       | 152           |       |               |     |      |

10. I would like university training in heritage education to improve the acquisition of teaching skills.

| Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M   | Sd.  |
|-------------------|----------|---------------------------|-------|---------------|-----|------|
| % 100             | 0.9      | 1.8           | 3.6   | 23.5          | 70.2|      |
| Frq 332           | 6        | 12             | 78    | 233           |     |      |

Regarding the fourth objective, assessing the importance of heritage education together with the cultural and natural environment, items 8 and 15 were used. As can be seen in Table 6, 62.7% of the students thought that they would not recognize the cultural and natural heritage of an ecomuseum, while 59.7% thought that the teaching of history and heritage should be a subject in their university degree. These opinions show that environmental sustainability and heritage conservation contents are not implemented in class sessions in the university context.

As the results show, the questionnaire provides a general overview of the incorporation of heritage and history education at the university through the knowledge of ecomuseums (see Figure 3). It is difficult to draw conclusions from the analysis of these results about whether the students understood the characteristics of and the eco-didactic relationship between the historical, patrimonial, artistic, archaeological, and natural elements of an ecomuseum. However, it was possible to verify an evolution of the opinions of the students towards positions more committed to their university education and a clear inclination to cover the training deficiencies regarding educational heritage and cultural sustainability. Finally, from an identity and historical-artistic perspective, it is necessary to highlight that the valuation of heritage assets, as references of community memory, allows the design of methodological spaces that involve students in their own learning [29].
Table 6. Valuing heritage education and the cultural/natural environment.

|                  | Strongly Disagree | Disagree | Neither Agree Nor Disagree | Agree | Totally Agree | M   | Sd.   |
|------------------|-------------------|----------|----------------------------|-------|---------------|-----|-------|
| 8. I would not be able to recognize the cultural and natural heritage of an ecomuseum. | 100 | 2.1 | 3.9 | 10.8 | 20.5 | 62.7 | 4.377 | 0.971 |
| Frq              | 332 | 7 | 13 | 36 | 68 | 208 |       |       |
| 15. I believe that the teaching of history and heritage culture should share a subject in the degree in Primary Education. | 100 | 1.5 | 4.5 | 9.6 | 24.7 | 59.7 | 4.364 | 0.937 |
| Frq              | 332 | 5 | 15 | 32 | 82 | 198 |       |       |

Figure 3. Quantitative comparison of the achievement of the study objectives. Source: Drawn by the author.

4. Discussion

According to the research presented, the specific case of the Ecomuseum of the Caicena River is an example of heritage conservation and protection of natural spaces. As the results of the research show, the study was organized around three categories—first, the conceptions of third-year Primary Education students about cultural sustainability; second, their perspectives on heritage education; and, finally, their beliefs on learning about sustainable culture and the teaching of history [30]. These dimensions shaped the general vision that the students of Didactics of Social Sciences had about their university training in historical education [31] and heritage sustainability. The literature on this subject shows that the understanding of basic knowledge in these disciplines is limited within the teaching–learning process [32].

Despite the rare presence of ecomuseums in Andalusia, they involve the collective work of all the parties involved, whether these are local development agents, ecomuseum directors, the city or town the ecomuseum belongs to, the public bodies involved, or others. These factors show that an ecomuseum is a common space where different groups collaborate for the protection and appreciation of both tangible and intangible heritage [33]. It is through citizens’ initiatives, from a historical and heritage point of view, that the natural and cultural heritage, as well as disadvantaged areas, is enriched. These projects have made it possible to preserve cultural, historical, and social elements in their place of origin—unlike a traditional museum, ecomuseums make it possible to move the museum to where the elements of the environment to be preserved are located, thus improving the relevance of the historical–cultural heritage in the territory [34].
Another of the aspects promoted by the experience of ecomuseums is the knowledge and dissemination of both Andalusian culture and history, which also leads to the enhancement of the natural and socio-cultural resources that are part of Andalusian cultural identity. Ecomuseums are living museums in which a local community participates and with which they identify. Landscape elements, archaeological elements, and natural resources remain in situ in a given territorial area managed by both public and private entities [35]. In this sense, cultural heritage in a model of sustainable development encourages on to reflect on the conditions and possibilities that closely link heritage culture and historical education.

These possibilities make up the general vision that students studying the Didactics of Social Sciences have about the different museum nuclei (archaeological, historical, natural, ethnological) that comprise an ecomuseum. In this way, by building knowledge and being curious about the historical past, they felt a deeper identification with and closer to their cultural heritage. Teaching improvements in the training of university students made them get involved and redirect their methodological, conceptual, and professional shortcomings. Nevertheless, from this educational perspective, the connection between value and society, together with the conceptual valuation of heritage, is understood by students as a gap in legislation and didactics that hinders not only their professional training, but also their training in terms of cultural sustainability [36,37].

5. Conclusions

It is necessary to consider several difficulties we faced in undertaking our research. One of them was the students’ lack of knowledge about their closest environment. Another was the absence of historical–patrimonial identity from the Didactics of Social Sciences point of view [38]. The poor implementation of cooperative and learning-through-discovery experiences was also significant. Among the positive aspects, this research involved proposals for the creation of new opportunities that make it possible to learn about the cultural and natural heritage of an ecomuseum, as well as for coordination between teaching teams and group work to carry out action–research.

In fact, the teaching–learning process of the students must be evaluated in the university in order to obtain information about the degree of complexity they face when trying to understand the natural environment and the relationship with the historical heritage of a specific place. In line with this, this study referred to the factors that are necessary to improve the historical and eco-didactic training of university students and ensure its application in their professional futures; on the other hand, it also drew attention to the training of teachers in education in cultural sustainability and heritage education.

From this point of view, the participants demonstrated their need to be trained in the topics presented so as to contribute knowledge and achieve a learning process that allows them to develop critical autonomy and plan didactic proposals adjusted to the reality of their historical and sustainable environment. This challenge brings university teacher training closer to historical and heritage education, both at the curricular and methodological levels [39]. In this way, school-based heritage education is the first preventive measure to strengthen the cultural identities of students—whether individual or group—relating them to their closest contexts [40].

**Funding:** This research was funded by the Spanish Ministry of Science, Innovation and Universities, grant number PGC2018-097481-B-I00.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** The author gratefully acknowledges the support of the University of Cordoba (Spain).

**Conflicts of Interest:** The author declares no conflict of interests.
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