

ARTICLE

Heritage Education in The Archaeological Sites. An Identity Approach in The Museum of Calatayud

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Abstract The present paper reports on a case study performed on the Museum of Calatayud's educational program where the latter is showcased as a didactic model for the museization of archaeological remains in the Iberian Peninsula (museum and site). This research has been developed by the Spanish Heritage Education Observatory (SHEO) in conjunction with the University of Zaragoza's CIVITAS project. The study shows a qualitative approach and is based on the comprehensive evaluation of the program's educational design and implementation resulting from a previous analysis of a sample consisting of $N = 223$ educational programs on archaeological heritage. The evaluation has been conducted by using the SHEO method, whose aim is to gain deeper insights into educational practices by means of a standards-based assessment of their underlying designs. Following the results of this study, the Museum of Calatayud appears as a clear benchmark: an institution that stands out because of its holistic conception and an approach that addresses issues of symbolism and identity in order to raise the population's awareness of its legacy and the importance of education inspired by heritage-related values of respect and protection. Our research enables us to draw up a decalogue of key actions which we do not mean to be transferable to other contexts, but rather to provide an example or a starting point for future educational designs and implementations by the museum community and heritage institutions.

INTRODUCTION

The duality represented by the case of a museum that is furthermore an archaeological site – a “museumized site” (Arias 1999) – comprises a gradual process that extends from the discovery and excavation of remains to the design of a museum in order to host the archaeological findings and contextualize their history. Such spaces as house heritage assets in their original site need to provide an area in which to preserve, protect and safeguard the dug up findings with an educational purpose: a place that makes it possible to museize the exhumed artifacts from a didactic perspective

in pursuance of a goal that may be termed knowledge transfer (Hernández and Rojo 2012; Martín and Cuenca 2011). For this reason, and beyond the regular mission of safeguarding and exhibiting its holdings that any museum has, one of the key competences that must be attended to with a special commitment in order to successfully attain the preservation and dissemination goals is the education and awareness-raising of the public by means of identity-driven, binding processes (Fontal 2003; Fontal and Gómez-Redondo 2016) that build strong relationships between people and places. To this purpose, educational programs are developed that enhance the value of

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heritage by means of education-based strategies meant to pass on this legacy. Such strategies eventually become context catalysts: a medium for interpretation or a set of guidelines for learning about tangible remains or objects. Some of these programs tap into national identity in order to raise the people's awareness of the relevance of preserving cultural heritage (McAnany and Parks 2012) while attempting to encourage value-enhancement perspectives through the understanding of the historical meaning of sites and the importance of recovering them (Bardavio et al. 2004; Barghi et al. 2017b). Our point here, however, is the need to learn about and evaluate educational practices, as already pointed out by authors like Pérez (2000) or Apaydin (2016). In this sense, there are a number of available studies on specific educational programs like those by Akmehmet (2008); Mujika et al. (2009); or Masachs et al. (2017). Even so, what becomes apparent after a review of this literature is the absence of analyses of broader samples capable of spotting outstandingly good educational programs on archaeological heritage worth a deeper examination in order to lay the foundations for future programs.

For these reasons, and in order to carry out the present study, we set out to evaluate a sample of programs ($N = 223$) by using the SHEO method, as a result of which the case of Calatayud's museum became a benchmark. The present study stems for the first phase of this research, which in turn features a case study on the museum's didactic action (Stake 2006). Our inquiry makes it possible to draw a number of keys to successful implementation which do not purport to be transferable to other contexts, but rather serve as examples or starting points for future educational designs and implementations within the museum community and heritage-related institutions.

THE ARCHAEOLOGICAL HERITAGE: MUSEUMIZATION AND EDUCATIONAL FUNCTION

Archaeological heritage does not only comprise sites, but a whole tangible culture consisting of artifacts and ecofacts that can be used to explain the processes – both global and specific – of historical shifts (Arias 1999, 46) and encourages understanding and awareness raising. From this point of view, Zabala et al. (2015) claim that social practices must promote “the exchange of experience as part of the individual subjectivities to collectivize knowledge and build consensus and complementarities of territorial visions” (2015, 30). Authors like Bradley and William (1998) argue that communities always find their source of inspiration in the past in order to establish the present time's cultural meanings. In the process of building such meanings, on the other hand, the territory's symbolism and identity play a particularly relevant role. The sense of identity derives from the sociological view of heritage encouraged by Vienni, for whom the latter “has a key role in shaping the historical memory of society” and favors its “knowledge, understanding, appreciation, care, enjoyment and transmission, emphasizing [its] relationship with society” (2014, 97). Several studies like those by Bareiro (2012) or Smith (2006), elaborate on the importance of heritage as a means of preserving collective memory and identity. Accordingly, Ireland (2012) argues that for society the value of these places lies in the bond that they form with memory, the sense of connection with the past and their affective qualities. For this reason, we believe that the importance of the past and its vestiges demands the right kind of mediation, contextualization and sensitization (Tully 2007), which in turn accounts for the need to expose them socially by means of their



museumization insofar as they are assets worth preservation and communication (Saladino and de Moraes 2015).

In this sense, education is becoming a critical line of action (Fontal and Juanola 2015) which brings together the divulgative function and the promotion of attitudes of respect and valuation towards archaeological heritage. The whole process attempts to transform heritage assets into resources for teaching and cultural leisure, as well as to bring about the population's civic and cultural literacy (Copeland 2009; Teixeira 2006). Such a pedagogical action is regarded as a management mechanism for preventive preservation (Domingo et al. 2013). Consequently, several authors advocate the need to empower society in cultural heritage management: a commitment that involves tasks related to conservation (Lobovikov-Katz 2009), dissemination and awareness-raising, notwithstanding the fact that the latter do not constitute the only actions needed to prevent the destruction of our legacy.

Archaeological heritage possesses a high cultural value while at the same time being one of the most complex heritage types in terms of transmission, interpretation and comprehension. Its educational potential, on the other hand, is certainly large, which means that we should approach the past from an active, critical standpoint (Vicent et al. 2015). This view of things underpins the perception of a single reality that can be accessed through experience and scientific knowledge and gives rise to a single historical narrative. To this we should add the impossibility of experiencing and verifying such a narrative on the sole basis of our senses, given that such a narrative belongs to the past, which inevitably strikes us as distant and blurred (Fontal and Martínez 2017). This approach to heritage transmission or learning stifles critical

thinking, so that it must be superseded by an educational system that makes it possible for us to approach our past and its context in a tangible way. Archaeological assets, in short, help us understand, reconstruct and build ties with the past that awaken our historical empathy by means of experimentation. The whole of archaeological heritage, therefore, “makes it possible to approach history from a practical conception of learning (hands-on), thinking (minds-on) and feeling (hearts-on), since it connects materiality, problem resolution and historical empathy” (Vicent et al. 2015, 86).¹

The educational potential of archaeology turns invisible unless in the presence of heritage education, which is responsible for activating the awareness-raising chain towards the value of assets, as described by Fontal: “knowing in order to understand; understanding in order to respect; and respecting in order to value” (2003, 209). Once we have become sensitized to our heritage, we will show a disposition to care for it, enjoy it and pass it on. Such an identity-strengthening process of heritagization (Fontal and Martínez 2017), is guaranteed by heritage education, in turn entrusted with building bonds between assets and people from an identity-driven, symbolic and social perspective (Fontal 2003). Indeed, the concept of identity constitutes an inseparable part of the current understanding of heritage, even though only a few decades ago the latter only involved notions of accumulated inheritance and legitimacy. The rediscovery, however, of multiple pasts, ethnic and cultural backgrounds, gave rise to a reconceptualization of heritage that put the stress on its being a source of cultural identity and diversity, thus adopting a broader, more plural perspective on its meaning (Smith 2006). That being said, in order for us to better understand the notion of identity in heritage-related



contexts, we should first disentangle the very concept of heritage (Smith 2015; Vecco 2013) and its processes (Fontal and Gómez-Redondo 2016), since heritage is absolutely fundamental as one of the levels where identification and forms of identity are shaped.

METHODS AND PROCEDURES

The case study presented here stems from the analysis of N = 223 educational programs related to archaeological heritage where the involvement of the Museum of Calatayud, within the framework of the Bilbilis archaeological site, has proved merit-worthy for the quality and specificity of their educational design. This research has been developed by the Spanish Heritage Education Observatory (SHEO)² in collaboration with the ARGOS research group (IUCA).³ The study resorts to the SHEO method (Fontal 2016a; Fontal and Juanola 2015), which involves a sequence of seven mutually discriminatory phases (Fig. 1) in order to assess the quality of heritage education programs.

The programs that showed a greater adequacy in terms phase 5 basic standards were referred to an extended and specific evaluation involving the definition of their heritage typology before the case study proper (Stake 2010). The results collected here correspond to the method's last phase, which focuses on the approach to the observational field that focuses our attention on educational practice. To this purpose a record sheet was designed so as to cover several observational variables and field notes were collected. Last but not least, semi-structured interviews were conducted with the museum's educators and a focus group was established with the members of the educational team. These tools were used to start a process aimed at examining the study's unit of analysis against the background of its social and cultural environment (contextualization), the evidence-based inquiry and the informants' reports (saturation). Finally, the data were validated by interrelating the feedback from the several agents involved in the research, including the researcher (triangulation) (Álvarez and San Fabián 2012).

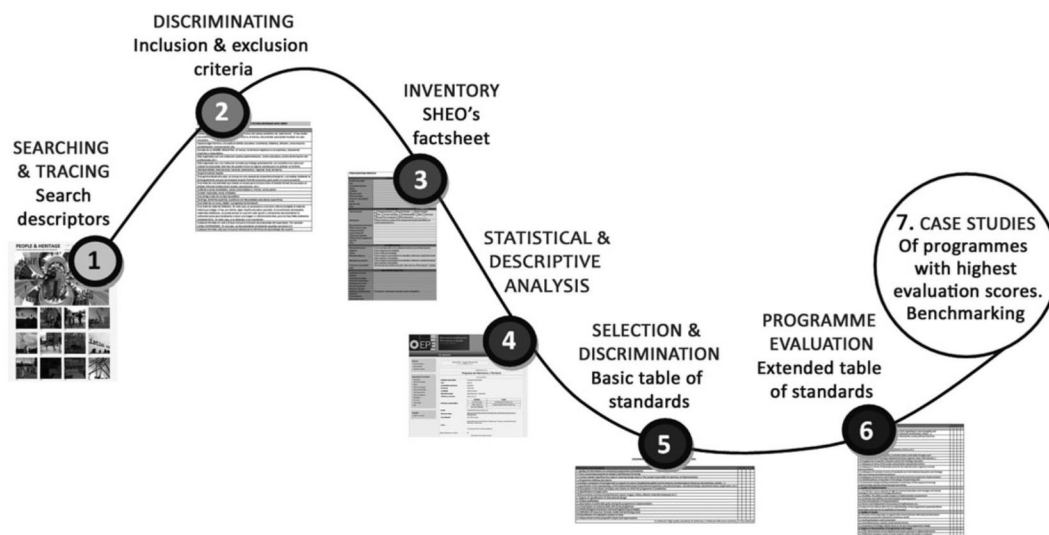


Figure 1. Sequential procedure for the evaluation of programmes.

THE MUSEUM OF CALATAYUD AND ITS EDUCATIONAL PROGRAM

The Museum of Calatayud began its educational work in 2007, when the institution's commitment to raising citizen awareness of the importance of heritage, led them to commission in 2013 an early report and analysis of their educational program conducted by the ECPEME group.⁴ This study became the first tool for the evaluation of their educational action (Calaf et al. 2015) and is therefore the precursor of our research, whose main aim is to provide an accurate analysis of the implemented educational design in order to reformulate and enhance the museum's proposals. The need to know and evaluate educational practices is discussed by authors like Apaydin (2016), who claims that in order to ascertain the degree of success of educational programs and their implementation styles, such programs must be examined critically.

Our research process began by producing a classification of educational actions undertaken since their inception until the present day. This provided us with an overview of the actions' timeline and evolution.

The institution's educational program of activities is designed by a multidisciplinary team formed by the museum's research unit, the URBS group and teaching staff members from Calatayud's schools. The design itself undergoes continuous development as a result of needs, demands and areas for improvement evidenced in the course of the museum's daily practice. Despite the fact that this is a local museum, it stands out for its wide-ranging program of activities mainly targeted at early childhood education and primary education levels. In this way, teachers can schedule a museum visit as part of their annual program

of events in compliance with current regulations (BOE 2009. Orden CUL/174/2009). However, the museum's supply of activities also includes workshops for families, single events, competitions, didactic tours, science events, etc.

The schedule of activities is designed bearing in mind the museum's permanent collection: one which includes items from the town's historical, archaeological and artistic heritage, which thus provides the common thread running through goals and contents. The program's didactic structure does not simply reflect the collection's contents, but furthermore seeks interconnectedness with curricular contents as well (Barghi et al. 2017a; Fontal et al. 2017). Competencies that have proved to be present across all workshops are "cultural and artistic skills", "learning to learn", "knowledge and interaction with the physical world" and "information processing", largely as a result of the teaching of strategies for the interpretation of archaeological or artistic items. More specifically, the workshop on the Roman city evidenced the centrality of the so-called "social and citizenship competency", in tune with the above-mentioned civic dimension of heritage (Table 1).

Following our direct observation of workshop performance and the information gathered by the focus group, the following lines detail the specific approach that underpins the Museum of Calatayud's educational project. The institution operates on the basis of the kind of holistic conception of heritage already described by Martín and Cuenca (2011): an open and multiple approach whose discourse attempts to interweave the whole range of heritage components. The program's main objective is to facilitate the users' grasp of the town's significance – its past and its former lifeways – by focusing on the museum's archaeological and artistic items. On the one hand, it is important to highlight the



Table 1.
Distribution of educational workshops according to educational levels

	Early years – Preschool (2nd cycle)	Primary (1st cycle)	Primary (2nd cycle)	Primary (3rd cycle)	High School (1st cycle)	Special Education
Cerealia: Agriculture in Roman times	X	X	X	X	X	X
The Roman society				X	X	
Sculpture and reuse: Torcal				X	X	X
The army in ancient Rome		X	X	X	X	
Roman games	X	X	X	X	X	X
The Roman city				X	X	X
History of writing	X	X	X	X	X	

town’s integration into the educational process and the ensuing process of reflection that breeds social knowledge (Ponce 2012). On the other, mediation strategies are clearly needed: “Sites and objects are not “found,” but rather identified as representative of the heritage stories that heritage and museum professionals wish to make” (Smith 2015, 460). According to the latter premise, the collection is used in the course of educational workshops within the framework of an identity-based approach: one that allows for the symbolic recognition of one’s own culture (Fontal and Gómez-Redondo 2016).

All workshops involve the preparation of audiovisual materials that provide a didactic narrative of the history of Bilbilis as well as background information for the activity’s specific contents. Moreover, practical work is supported by material resources like didactic booklets, materials adapted for blind and visually impaired people including archaeological replicas or logical dismantlable models, plastic and moldable resources or recyclable materials and digital resources (Rivero and Flores 2014). The workshop’s methodological structure begins by viewing the collection’s selected pieces while using a dialogic (Freire 1971), constructive and interpretive structure based on the Socratic approach. This is followed by a practical, experimental and

playful activity that reinforces the understanding of and experimentation with the topics presented during the session. Finally, the dialogic phase of the workshop is resumed in a group discussion that also raises new issues for further consideration.

In order to assess the proposal’s impact and practical repercussions, an analysis of the museum’s blog and social media contents was conducted which showed that the Web 2.0 space provided a platform not only for the dissemination of all activities related to the museum (Rivero and Escanilla 2014), but also for heritage educommunication. The museum, therefore, is connected with society by providing a multidirectional communication channel.

Finally, the museum carries out a continuous evaluation, both internal and external to the educational action itself. The internal assessment is conducted in the course of inter-group follow-up meetings and by means of questionnaires answered by teachers who express a high level of satisfaction: all of which enhances the workshops’ active and participatory methodology reflecting the educational discourse espoused by the museum. External evaluation, on the other hand, involves the engagement of research work from outside the museum in order to assess the institution’s practices in an

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objective way. Lastly, it is worth mentioning that, notwithstanding its relevance (Diamond et al. 2016), no evaluation of student learning outcomes was performed other than a recap or synthesis by the educator of workshop contents learned.

CONCLUSIONS AND DISCUSSION

From the observation of the data resulting from the analysis, there follows a sound educational design that approaches heritage – its conception and characteristics – from a holistic point of view that matches the action guidelines proposed by Martín and Cuenca (2011), who seek to activate the kind of identity-construction processes extensively described by Fontal and Gómez-Redondo (2016) and the symbolic empathy with culture (Zabala et al. 2015). Such a comprehensive approach also involves a working methodology that intertwines reflective, constructive, emotional, physical or cognitive aspects foregrounded by influential authors like Freire (1971) or Juanola and Calbó (2007). Regarding the analysis of the educational program contents, a close correlation becomes apparent between the latter and the curriculum's competencies, which in turn underscores an area of convergence between educational and cultural policies (Bevan 2017). This suggests a bidirectionality that fosters and supplements learning and awareness-raising with regard to cultural heritage, as otherwise discussed in several research studies (Foreman-Peck and Travers 2013; Ivon and Kušević 2013). Furthermore, it signals a positive aspect that makes possible a common path towards the acquisition of skills needed in learning heritage contents.

As far as the working methodology is concerned, we positively value the high degree of consistency within the several elements making up the program's educational design.

There has to be a mutual correspondence across pedagogical premises, goals, contents, methods and organizational forms: an homology between the teaching-learning processes and the students cognitive competences, as well as a neat match between design and implementation which must constitute a *sine qua non* for any quality education framework. The working methodology used in this case focuses on engaging the participation of local groups of visitors by emphasizing the values of heritage and the awareness of one's own roots through the understanding of historical change (Arias 1999). In this sense, Tully (2007) underlines the need for individuals to become active agents of archaeological research, which, according to Bradley and William (1998), makes it possible for us to build in the present time new cultural meanings attached to our origins. However, as Apaydin claims, while it is true that the involvement with heritage issues has increased, it is necessary to develop a practical, hands-on relationship with heritage and archaeology, thus giving citizens "opportunities to see, touch and feel archaeology and heritage objects, which can increase the interest of people towards their local heritage" (2016, 228).

We should finally mention the systematic evaluation of its own educational practice by the museum itself. This is by no means a novelty but, on the contrary, a standard practice that we tend to take for granted in the educational system. And yet, studies conducted at SHEO, as well as a review of the literature, challenge this assumption in the field of heritage education. On the basis of data collected for research purposes in her retrospective and prospective study on the latter, Fontal (2016b) concluded that only 1.9% of heritage-related educational programs contemplate or explicitly perform some kind of evaluation: an observation supported by other studies (Fontal and Ibáñez 2017; Marín



et al. 2017). Let us add in this regard that in the preliminary report preceding the case study proper, 72% of the analyzed sample did not include evaluation systems or tools in the description of the programs' didactic structures: a gap likewise detected on an international scale according to Vienni (2014) and Apaydin (2016), who claim that the majority of programs do not concern themselves with assessing their efficacy or public impact.

The case's triangulation, our literature review and the latter's comparison with other research work conducted by SHEO (Fontal and Gómez-Redondo 2016; Fontal and Ibáñez 2017; Marín et al. 2017), leads us to propose a decalogue for action that may serve as a starting point or a benchmark for future designs and educational implementations. The guidelines proposed by this decalogue are not exclusive of archaeological heritage, but are rather intended to be applicable to any collection, museum or institution that seeks to work on heritage in a fully comprehensive way by including all of its components and dimensions.

1. A conception of Heritage based on a multiple, holistic and comprehensive understanding of its elements, nature and characteristics.
Our understanding of heritage must hinge on a conception of the latter as wide as possible. Even though the need for a holistic approach to heritage appears to have been already widely discussed and agreed upon, Ponce (2012) claims that such a comprehensive view "is hardly ever applied; instead purely formalistic proposals are often drawn up (...) that pay no attention to social aspects". It is precisely these aspects that constitute a key strategy for heritage to be useful to citizens. This approach is indeed critical in ensuring the future sustainability

of heritage, insofar as it helps build a social and culturally committed citizenship by promoting respect towards cultural diversity (Martín and Cuenca 2011).

2. A clear description of the rationale, principles and standards underpinning programs and their design.
The project must rest on consistent epistemological foundations that justify the specific educational action in a given context and in the framework provided by the previous literature. It is likewise important to underline the need for the information units making up the program's didactic structure to be "technically designed and systematically collected and organized" (Pérez 2000, 270).
3. Organic educational design.
By organic design we mean a stable structure which nevertheless puts the focus on vital capabilities: a solidly-based educational practice that can cater for the diverse interests of individuals. The didactic design must include dynamic, open, flexible and constantly changing units which, in combination with the educator's strategies, transform every single practice into a new enjoyable learning experience. The visitor's initial analysis is key to this transformation. Massey (2004) highlights the peculiarity of individuals and the need to pin down their interests and experiences in order to generate a space for discussion where heritage issues can be identified and problematized.
4. Coordinated development of multifactorial, multidimensional and multidirectional strategies.
A multifaceted approach to all spheres of learning involves a comprehensive



- development – bodily, emotional, cognitive, creative, sensory, psychological, ethical, spiritual, etc. (Juanola and Calbó 2007) – which prepares individuals to open up their capabilities in whatever the medium and engage in experiences without restricting or putting limits on opportunities for learning, but rather making use of the full potential of human beings. Working on contents in an interdisciplinary way fosters the active and multidirectional participations of students and of the community at large in the way already described by Freire (1971) nearly five decades ago.
5. The presence of affective values, bonds and memory as a social and heritage-based connecting thread for ownership, belonging and identity. Didactic layouts should embed the awareness-raising chain designed by Fontal (2003) in order to achieve the sensitization of society, as well as Teixeira's extension of the latter concept so as to include the awareness of social problems. In this way, heritage becomes a resource whereby citizen education can lead to the resolution of problems concerning identity and social disruption (2006).
 6. Multidisciplinary teams involved in a model for continuous training. Educational teams must be offered a training process that promotes knowledge recycling and prevents a disconnection from the changing reality while at the same time meeting the challenges of contemporary education (Klarin 2016). Additionally, interdisciplinary approaches are encouraged that promote the intersections between different disciplines.
 7. Continuous projection in time and particular approaches that encompass the global and the local. Educational programs must be committed to extended timelines. Apaydin (2016) and Vienni (2014) point at the need to develop continuous and sustainable programs that allow for greater depth in actual practice. The key is the search for educational resonance and education-derived synergies.
 8. Systematic evaluation of technical-humanistic actions. The greatest limitations deal with the evaluation of implemented programs (Diamond et al. 2016). Many studies conclude that such an evaluation is significantly absent from projects, which causes lack of awareness of how implementation works and prevents necessary changes and overall improvements (Marín et al. 2017). This is why it becomes necessary to set up a system for the evaluation of the programs' design and implementation that enables the educational team to readjust their original conception and enhance their didactic performance.
 9. Knowledge transfer. Educational actions and practices must be made visible through participation in scientific gatherings and publications, as well as by setting up institutional networks that disseminate the knowledge of good practices among the museum community.
- Finally, it is worth pointing out that every museumized site exists in relation to its environment and community and belongs to them. For this reason, such sites “are not comparable in absolute terms, but should rather be valued on



the basis of the function they perform, or may perform, in a specific context” (Arias 1999, 42).

However, they all share the mission of encouraging the knowledge of culture and the understanding of history and promoting the awareness of society and its education for heritage values that support the preservation of and respect for our legacy: the social and cultural foundations on which that society is presently built. It is in this pedagogical process based on awareness and engagement with regard to and in defence of cultural heritage where citizens become the symbolic co-owners of their cultural assets. **END**

ACKNOWLEDGMENTS

This research has been supported by Spain’s Ministry of Economy and Competitiveness, which provided the funding for projects EDU2015-65716-C2-1-R and EDU 2016-78163-R (MINECO-ERDF). We would like to express our gratitude to Dr. Manuel Martín Bueno and the management team at the Museum of Calatayud for their excellent disposition in facilitating and collaborating with our fieldwork while conducting this study.

NOTES

1. For this and subsequent quotes from Spanish language sources, we provide our own translation.
2. Directed by UVa’s Dr. Fontal, the SHEO began to operate through three competitive research projects (Ref. EDU2009-09679 and Ref. EDU2012-37212) participated by 24 researchers from 9 universities – 7 Spanish, one French and another one from Brazil. Currently the observatory continues its work through two additional R&D projects that are being implemented in coordination with each other: “Evaluación de aprendizajes en programas de educación patrimonial centrados en los procesos de sensibilización, valorización y socialización del patrimonio cultural” (Ref. EDU2015-65716-C2-1-R) and “Evaluación de programas y evaluación de

aprendizajes en los ámbitos no formal e informal de la educación patrimonial” (Ref. EDU2015-65716-C2-2-R).

3. Projects HAR2013-48456-C3-3-P “Evaluación cualitativa de la acción cultural de yacimientos romanos con web 2.0 (CIVITAS)” and EDU2016-78163-R Educomunicación web 2.0 del patrimonio”, directed by Dr. Rivero from the University of Zaragoza (UZ) – a member of the ARGOS group (IUCA) – are respectively funded by Spain’s Ministry of Economy and Competitiveness (MINECO) and y MINECO/ERDF.
4. Ref. MICINN-12-EDU2011-27835: “Proyecto de Evaluación Cualitativa de Programas Educativos en Museos Españoles” – a scheme for the qualitative evaluation of educational programs in Spanish museums funded by the national Ministry of Economy and Competitiveness.

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