



A Drawing Methodology Based on Graphic Experiences in the Alhambra

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Abstract. Throughout the history of education in architecture the drawing of architectural models of patrimonial value has been, and continues to be, a valuable method for initiating the training process in the architectural trade; a process that must not be degraded or devalued by new technologies and trends in graphic expression. This methodology, based on the representation of patrimonial architecture, is proving to be a valuable exercise in reflection for the students, who are required to synthesize all the information and perceptions offered in order to select the graphic method most suited to the expression of their intentions through representation. Neither should we forget the motivation that this supposes for the student, who has the opportunity to work in an environment that has inspired so many artists. The process is one in which the student experiments with a number of different graphic techniques and technologies in a variety of locations and on a range of scales. This work describes the didactic experience in the environment of the Alhambra Palace, an experience that allowed for analysis and re-interpretation of the architectural heritage of the palace by offering a wide range of perspectives on the principal heritage site in the city of Granada.

Keywords: Alhambra · Academy · Architecture · Drawing · Heritage

1 Introduction

Over the course of history, rarely have changes taken place at such a dizzying pace in all walks of life as they are taking place today, and rarely have these changes conditioned to such a degree the manner in which we experience our “presence” in the world. Our physical reality coexists alongside virtual environments that arise as extensions of everyday existence, offering new modes of expression and communication that both synthesise and present messages in a rapid, immediate and, in many cases, fleeting manner that is not always accompanied by reflection.

Neither graphic expression nor the teaching of the same have escaped the influence of this rate of change and the constant feeling of “outdatedness” that pervades life today, a fact that leads us to believe that other modes and means must be employed for the observation, analysis, reflection, criticism and understanding of architectural reality, be it concrete or projected—new methods that are more in line with current advances.

In this manner, platforms and computer applications linked to the BIM (Building Information Modelling) methodology, in the field of architecture, and social networks in general (Facebook, Twitter, Instagram, etc.), have revolutionised the manner in which relationships such as society, professional collectives and as individuals in a globalised world, arise.

While it is true that these new technologies cannot be overlooked, and must inevitably be incorporated into training and the field in general, it is important to bear in mind that this incorporation must serve to complement traditional methods that, on the basis of experience, have proven to be both useful and productive to the profession—an incorporation designed to enrich, rather than replace.

The cumulative experience of many years teaching drawing-related subjects as part of architecture courses has led to the use of, as both an instrumental basis and a basis for thought, direct experimentation with classical techniques using noted architectural models as a means by which the student, during the initial years of training, connects with the essence of both what is to become their profession and with art in general.

For the architect, drawing is both the most suitable way to contemplate architecture and the instrument of architectural knowledge. As Arnau Amo (1991, p. 7) says, by drawing architecture, “one learns what architecture is and what it should be, what it can be and may even become”.

With this in mind, drawing architecture can be considered as a step towards creating architecture.

By means of the graphic experimentation with the Alhambra complex described in this work, the tradition of “graphic transcription” in a variety of techniques as a means of deepening our knowledge of architecture is continued. In parallel, we attain a dual objective with the students. On the one hand they are familiarised with the bi-directional tradition that exists between the architect and the graphic arts (charcoal, sanguine and gouache techniques, etc.), and, on the other, they learn to appreciate all aspects of architecture via the graphic medium. The Alhambra is the ideal place to implement this methodology, and the opportunity to observe, analyse and represent it, in short, to perceive it, will lead to increased appreciation, respect and love for the site.

2 The Importance of Drawing in Architectural Training

Throughout the history of education in architecture the drawing of architectural models of patrimonial value has been, and continues to be, an effective method for initiating the training process in the architectural trade in all its dimensions, and this type of training must not be degraded or devalued, as we stated earlier, by new technologies and trends in graphic expression.

The use of a specific methodology as a means of teaching students to perceive and analyse architecture in order to subsequently reinterpret and describe it in accordance with the desired communicational interests is a key factor in consolidating the graphic and project-related skills of the students as it initiates them in reflection by means of perception of the project-related component of the architectural work on which they are engaged.

The aim of these exercises is to acquire the skills and resources required to “describe and explain” architecture, not merely to represent it (which would constitute the initial teaching phase in drawing courses).

With this in mind, the aim of this paper is to present the educational experience that was carried out in the Alhambra and its environment; an experience based on a methodology that has been used since the very origins of the teaching of architecture—mimesis—but in this case for the purposes of communicating as well as for the additional documentary value.

The aim is to revitalise the representation of architectural heritage as both a very useful tool in the creative and learning processes of the architect and as a timeless methodology.

Drawing has been, and continues to be, the natural language of the architect, and we must assimilate it as a natural mechanism placed at the service of observation, analysis, criticism, interpretation, etc. Drawing constitutes the primary means of expression that the architect has used throughout history to construct and transmit his or her ideas.

3 Tradition and Heritage as Learning Tools

Training in architecture has always been accompanied by the copying and gathering of data from existing architectural models of recognised heritage value, examples of which can be found at different times and in different places throughout the history of architecture, and particularly in Spain.

For the various European arts academies, Italy and Greece were, and still are, the two obligatory destinations for classical learning (Figs. 1 and 2). The tradition of travelling in order to familiarise oneself with and document heritage sites by means of surveying and gathering data was either self-financed or depended on patronage, above all in countries in which economic or political power made this possible. In the case of Spain, the encouragement of these cultural dissemination practises were sponsored by the state through the “Rome grants” created by the Real Academia de Bellas Artes de San Fernando (and of which we shall speak further about later) in 1745 in order that students could finish their studies in that city. Of the six grants awarded, two were earmarked for architecture. Miguel Fernández and José de Hermosilla were the first two architects to benefit from these grants, and it was José de Hermosilla who travelled to Granada as director of a team of draughtsmen in order to produce a planimetric survey of the palatine city of the Alhambra, thereby creating the first reliable plans that exist of the city. This, then, may be considered the first example of how the monumental complex of the Alhambra served as a stage for the graphic experience.

La Real Academia de Bellas Artes de San Fernando

As we have stated previously, Spain was not unaware of the need to create an institution to promote and oversee artistic creation, knowledge and heritage-related documentation, and that is why, in the 18th century, in an effort to establish a fine-arts academy for design, painting, sculpture and architecture, the Real Academia de Bellas

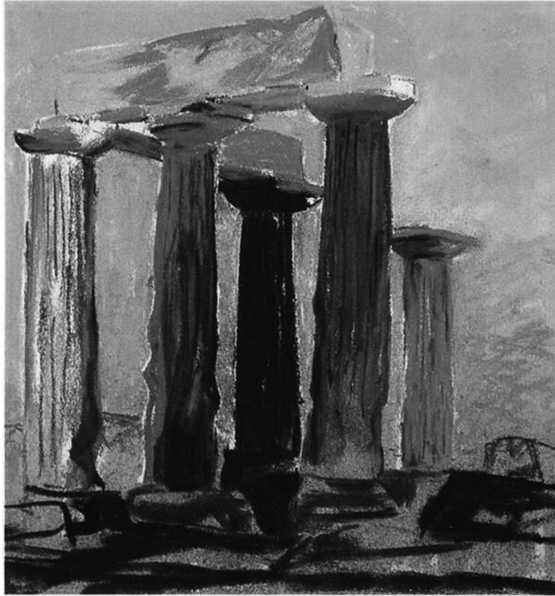


Fig. 1. Kahn, L. (1951) *Temple of Apollo at Delphi* [sketch]

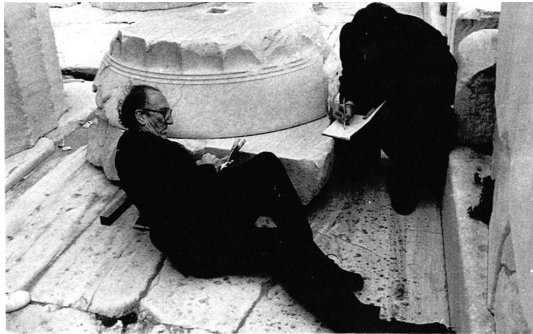


Fig. 2. Image of an unknown author (1984) *Sáenz de Oiza en el Partenón, Atenas* [photograph]. Appears in the magazine *El Croquis* no. 32–33, p. 19

Artes de San Fernando (Royal Academy of Fine Arts of San Fernando was founded, as had previously happened in Italy and France.

The architecture section of the academy employed academic architects who promoted learning in this art form by means of, among other methods, planimetric surveying and graphic representation of a variety of Spanish architectural heritage techniques using mimesis. The result was the creation of the visual catalogue of “Spanish Architectural Monuments” (1853–1881), which had its beginnings in the surveys produced by students of the *Escuela Especial de Arquitectura* (Special School of Architecture) as practical training exercises. These works were the product of

practical field-trips in which, following a programme designed by a commission formed by the Ministry of Planning and Development, architecture students sketched the principal monuments in each of Spain's provinces (1849 and 1850) (Figs. 3 and 4).

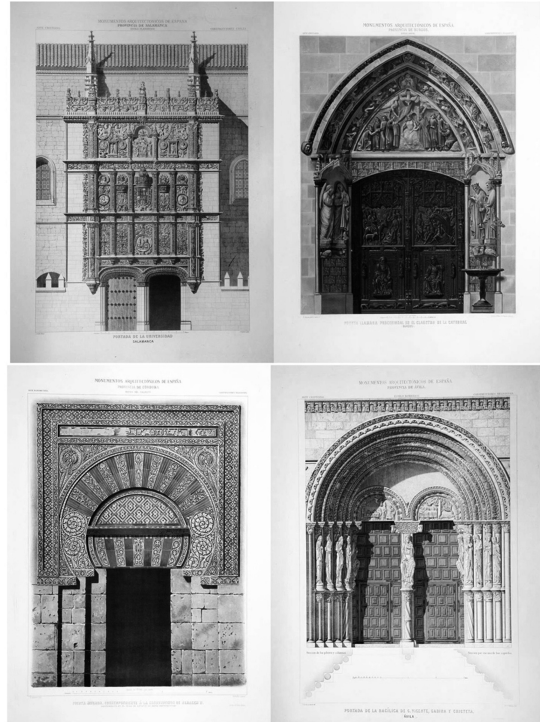


Fig. 3. Spanish chalcography from the Real Academia de Bellas Artes de San Fernando (1852–1881). *Façade of the Universidad de Salamanca; Processional gate in the cloisters of Burgos Cathedral; Al-Hakam II Gate in the Cordoba Mosque; Portal of the Baillica of S. Vicente, Sabina and Cristeta in Ávila* [sketches]

Jose de Hermosilla and his team catalogued the buildings and details of the complex from a graphic perspective and with great precision in an effort to provide evidence of both its existence and its grandeur. In addition to achieving this objective it could be said that the project constituted the first academically-oriented laboratory for graphic analysis and research on the Alhambra complex.

3.1 Contemporary Examples in Spanish Architecture Colleges. The Granada School of Architecture

This method for the learning and practise of graphic expression through the use of heritage sites began in the mid-19th century and continued with the sponsoring of new schools of Spanish architecture, examples of which can be found in the schools of



Fig. 4. De la Gándara, J. (1857) *Puerta del Vino, Alhambra monument complex* [sketch]. Appears in: *El legado de al-Ándalus. Las antigüedades árabes en los dibujos de la Academia* [Exhibition catalogue], p. 299

Madrid (surveying of the Royal Palace, etc.), Valencia (the church of San Vicente Ferrer, the Chapel of the Kings, etc.) and Barcelona (the Gaudí buildings, churches such as Nuestra Señora del Mar, etc.), among others (Fig. 5). Interesting examples of these academic graphic experiences have also been found in the city that concerns us here (surveys of the San Jerónimo Convent, the Royal Hospital, the Gran Vía, etc.).

Numerous collections of academic works by students of architecture schools reflect the use of this practise as a means of learning about and documenting architectural heritage during the academic phase. As Iglesias (1991) so rightly states, these constitute contributions to drawings of the city and add to the body of work already begun in previous eras, as we stated earlier.

Following the tradition of this method, as the other Spanish schools did, the Granada school did not miss the opportunity to infuse its architecture students with the practise of drawing their heritage sites, in this case the Alhambra complex.

This constitutes the purpose for which this learning laboratory was established and is also why it continued to operate for a period of some ten years and remains open today as a site for further graphic experiences.

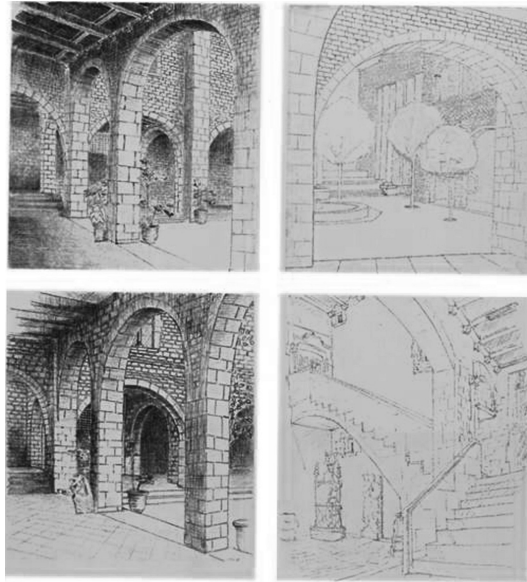


Fig. 5. Architecture students of the ETSAB (1983–1984) *Sketches of the courtyard of the inquisition tribunal. 16th century. Museo Marés, Barcelona* [sketches]. Appears in: Barcelona Escuela de Arquitectura Dibujos, p. 57

In order to carry out the Project, locations that would allow the students to work on different scales and with different techniques were selected within the complex. The students' projects were carried out during the second semester of the course in order that they would have already accumulated the graphic and theoretical background required, bearing in mind the magnitude and complexity of the overall project.

Simultaneously, as a means of offering additional motivation, the students were given a historical-artistic introduction to the site and provided with a series of prior graphic references. For the purposes of this, Gámiz Gordo (2012) explains how, in the 1830s, important European artists travelled to the Alhambra in order to interpret its architecture, the most notable results being the work of John Frederick Lewis.

4 Mimesis and Synthesis as a Means of Acquiring Knowledge of Heritage

Mimesis has always been innate to man as a strategy for learning and artistic creation. According to Aristotelian doctrine, mimesis, the imitation of nature, forms the basis for human learning. Loosely following this train of thought, it could be said that the basis of the architect's training consists of the mimesis of architecture, their experience with architecture itself and their ability to transfer their perception of architecture to the graphic medium in an effort to achieve the desired documentary and communicative

goal. Mimesis constitutes both an initial learning method and the basis for subsequent evolution. A methodology often used in art forms in general is that of the deduction of the rules employed by other masters in order to continue to apply these to the creative process.

5 The Graphic Experience in the Alhambra

In order to make the most of the good fortune of having a site like the Alhambra in Granada, the decision was taken to apply the graphic methodology referred to earlier in situ. Using “*drawings*” of the Nasrid palatine city and its surroundings, graphic experiences that allowed for the analysis and reinterpretation of the architectural work itself were made possible. In addition, the students acquired skills with the architects’ principal communication tool, drawing.

The aim of this experience was to consolidate a methodology based on representation of this type of architecture, and the project proved to be an excellent exercise in reflection for the students, who were required to synthesis all the information that made their subject’s appearance possible and select the graphic medium most suited to expressing their intentions through representation. We must not overlook the motivation that working in surroundings that have inspired so many artists supposes for the students; artists whose works have constituted valuable examples for the students. The project is one in which students experiment with lines, planes, textures, colours, shadows, light, composition, etc., in a variety of locations, on a range of scales and employing a number of different techniques.

It is not a new idea to suggest that drawing teaches students to think, and it can be understood as a personal process of knowledge acquisition in which the artist is obliged to consider a number of strategies and objectives in order to be able to precisely and efficiently express what he or she wishes to describe.

On presentation of the work carried out during successive graphics-related courses in the Escuela de Arquitectura de Granada, it becomes clear that the tradition of using drawing as a tool and methodology for architectural training has served and will continue to serve as a tool for analysis and reinterpretation of the architectural works themselves. It could be said that what was created was a “laboratory of perspectives” on the most significant heritage site in the city of Granada.

5.1 Work Locations in the Alhambra Complex

The various locations in which the students carried out their projects were selected according to a number of variables, sometimes by the teachers and sometimes on proposal by the Board of Trustees of the Alhambra and the Generalife.

Due to the number of tourists visiting the complex many areas were not taken into consideration, given the limitations on access imposed by the administrators. As a result other less frequented areas were selected, which also offered the students a more agreeable environment in which to enjoy the practise of drawing.

Another consideration taken into account for the selection of locations was that the students could spend the time they needed on their projects, without the imposition of opening and closing times.

It was also important that the piece of architecture in question offer a series of characteristics that were suitable for the work to be carried out.

And finally, selection was also influenced by the atmospheric conditions that could be expected at the time of year the work was to take place, given that working in situ was one of the fundamental premises for obtaining the desired teaching objectives.

Given all the above parameters, the locations selected were: the area surrounding the complex (site plans, existing planimetries, etc.), the Puerta de las Granadas, the Pilar de Carlos V, the Puerta de la Justicia, the Arco de las Orejas, the Puerta del Vino, the Palacio de Carlos V, the Patio de la Reja, the Palacio del Partal and the Oratorio...

5.2 Representation Scales

The graphic representation exercises were carried out on different scales in order that the student may, by means of synthesis or development of graphic detail, better understand the relationship that exists between the detail and the scale on which he or she is working, thereby creating a visual and graphic richness that is consistent with the architectural discipline in question.

The following scales of approximation were used:

URBAN, ARCHITECTONIC AND DETAIL SCALES

- URBAN SCALE (general vision of the Alhambra complex. Figure 6).

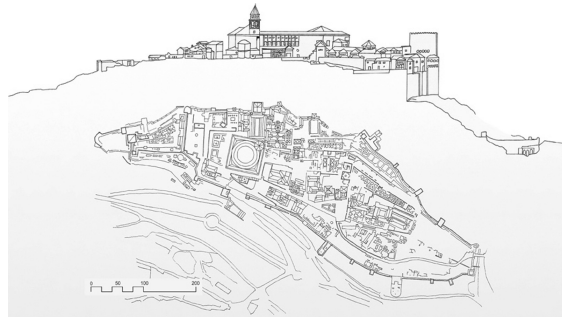


Fig. 6. Siles Montes, M. and Sánchez Díaz, D. (1998–1999) *Distant view of the Alhambra* [floor plan and section in black ink on paper Caballo 109, 41.9 × 21.0 cm]. Appears in García Bueno (2007, p. 17)

- ARCHITECTONIC SCALE (elevation, floor plans, volumetries, of the various pieces, Figs. 7, 9 and 10).
- DETAIL SCALE (elements studies included capitals, doors, arches... with appreciation for textures, patinas, ... Fig. 8).

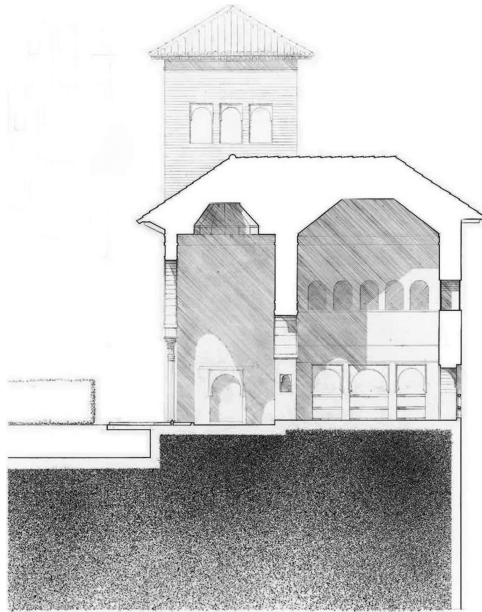


Fig. 7. Pérez-Lanzac Raya, J. (1998–1999) *Torre de las Damas* [section in black ink on paper Caballo 109, 41.9 × 59.4 cm]. Appears in García Bueno (2007, p. 139)

5.3 Representation Techniques

Once the learning process was complete and the student had attained mastery of scale and representation of the same, the next step was to experiment with a variety of plastic techniques with which to transmit perceptions, textures, colours and light and shade, thereby motivating the student to delve further into the skills they had acquired (Figs. 6, 7, 8, 9 and 10). Báez (2010), using this training as a basis, the graphic methodological process is completed by applying different techniques to the same perspective on the architectural piece, on both a detailed and an architectonic scale, in order to be able to appreciate the different results, thereby improving the students' decision-making abilities so that in the future they will be able to select the technique that will allow them to be most efficient in terms of expressing themselves both graphically and plastically.

The techniques studied were the following:

- Planimetric survey in lead pencil and black ink.
- Planimetric survey in black ink and gouache.
- Planimetric survey in black ink and sepia.
- Planimetric survey in lead and colour pencil.
- Planimetric survey in lead pencil and gouache.
- Lead pencil sketch.
- Colour pencil sketch.
- Black ink pen sketch.



Fig. 8. Garrido Carretero, F. (2000–2001) *Detail of the Arco de las Orejas, Alhambra complex* [sketch in lead pencil and watercolour paper, 29.6 × 41.6 cm]. Appears in García Bueno (2012, p. 37)

- Sepia ink pen sketch.
- Gouache sketch.
- Watercolour sketch.
- Charcoal sketch.
- Sanguine and white ink sketch.
- Mixed techniques.

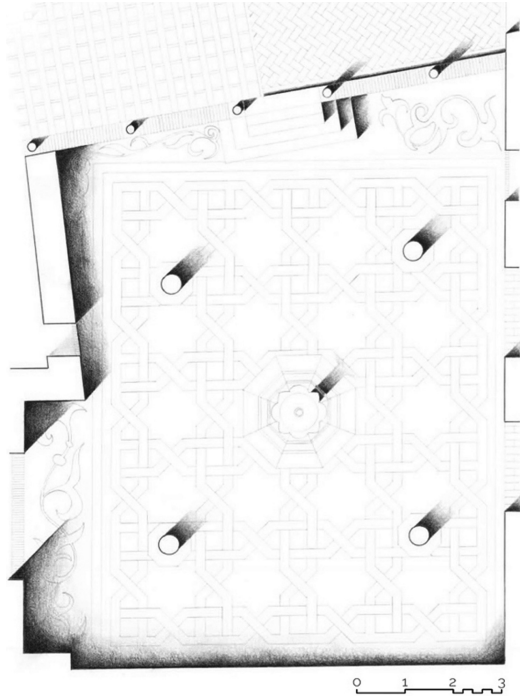


Fig. 9. Melguizo Rodríguez, J. A. (1999–2000) *The Reja courtyard beside the Torre de Comares, Alhambra complex* [courtyard floor plan, upper gallery and exploded view of flooring in lead pencil on paper Caballo 109, 41.9 × 59.4 cm]. Appears in García Bueno (2007, p. 107)

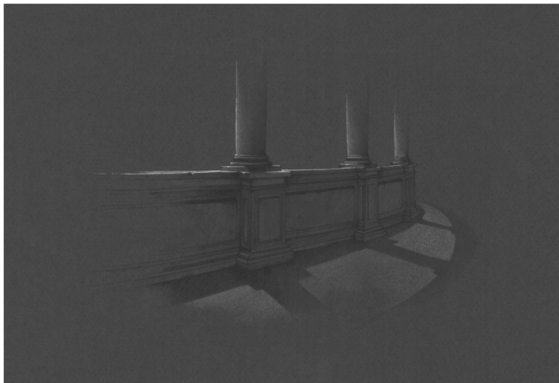


Fig. 10. Garrido Rodríguez, M^a. D. (2004–2005) *Detail of the upper gallery of the Palacio de Carlos V, Alhambra complex* [lead pencil, White pencil and white ink on coloured Canson paper, 42.1 × 24.2 cm]. Appears in García Bueno (2012, p. 138)

6 Conclusions

A decade of working with architecture students in the Alhambra complex and its surroundings has proven the effectiveness of approaching architectural heritage from a perspective of interpretation and graphic representation in order to create an emotional bond between architecture students and not just the “monument” that forms part of the collective imagination of the city but also its physical nature, its structural essence, how it is experienced by visitors, the memory of past history and its aesthetic presence. As such, we have confirmed that the methodology applied is useful in terms of teaching and learning drawing and architecture and as both a humanistic and technical basis for the foundational training of students.

For this reason, and without forgoing other, more modern substitution techniques and knowledge, we have opted for continuing with reading, detailed analysis and reflection on architecture in the studio and the transfer to the graphic medium via direct contact and perception of architectonic and urban elements—graphic experimentation as a means of developing figurative thinking, a most important element in architectonic creation.

As Ramos Galino (1991, p. 7) said, “... someday [the students] will speak a language that does not write words nor hear them”, and they will use drawing as a world in which words are not written nor heard.

In addition to the pedagogical value of these activities, the collective efforts of the students also produced an interesting documentary compilation of the architectonic and urban heritage of the city, the Alhambra and its surroundings, in this instance with the aim of being of use both inside the academic environment and outside it, thereby providing valuable testimony for both the city and the monument.

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