

# **FOCUS GROUP AS A QUALITATIVE EVALUATION TOOL OF A UNIVERSITY TEACHING PROJECT BASED ON INFOGRAPHICS, IN THE HERITAGE CONSERVATION AND RESTORATION AREA**

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## **Abstract**

During the project "Infographics Applied to University Teaching", supported by the Institute of Educational Sciences -ICE- of the Universitat Politècnica de València -UPV-, we implemented the use of individual and shared group infographics. In this work, we have collected the students' reflections on the use of infographics as a tool in university teaching through the means of a focus group at the end of the teaching experience.

The focus group has been assembled with a parity selection of the students for equity gender and with a specific selection of questions for data collection. In this study, we will analyse the information obtained in-depth, in order to extract the advantages, disadvantages and possible improvements for the use of infographics in the university classroom.

The analysis has been based on the incorporation of individual and shared group infographics. The students created individual infographics based on the complex exercises that they have elaborated in the classroom, adding to them their own conclusions. For the shared group infographics, they created joint research, in teams of four to five students. After this exercise, they presented and debated their work in the classroom.

The graphic representation that is created with infographics helps increase in-depth learning, as it allows students to establish a hierarchy of the contents, organize them graphically and present the final figure to their classmates. The results of this experience gathered from the data in the focus groups, show that the students valued it positively, the acquisition of content, self-regulation, and collaborative work. Moreover, analysing their experience with this teaching innovation encourages them to reflect on their metacognitive learning process and helps us to understand the scope of our actions.

Keywords: Focus group, evaluation, infographics, ICT, university.

## **1 INTRODUCTION**

The teaching experience is part of the subject "Introduction to the conservation and Restoration of Gilding and Polychrome" of the Bachelor's Degree in Conservation and Restoration of Cultural Assets. It is part of the project "Infographics Applied to University Teaching", supported by the Institute of Educational Sciences -ICE- of the Universitat Politècnica de València -UPV-. The project is made up of professors from the Business Organization Department, Drawing Department, Painting Department and Department of Conservation and Restoration of Cultural Heritage.

Teaching innovation began in the 2020-21 academic year and has continued in 2021-22. It has consisted of incorporating infographics as a teaching strategy in two ways: teachers have added infographics to their teaching practice and students have incorporated them progressively. The student infographics have been individual (Figure 1) and shared (Figure 2).

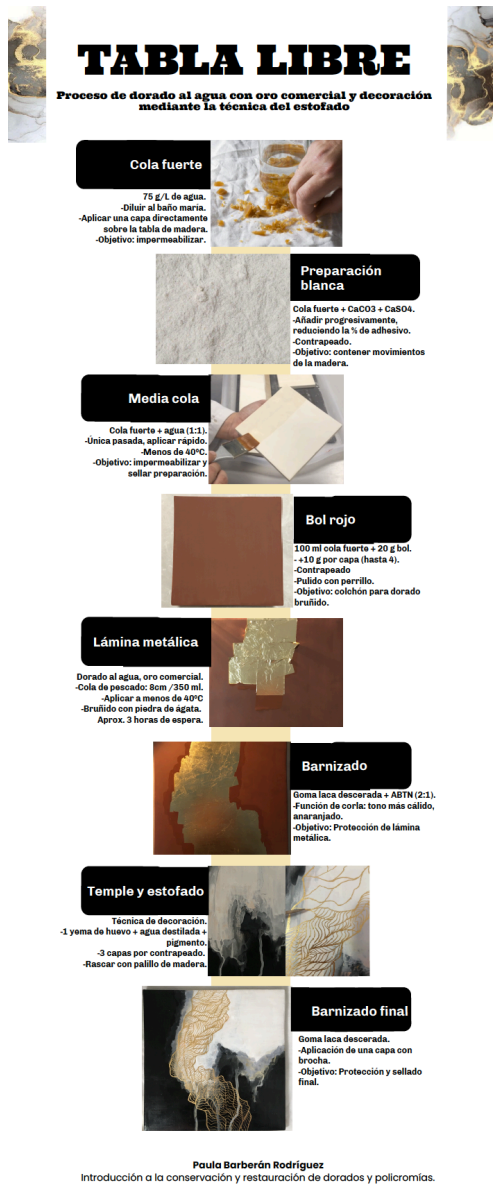


Figure 1. Individual infographics. Source: Infographics Project.



Figure 2. Group infographics. Source: Infographics Project.

In the last year, teaching innovation has been evaluated, and several data collection tools have been selected to analyze the evolution and possible improvements of the project. The results have been collected by the teachers who participate in the project, and by colleagues who have not participated in the project but have followed its evolution and the conclusions of the students. One of the tools used has been the focus group, to collect and analyze the teaching experience of the students.

For data collection, the use of anonymous surveys has been combined, through the SurveyMonkey® platform, with quantitative results and the focus group to obtain qualitative data. The focus group is a method of participant observation: “Participant observation involves attempting to understand and interpret the meanings and experiences of a group” [1].

The focus group, as a tool to analyze the scope of the project, can help teachers to focus the methodology in future courses, with the aim of meeting the needs of the student, since it can help decision-making: “The (...) benefits of focus group interviews are that many ideas and issues can be covered in the discussion, and it is possible to arrive at some solutions to a problem with collaborative efforts. Given the emphasis on exchanging opinions, this technique can be used to support decision-making” [2].

Another selection criterion is that “*focus group interviews can help researchers get different data than they might from an individual interview. (...) all or most of the participants are being interviewed at one time, a significant amount of data often emerges through the interaction of the participants in a focus group interview*” [3].

## 2 METHODOLOGY

A selection of students from the subject "Introduction to the Conservation and Restoration of Gilding and Polychrome" of the Degree in Conservation and Restoration of Cultural Assets participated in the focus group.

The methodology followed has been; the initial setup, the development of the focus group and the processing of results. During the approach, an attempt has been made to establish a representative group of students, to set up a "*research group - action - participation (...) constituted, prior to the activity, with which the researcher acts as moderator to exhaustively resolve their question of research*" [4].

After this, the information obtained was selected, with a selection of questions focused on the student's assessment of the individual and shared use of the infographics, for the subsequent transcription and processing of the results.

The individual infographics are made from the practices and topics already covered in class. The shared group infographic responds to an investigation proposed by the teacher, which they have to do collaboratively, and then capture it in a collective infographic and deliver a presentation in the classroom, in which the entire group has to speak (Figure 3).



Figure 3. Exhibition of group infographics. Source: Infographics Project.

### 2.1 Focus group approach

In the approach, issues such as the selection of informants, the space where the activity will take place, the topics that will be addressed and the duration must be taken into account.

#### 2.1.1 Group composition and size

First, for the selection of participants, the number of people was established, which was 6 subjects. The focus group is made up of a limited number of people: between 4 and 10 participants [5]. The selection was equal, with 3 female members and 3 males.

The composition of the group is very important. *“One of the key factors in focus group interviews is that participants can converse with other people in a comfortable way. Under this condition, the composition of a focus group is very important”* [6]. In this context, factors such as the results in the subject and the participant’s ability to communicate, after working during a course with the group, were taken into account.

All participants signed a consent form for the session to be recorded informed that the information collected would be used for teaching research and the analysis of the infographic tool.

### 2.1.2 Choice and preparation of space

“The choice of the place is also important: it must be a space away from the noise so that the members do not lose concentration and understand the questions that the moderator asks. The place must be known by the members and be equipped with the appropriate furniture” [7]. It was developed in a classroom in the Faculty of Fine Arts building (Figure 4), in which students usually have classes throughout the course. It is a space known to them, it is familiar. Two tables were placed so that they could have visual contact between all the participants in an equitable manner.



Figure 4. Focus group space. Source: Infographics Project.

### 2.1.3 Questions

The selection of contents to be addressed requires prior reflection and establishing of the purpose of the investigation. In the case of this study, the purpose was to analyze the scope of the teaching experience through the use of infographics.

The analysis focused on understanding the perception of the students when incorporating infographics in the teaching practice and in their learning and evaluation process. Another objective was to collect the importance of visual language, with an attention to diversity inclusion, investigating how infographics could be one of the ways of accessing information for students.

It was also focused on how infographics could help with in-depth understanding, by ensuring information is prioritized and synthesized to present it visually, for *“if students select, summarize or express in their own words what they receive, a better understanding is produced. initial elaboration of meaning”* [8].

It also looked at whether making infographics required effort, concentration and reasoning, providing an analytical and synthetic vision of the contents. It also looked at whether self-regulation worked, in addition to trying to understand the methodology carried out for shared group infographic work.

## 2.2 Development of the focus group

In the first place, it was stipulated that the duration of the activity would be one hour. For this, it was important to know in advance, what time to allocate for each question. The role of the moderator is

decisive: “the moderator must very effectively manage the time allocated to each question, each sub-topic of the focus group since there is a danger of reaching the end of time without having been able to go through all the points of inquiry”. For this reason, it is very important that before starting the group moderation, the times that each part of the inquiry requires are established. As the questions are asked, the moderator will control how much time is left for that part of the focus group, having to move on to the next one once the time has elapsed” [8].



*Figure 5. Development of the focus group. Source: Infographics Project.*

The activity took place in the stipulated time and the interaction between the students was cordial. During the data collection process, the script gave way to topics that had not been raised at the beginning, but that enriched the research and were expanded. (Figure 5).

### **2.3 Processing of the information**

At the end of the focus group, the literal transcription of all the information and the processing of the information by topic was carried out. Information processing does not follow the common methodology, it has a specific treatment due to its collective nature: “it is important to note that the analysis of focus group data is different from other qualitative data because of their interactive nature, and this needs to be taken into consideration during analysis. The importance of the context of other speakers is essential to the understanding of individual contributions (...) The analysis of focus group data must therefore take account of the group dynamics that have generated remarks” [10].

## **3 RESULTS**

The processing of the information has given rise to the following results [11]:

- The first point was to know the perception of the students when infographics were incorporated into the teaching practice. It was a new tool, which they had not experienced or used outside the university environment. The students agree on a positive perception regarding the use of infographics and agree that it favors their learning and evaluation process.
- The adaptation of the tool to its visual codes. It adapts to today's society, more visual than textual. One of the issues to take into account is that students tend to have a lower reading habits than in previous generations. They define it as “stimulus generation”.
- Another objective was to collect the importance of visual language for attention to diversity inclusion. The perception is dynamic, through a universal language that is easy to understand. Images, colours, and the layout of information can help you understand and remember information.

- The students agreed that infographics are also a "study tool", since they help establish concepts that may have not been clear when first taught, especially when they have to do them independently, but also when teachers use them as a teaching tool.
- Regarding in-depth understanding, it helps to present organized concepts, allowing you to deepen and prioritize. Sometimes a parallel investigation is even necessary to compare and expand the content. It goes from "the simple to the broadest", forcing you to contrast and look for ideas. "At the time of making the infographic, you learn because you have all the information and just by underlining what is important or trying to find what is important, you are already learning" [11]. The students agree that it provides an analytical and synthetic view of the content, working on self-regulation. It condenses a lot of information, but you have to have the terminology clear. "It has helped me to clarify the concepts because the theory was a bit dense and when I did the topic I saw it more clearly" [11].
- We can say that making infographics requires more effort, and concentration and you need to apply reason so that it is logical and concrete. The perception of work is less, because they define it as "enjoyable", but it requires a lot of involvement. The students value that if the infographic is not made well, it is noticeable in the final result.
- They recognize that it is direct access to important information, and they would value it positively if there were infographics on the walls of the classroom with the contents to learn, to be able to go to the specific infographics in any case of doubt during the learning practice.
- Regarding the methodology carried out for the shared group infographic work. The purpose of the study was to know how the work is distributed and how the tasks are distributed. The inquiry also intended to collect opinions regarding group presentations. The students affirm that more attention is paid when the students present an infographic over a powerpoint because it arouses interest and tends to draw comparisons with what other groups have done, motivating the students to improve in each delivery. The presentation of the shared group infographics was felt as part of the students as an incentive, a stimulus, to improve their exercises, and there was also peer learning.

A sentence from a student helps to understand his conclusion on the use of the tool: "It is an academic challenge, because we did not know it and we did not know how to do it, to synthesize so much. At first, it shocks you, you tell yourself "I don't know if I'm going to know how to do this", but then we realize we have done much more, even without being asked, in other subjects" [11]

## 4 CONCLUSIONS

Regarding the use of the focus group as a data collection tool, it is a very versatile tool to adapt to different topics. The selection of informants, space and time are of special importance in addition to the detailed preparation of the focus group organization.

It is essential to reflect on the meaning of the investigation in order to moderate the debate that occurs since it can sometimes lead to other adjacent topics, which may be interesting to record, but which should not divert us from the final objectives of the investigation. That is why it is of great importance to mark times. For each of the topics, leave a margin in case they spread.

In our case, the results have been very enriching, because they helped us to empathize with the students as well as understand their concerns and their cognitive mechanisms.

Regarding the infographics, and the progression of content, an attempt has been made to capture interest in what has been exposed or worked on. This is because well-founded and concise conclusions have to be drawn, in order to be worked on continuously, which generates persistence and self-regulation, something which will be a permanent task during the course. Multiplicity is also worked on when it comes to presenting, taking into account the different perceptions of reality, with their corresponding languages and symbols which facilitate understanding, by having to present their own conclusions graphically and, subsequently, during the exhibition. You can also work on finding and building that depth of knowledge.

Likewise, there have been multiple results related to action and expression, given that communication, both visual and verbal, has been worked on in a diversified way. This has not only promoted individual work but has also activated the development of cooperative methodologies, through exhibition and debate, key tools.

It is important to emphasize that visual work generates an attractive perception and forces them to delve into the themes worked on, to help them understand concepts and be able to represent them with a single glance, in the most graphic way possible. Between them, they have generated a formative fabric, thanks to the visual schemes represented and exposed. With this, we consider that the results obtained will then be extended to their future work when presenting projects and reports, by sequencing and compiling the processes visually.

## ACKNOWLEDGEMENTS

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