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IMPROVING UNIVERSITY STUDENTS' RESULTS: A CLIENT-BASED EXPERIMENT THROUGH DESIGN THINKING AND VISUAL STORYTELLING IN COMMUNICATION

**(MEJORANDO LOS RESULTADOS DE LOS ESTUDIANTES UNIVERSITARIOS:
UN EXPERIMENTO CON CLIENTES REALES A TRAVÉS
DEL *DESIGN THINKING* Y DE LA COMUNICACIÓN VISUAL)**

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DOI: 10.5944/educXX1.19981

Cómo referenciar este artículo/How to reference this article:

Cortés-Selva, L. y Wandosell-Fernández de Bobadilla, G. (2018). Improving university students' results: a client-based experiment through design thinking and visual storytelling in communication. *Educación XX1. 21(2)*, 205-224, doi: 10.5944/educXX1.19981

Cortés-Selva, L. & Wandosell-Fernández de Bobadilla, G. (2018). Improving university students' results: a client-based experiment through design thinking and visual storytelling in communication. [Mejorando los resultados de los estudiantes universitarios: realización de un experimento con clientes reales a través del *design thinking* y de la comunicación visual]. *Educación XX1. 21(2)*, 205-224, doi: 10.5944/educXX1.19981

ABSTRACT

Subjects lectured during the 4th year of the Bachelor's degree in Communication, at the Catholic University of Murcia have a large practical part, which raises their permeability to innovation, especially concerning learning and evaluative methodologies. In this context and throughout the years in which different media subjects were taught, some problems related to the students' lack of involvement and the low quality of the resulting projects, alongside the limited synergy between the University and the labor market, have been detected.

This research follows the hypothesis that working with a real client with whom students interact and develop visual communication projects increases

students' participation, the quality of their projects, and bridges the gap with the labor market. For that purpose, an experiment was conducted during the practical lectures of several visual communication subjects taught during the 2013-2014, 2014-2015 and 2015-2016 academic years, at the Communication Faculty at the Catholic University of Murcia. A sample size of $n = 375$ with a margin of error of $e = 0.05$ was calculated according to the total number of students enrolled in communication studies at a national level ($N = 17, 213$) according to data published by the Spanish Ministry of Education, Culture and Sports.

Among the main conclusions, we found, after the client-based experiment through design thinking and visual storytelling, a notable improvement of the students' implication in projects, a rise in formal and content quality of those projects, and an increase in the synergy among the university and the labor market. This successful experiment has provoked its implementation in similar subjects the forthcoming academic years.

KEY WORDS

Education; visual communication; experiment; design thinking; photography.

RESUMEN

Las asignaturas impartidas durante el cuarto año del Grado en Comunicación, en la Universidad Católica de Murcia poseen un alto componente práctico, lo que aumenta su permeabilidad a la innovación, especialmente en lo concerniente a las metodologías de aprendizaje y evaluación. En este contexto, y a lo largo de los años en los que se imparten diferentes materias relacionadas con la comunicación se detecta un conjunto de problemas entre los que destaca la insuficiente implicación del alumno en los proyectos y un descenso en la calidad de los mismos, así como una escasa sinergia entre la Universidad y el mercado laboral.

Esta investigación parte de la hipótesis de que trabajar para un cliente real con el que el alumno puede interactuar y desarrollar proyectos de comunicación visual incrementa la participación y la calidad de los proyectos realizados por los alumnos y su acercamiento al mercado laboral. Para demostrarlo se realiza un experimento durante las sesiones prácticas de diversas materias vinculadas con la comunicación visual impartidas durante los cursos académicos 2013-2014, 2014-2015 y 2015-2016, en la Facultad de Comunicación de la Universidad Católica de Murcia. El tamaño muestral ($n = 375$) con un margen de error de $e = 0,05$, parte de una población de alumnos matriculados en Comunicación a nivel nacional ($N = 17.213$), según datos del Ministerio de Educación, Cultura y Deporte.

Entre las principales conclusiones se encuentra que, tras el experimento realizado con un cliente real empleando métodos del *design thinking* y de la comunicación visual se produce una mejora notable de la implicación de los alumnos en las prácticas, en la calidad formal y de contenido de sus trabajos y aumenta la sinergia entre la Universidad y el mercado laboral.

PALABRAS CLAVE

Educación; comunicación visual; experimento; *design thinking*; fotografía.

INTRODUCTION

The European Higher Education Area (EHEA) has brought with it a bridging of the gap between higher education and the labor market. University faces the challenge of bolstering active and involved learning by the student (Calderón-Patier & Escalera-Izquierdo, 2008), as the profile and professional skills of the future graduates are erected as bastions of their training, which leads to a certain innovation in its design, development and assessment (Tejada-Fernández & Ruiz-Bueno, 2016).

High-quality models promote continuous improvement, which encourage specific changes in the workings of educational centers, specifically the universities. Therefore, «organizations with the capacity for imagination and creativity, with structures that drive and value this skill in their staff», are needed (Fernández-Díaz, 2005, p. 70-71).

The focus of training that is based on *competencies* places the emphasis on a rationale that is more about productivity as opposed to academics, and is more oriented to solving problems as opposed to mere reproduction (Tejada-Fernández & Ruiz-Bueno, 2016, p. 23). The «change of the education paradigm focuses its attention on substituting a style of teaching that is more focused on theory for one focused on active learning» (Michavila, 2009, p. 4-5), that eliminates the problem of excess abstraction (Von Feilitzen, 2002, p. 23) and increases the quality of the results.

Practical training, which is highly relevant for the professional, personal and academic performance of a university student (Raposo-Rivas & Zabalza-Beraza, 2011), is one of the domains that is more permeable to innovation, especially in the areas of learning and assessment. The term *innovation* alludes to the practices that drive active and independent learning, provide the students with competencies and strategies, and motivate collaborative as well as project-based learning (Savery, 2015). Among the more innovative

developments in the education sphere is the shift towards creativity, which provides new ways to think about research, new methodologies to conduct it and a very interesting information *corpus* on the creative process (Candy & Edmonds, 2017).

In the communication field, professional practice requires not only technical reasoning, but the application of principles and processes that reflect a theoretical basis as well (Schön, 2017). Appealing to the learning proposals by Kolb (2015) and referring to the reflective practice of Schön (2017), Glen, Suciú, Christopher & Anson (2015) conceptualized *active learning* as a process in which resorting to action offers as a result new information—which at the same time— stimulates the creation of new knowledge.

This study deals with the application of active learning methodologies within the context of teaching innovation that are based on group work, collaborative learning and problem solving (Häkkinen, Järvelä, Mäkitalo-Siegl, Ahonen, Näykki & Valtonen, 2017) in the same line that authors such as Cocchiarella & Booth (2015) have conducted successfully before. As a complement of traditional methods such as the classroom lecture, *executive* methodologies are integrated through real problem solving as shown by the executing of professional projects (Tejada-Fernández & Ruiz-Bueno, 2016). This situation demands greater participation by the student, and increases specific and transversal competencies as required by the professional and social environment.

With the intention of achieving real changes in the methodological and assessment methodologies that could transform educational practices, this project supports itself on three pillars: the academic collective, students and employers (Foncubierta-Rodríguez, Perea-Vicente & González-Siles, 2016) and the gaze is focused on the main spaces of exchange: the classrooms (Margalef-García & Álvarez-Méndez, 2005).

During the fourth year of the Bachelor's degree in communication at the Catholic University of Murcia, several courses related to visual communication with a theoretical-practical approach are taught. In the practical part, the students face complex situations that require the use of knowledge and skills acquired in these courses, as well as other previous courses from the degree (Navío-Gámez, 2004). When the students face real problems for which they have to propose feasible solutions, they acquire competencies (resources) and learn to be competent (master the action) (Tejada-Fernández & Ruiz-Bueno, 2016), in the sense that Villa-Sánchez & Poblete-Ruiz (2011, p. 148) defined: being competent is «the ability to integrate a series of elements (knowledge, techniques, procedures, values) that a person puts into play in specific problematic situations, showing that he or she is able to solve it».

Originally, the initial plan of the courses contemplated the conducting of a practical exercise that proposed the student the development of visual communication projects destined to companies who —although real— had not directly presented any communication problem. Normally, important companies were chosen (*Coca-Cola*, *Pepsi*, *Mercedes* and *BMW*, among others), with the objective that they should be attractive to students. However, throughout the duration of the course, an insufficient involvement by the students on the projects was detected, with a decrease in quality and a low synergy between the university and the labor market. In order to correct these problems, an experiment was created first in the 2013-2014 academic year, and then replicated in the following 2014-2015 and 2015-2016 academic years in order to test its internal validity. The main purpose of this experiment was to test if carrying out visual communication projects with a —not necessarily well known client— but a real one, could be beneficial to solve those problems.

The real client chosen for conducting the experiment was a *SME* (small and medium-sized enterprise) from Murcia, dedicated to the artisanal creation of headdresses and complements, placed fourth among the most important businesses in the hat-shop market in the Region of Murcia. Focused on the regional market (Murcia and the surrounding cities), it is a recently-created brand that was inspired by the ancient artisan workshops —*ateliers*—, that used to offer exclusive personalized designs. Its target audience is women aged between 25 to 60 years old, with a common sensitivity towards tradition, fashion design and exclusivity. Most of those customers are linked to wedding ceremonies and similar events.

The criteria for the selection of this business was based on the fact that it is a real, accessible company, which is open to new ideas and is willing to collaborate with the students. *Fuen Viudes* is a *SME* that has the ability to give challenges and opportunities to the students, who have to present solutions for its communication problem: the lack of a brand story.

EXPERIMENTAL DESIGN

In this research study, an experimental design was conducted using a non-probabilistic sampling method with a model of two groups: a control group and an experimental group (Campbell & Stanley, 1991; Wimmer & Dominick, 1996). The sample size ($n = 375$) included the entire set of students enrolled in the fourth year of the bachelors' degree in communication at the Catholic University of Murcia, during the 2013-2014, 2014-2015 and 2015-2016 academic years. With a margin of error of $e = 0.05$, the sample was calculated according to the total population of students enrolled in the communication degree at a national level ($N = 17,213$), according to data from the Ministry of Education, Culture and Sports. The experiment was created during the

2013-2014 academic year, and then, replicated in the following 2014-2015 and 2015-2016 academic years in order to test its internal validity.

SUBJECTS SELECTION

The selection of students assigned to each group was conducted randomly. The experimental group (187 students, 62 students the first two academic years and 63 the third year) were subjected to the independent variable (the real client). The other 188 students (63 students the first two academic years and 62 students the third year) comprised the control group, which means that conserved the same dynamics of the past academic years (worked with a fictitious company). Both groups produced a total of 80 projects, 40 from the control group and another 40 from the experimental group.

VARIABLES

In order to get the main objectives, three variables were analyzed in this experiment: students' involvement, the quality of the projects and the contact with the labor market, as presented next.

a) Student involvement

In order to measure the degree of involvement of the students in the experimental and control group, a hybrid method was used, which included quantitative and qualitative techniques. The qualitative techniques included a semi-structured interview given to the student, as well as participant observation of students' behavior through exhaustive recording of their contributions in each of the sessions.

The quantitative techniques included the recording of attendance to the face-to-face sessions (class sessions) and the out-of-classroom sessions (work done outside of the classroom). The first set were quantified by monitoring attendance, which was done for each of the sessions, and the second set was measured through the audiovisual records (*making of*) that the students had to create of the work done outside of the classroom. This last audiovisual document was considered evidence of the student's participation in the sessions mentioned.

b) Quality of the projects

Another variable that was included in the experiment was related to the formal and content quality of the projects. So that its measurement was as precise as possible, we opted for the use of qualitative techniques.

In the first conceptual part, the creation of a coherent narrative or *storytelling* with the brand's values was evaluated. This narrative had to have a title that included the slogan or *claim* of the project, the presentation of a synopsis that detailed the structure of the narrative (set-up, a conflict, and a resolution), the main characters, the conflict that has to be resolved, as well as the physical space and the length of time in which the action takes place.

The second phase was characterized by the formal development of the projects. The work and coherence of the brand story of each category of the *picturetelling* were evaluated, as detailed in the section dedicated to it.

c) Synergy with the labor market

The bridging of the gap between the student and the labor market comprised another variable analyzed in the experiment. Its measurement was based on two fundamental pillars: a questionnaire directed to the student and the monitoring of projects published in the company's communication channels. The questionnaire directed to the students was created using a *Likert* scale of one to ten, with contained a set of *items* related to the labor market and that quantified the projects that the client had published in their communication channels.

THEORETICAL BASIS OF THE PROCEDURE

In each of the academic years in which the research was conducted, the experiment was developed alongside six intensive sessions that lasted three hours, plus a final four-hour session in which the projects were presented to the client. Between sessions six and seven, students had two more weeks to perfect their projects.

The method of design thinking is used in this research as the backbone of the experiment within which the techniques of storytelling and picturetelling are included in different stages.

DESIGN THINKING

Although the origins of design thinking are uncertain, the term has been used for decades, alluding to the study of professional designer's practices (Cross, 2006; Dym, Agogino, Eris, Frey & Leifer, 2006; Lawson, 2006). The approach of design thinking is found closer to the philosophy of

learning by doing (DuFour, DuFour, Eaker & Many, 2016) so that there is a special emphasis in doing and in experimenting (Brown, 2009; Ogilvie & Liedtka, 2011).

On their research, some investigators (Glen & others, 2015, p. 182) concluded that although the main attributes of design thinking have been articulated throughout the last few decades (Buchanan, 1992; Cross, 2006; Rowe, 1991), its methodology is currently being applied to areas as distant as business strategy or social innovation (Brown, 2009; Dunne & Martin, 2006; Melles & Misic, 2011; Glen, Suciú & Baughn, 2014).

Although there are different approaches to the methodology of design thinking (Beckman & Barry, 2007; Lawson, 2006; Liedtka, 2015), this research was inspired by the categories created by Brown (2009) and the proposals by the Institute of Design at Stanford (Glen & others, 2015), as shown in table 1.

From Brown's perspective (2008), the main objective of design thinking is to offer a methodology to resolve a user's problems as they arise in their day-to-day. It is comprised of different stages: inspiration (to experience a problem or opportunity through the observation of the user's needs and a clear call to action), ideation (generation of ideas and their testing through prototypes) and implementation (how to place the product in the market).

On its part, the Institute of Design at Stanford presents *design thinking* in five stages: empathize, define, ideate, prototype and test.

Table 1
Phases of the design thinking process

Phases	Brown (2009)	Stanford (2010)
Stating the problem	Inspiration	Empathize
Observation		Define
Visualization		
Ideation	Ideation	Ideate
Prototype and <i>testing</i>	Implementation	Prototype
Viability test		Test

Source: author generated

CREATING A BRAND STORY FOR THE COMPANY

Message saturation in the communication sphere has resulted in the advertising strategies that are based solely on the product to be scarcely efficient. This resulted in the emergence of storytelling, or the art of the narrative (Demaury, 2005) in the 1990s in the United States, and it has not only been applied to the world of the brands, but also to other areas such as politics or business.

At present, brands have to provide extra meaning to the lives of potential consumers, emotionally involving them with the brand, making them participants in the narrative and converting them into the protagonists. The main communication objective has gone from exclusively focusing in showing or defending the inherent characteristics of a product, to focusing on the story.

Currently, successful innovation must focus on the experience of use and consumption by the user, from whom an emotional response should be evoked. In this sense, storytelling is the fundamental pillar of the communication products that try to appeal to emotions. Its objective is to leave an impression that can guide the emotional journey of the user, just as Campbell's hero did (1949).

The importance of storytelling resides in that little stories, narratives or anecdotes start to construct or create a large story, a *mother* story that has the power to introduce ideas in a context and endow them with meaning. Narrations that are attractive are contagious, and are transmitted from person to person just like a virus or *meme*. Dawkins (1976) defines these ideas as self-propagating.

The creation of a brand story possesses some advantages, as it is governed by a set of laws that have to be followed in order to maintain its coherence. Therefore, the pillars of storytelling, already present in Aristotle's *Poetics*, have to be known in order to understand the structure of the narrative. The bare bones are shared by cinematographic scripts, which include a beginning, a middle and an end (set-up, a conflict, and a resolution), or a first, second and third act, following the paradigm by Field (1995). In this type of structure, it is necessary to include a conflict which the characters have to face and try to resolve, within a specified length of time and space, which set the story's tone and narrative style.

BUILDING A BRAND IMAGE FOR THE CLIENT

Following the rules of storytelling, the company's objective is to create and disseminate a universe of meaning around a product or service. This narration refers to verbal as well as visual language, and therefore, the attainment of a visual project that sustains the narrative is fundamental for achieving the communication objectives. The image or images represent part of the brand story and are essential for driving the emotional link.

Picturetelling or visual storytelling is the methodology that is applied for the creation of high-quality images that support the company's branding through storytelling. From a perspective of innovation (Christensen & Raynor, 2003), the projects represent a way of solving the communication problem presented by the client, and imply the understanding of the problem and its specific circumstances (Johnson, 2016).

Within the methodology of picturetelling, a set of categories are included, which are inspired by cinema production, which, leaving the soundtrack aside, include *direction*, *photography*, *set or stage design*, and *post-production*, as explained next.

a) Direction

The *direction* category takes into account the viewpoint that the camera adopts for creating the image or photography (the scale of the shot, composition, etc.), as well as the selection of the professionals (models and/or natural or professional actors) who participate in the images. For this, the casting event is very pertinent, in order to make sure that the persons chosen fit within the narrative we want to communicate.

b) Photography

In this section, the parameters related to the capture of the photographic image, the camera's format, the type of resolution it allows, the filters and other expression elements, are detailed. Other aspects related to the composition of the image, the type of lighting (artificial versus natural; soft or hard, light intensity and the color temperature) are also included.

Lastly, the image's colorimetry or the color gamut present in the project are also taken into consideration.

c) Stage or set design

Stage or set design refers to real scenarios or locations and the artificial decorations where the acts from the story take place, and in which the recorded images appear. In this section, the *props* (the objects that form part of the decoration), the *wardrobe*, *hairdressing* and *make-up*, categories that also communicate, should also be taken into account in the brand story created.

d) Post-production

This phase begins once the image has been captured, and within it, the image is treated by the use of editing programs that allow for the manipulation of different variables such as the dimensions of the image, exposure, color and contrast. It is also possible to include different texts and logos of the brand that is being worked with.

EXPERIMENT STAGES

Session one: Empathize and define

In this stage (*who*), the aim of the student was to research the client chosen and the needs of the target audience. Although they have had a briefing, which solidified their communication objectives, the student had to analyze the communication problems of the business in greater detail.

This was also the stage for defining the *design challenge* (Glen & others, 2015, p. 185), which in this case was related to the creation of a brand story for the company.

Session two. Ideate

During the ideation stage (*what*), the student faced the generation of ideas, concepts raised in the previous stage, which could help construct and develop a brand story employed in the *storytelling* techniques. This session was determined by the following stages:

- *Brainstorming* or a set of techniques used for the generation of ideas whose main objective is to extract the fundamental values that define the chosen company.

- Creation of a title that is in accordance to the narration generated. As if we were dealing with a cinematographic film, a slogan or claim, which makes for an exercise of specification.
- Synopsis: the student develops, in two or three pages, the essential elements of the narration. It details the characters that appear in the narration, the conflict that they have to face, and its resolution, as well as the space and time in which the action is to be developed.

Session three. First prototype and testing

Once the student has created a narrative related to the brand, the third session (*how*) has as the main objective the presenting of the first prototypes to the client.

Throughout this session, although they find themselves at the beginning stages of their projects, the student has the opportunity to contrast, with the client, the visual concepts that are being worked with, and to obtain an answer on what works and what doesn't work. For this, the student draws upon the different visual resources considered, from photography to freehand drawings.

Sessions four, five and six: Building the project

Following the client's first response to the prototypes presented, on sessions four, five and six (*how*), the student develops the phases of picturing to create images of conceptual and formal quality, adapting each one of the categories that compose it (*Direction, Photography, Set design and Post-production*), in a coherent manner.

Session seven. Presentation of the final project

Between session six and seven, two weeks pass before the final presentation. During the final four-hour session, (*who, what, how and where*), the client is invited to attend the presentation of every student project. Each group has 15 minutes available to present their projects, relying on different audiovisual techniques. After the presentation, each group receives the client's final evaluation.

Table 2 offers a scheme of the integration of design thinking principles together with the techniques of storytelling and picturing.

Table 2
Sessions conducted in the experiment

Sessions	Objectives	Object	Action
Session one	Empathize Define	Who	First. Research the company and the needs of the target audience Second. Briefing and creation of concepts and needs Third. Definition of the <i>design challenge</i>
Session two	Ideate	What	Storytelling: Title and synopsis of the brand story
Session three	First prototype Testing	How	Picturetelling phase one: Presentation of the first theoretical draft of the project
Session four, five and six	Culmination of the project	How	Picturetelling phase two: Culmination of the project
Session seven	Presentation	Who, what, how and where	Presentation of the project and justification to the client

Source: author generated

RESULTS

In this section, the results obtained will be presented. These will be divided according to the three variables analyzed in the experiment: student involvement, quality of the projects and synergy with the labor market.

a) Student involvement

The results obtained from the interview given to the students and the participant observation showed that there was a high degree of involvement shown by the members of the experimental group, as opposed to the medium-low involvement of the control group.

As for the attendance to sessions in and out of the classroom, the results showed that the students from the control group attended to 75 per cent of the in-person sessions and to 45 per cent of the sessions conducted outside of the classroom. In comparison, the experimental group attended to 100 per cent of the in-person sessions and to 97 per cent of the sessions outside of the classroom.

b) Quality of the projects

As it is shown in table 3, among the results obtained it stands out the superiority of the relative mean of the categories of *storytelling* from the experimental group are notable, with a result of 96 per cent, as compared to the control group. More specifically, 20 per cent of the projects from the control group possessed a *storytelling* that was coherent with the brand's values, as compared to 100 per cent from the experimental group.

100 per cent of the projects from the control group as well as the experimental group had a title that was coherent with the brand story generated. Also, 100 per cent of the projects from the experimental group presented a synopsis with a structure that contained a set-up, conflict and resolution, as opposed to 20 per cent of the projects from the control group. This same result was re-iterated in the section relative to the characters that faced the conflict and solved it, which in the case of the control group was 20 per cent as compared to 80 per cent from the experimental group.

100 per cent of the projects from both groups correctly defined the space and time of the narration.

Table 3
Presence of the storytelling categories in the projects

Categories	Experimental group	Control Group
Coherence of <i>storytelling</i> with the brand's values	100%	20%
Coherence of the title	100%	100%
Structure of the narration shown in the synopsis (set-up, conflict and resolution)	100%	20%
Characters, conflict and resolution	80%	20%
Definition of time and space	100%	100%
MEDIA	96%	52%

Source: author generated

As it is shown in table 4, it is noteworthy to see the superior results of the experimental group in all the categories, as compared to the control group. The groups only had a similar result in the variable related to *make-up*, with the low result denoting the lack of interest in its ability to narrate. Similar results were shown for the *hairdressing* category, which was another aspect that was least valued by both groups.

Both groups coincided on the importance conferred to *post-production* of the image, as compared to the lack of care in the capturing of the image (*photography*) by the control group, when this is vitally important so that its posterior manipulation results in a high-quality image. In this sense, it is important to note that 95 per cent of the groups from the experimental group relied on the professional help of technicians for its achievement, as compared to 0 per cent of the projects from the control group, who opted for executing it themselves.

The experimental group showed a clear strength when directing the actors, with professional actors being chosen in 80 per cent of the projects, as opposed to 40 per cent of the control group.

Both groups coincided on the importance granted to the (physical) space chosen for capturing the images, meaning the *sets*, which in both cases were natural locations.

Although with a lower score, both groups coherently chose the *wardrobe* according to the characters, with results of 85 per cent for the experimental group and 60 per cent of the control group.

Table 4
Results from the formal analysis. Coherence of the pictoretelling categories with the story brand

Categories	Experimental Group	Control Group
Direction	80%	40%
Photography	95%	40%
Stage or set design	100%	80%
Wardrobe	85%	60%
Make-up	15%	15%
Hairdressing	40%	15%
Post-production	98%	95%
MEDIA	73.6%	49.3%

Source: author generated

c) Synergy with the labor market

The results of the questionnaire showed that 97 per cent of the students from the experimental group and 85 per cent of those from the control group were in agreement in that introducing a client that posed a real communication problem contributed to closing the gap between the student and the labor market.

As for the monitoring of the publication of the student's work in the habitual communication channels of the company, the results showed that in the case of the experimental group, 80 per cent of the works were published, which points to its high satisfaction with most of the projects.

CONCLUSIONS

The main conclusions derived from this research confirm—in first place—the hypothesis presented: the presence of a real client during the development of the practical part of a course, at the communication faculty, at the Catholic University of Murcia drives the active learning of the student, increases their involvement in the projects and improves its quality, and closes the gap between the students and the labor market.

The high motivation of the students from the experimental group is reflected in the attendance to practically all of the sessions in and out of the classroom. This is contrasted with the students from the control group, who complied with the assistance in the classroom (one of the requirements for passing the class), but in the case of the sessions outside of the classroom, this was notably reduced, which affected the development of the projects.

The contact with a real client together with the possibility of seeing their projects published in the company's communication channels, increased the student's preoccupation for achieving high-quality results, in the case of the projects from the experimental group. This same concern drove the students to adjust and comply with the methodology proposed, which was ideal for the creation of high-quality advertising projects, from a formal and content point of view.

The publication of a high percentage of the projects created by the experimental group showed the company's high satisfaction, and closed the gap between the student and the labor market, as publishing worked as an advertising communication platform that could rouse the interest of potential companies.

Independently of their participation in the experimental or the control group, all of the students showed their preference for developing projects for real clients, even if they were unknown or not-so-well known, as opposed to fictionally working with well-known brands.

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Fecha Recepción del Artículo: 11. Octubre. 2017

Fecha Modificación del Artículo: 19. Enero. 2018

Fecha Aceptación del Artículo: 30. Enero. 2018

Fecha Revisión para Publicación: 22. Febrero. 2018