

# Design and Communications: A Strategic Tool to Create Awareness about Cyberbullying in Young People

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## Abstract

This research has focused on the interference of design behavior within cyberbullying in the university public in the city of Barcelona, Spain. Its starting point is to define the causes and effects of the aggressors towards the victims and witnesses to guarantee the mediation of design as interdisciplinary and its intimate relationship with the communications field, thus affecting the actions of every actor who participate in this scenario of digital intimidation. Design Thinking is established as a methodology through a research line with a quantitative and qualitative approach which its content is based on interviews conducted with experts in youth psychology and surveys of students from different public and private universities in Barcelona. The study concluded that since a cyberbully's attitude toward an individual or group of people is hostile and deliberated, design had to intervene according to the distressing situation and bear a rigorous and inclement message that meets aesthetic and purpose parameters. However, the intrinsic duty of design was to offer a strong meaning that transgresses the imaginary of the audience and make a suggestive call to actively participate when cyberbullying takes place.

**Keywords:** Design, Communications, Digital Intimidation, Cyberbullying in Barcelona.

## I. INTRODUCTION

With the arrival of the new information and communication technologies (ICT), the paradigm of human interaction has been transfigured in socio-technological fields unprecedented in its history, thus, society, its social network, and its various sectors have ventured into a new connectivity process on a planetary scale—with the internet at present—the central axis that has been established in the progressive growing globalization. “In general, we could say that the new information and communication technologies revolve around three basic means: information, technology, and

telecommunications; but they revolve, not only in isolation but what is more meaningful in an interactive and interconnected way, which allows achieving new communicative realities”. (Cabero, 1998, p.198).

Access to information has had a positive impact on the everyday users life and has facilitated their jobs, social and educational activities in time and space. However, there has been a negative effect of communication in the social field of cyberspace and its relational system: the malicious sharing, misuse and socialization of information by one or more users in order to violate the dignity of others.

Therefore, this research has focused on the study of media harassment that exists in cyberspace around the environment of young people through a communication and design strategy against the non-consensual dissemination of personal information, violation, attack on privacy and false accusation, where the contributions of design and communications involve raising awareness in young people about the harmful and negative effects of cyberbullying.

Cyberculture and globalization have taken place through the revolution of new technologies, so, nowadays, it is likely that a young person who belongs to the information and communication society would not be exposed to be harassed when navigating the sea of risks that the network of networks offers within its hypertextual structure. There are several reasons why a young person makes use of ICT on a daily basis through electronic and digital devices such as computers, cellphones, and tablets, accessing the world wide web with the intention of carrying out various activities such as obtaining information for homework purposes, getting to know people via social media, playing video games, among others. "ICT is for young people a very important space in their daily practices because they are material and space for building meaningful relationships. If these relationships are positive or negative, they relate to a specific situation but not to the environment." (Gil and Vallillovera, 2006, p.57).

In the field of education, the acquisition of information by young people ceased to be partially in the four walls of the library to now place him/herself into the infinite of cyberspace, thus, information and knowledge have led a young person having the need to do its tasks with the support of the internet, a network understood as a mother research tool in which the teaching and learning processes are developed, hence attending online classes, classrooms and virtual forums, meetings with teachers and other educational activities where ICT have intrinsically been involved in the academic context. In an unfailing way and necessary for

educational training, a young person has the necessity to enter the world of cyberspace to fulfill their educational activities. There are several online communication channels that are available today: "The starting point is in the consideration of social networks, which is extensible to the «machining» media to access them as are the different forms of microcomputer, as machines that produce social relations" (Callejo and Gutierrez, 2012, p.111). This system of communication converges in the social-relational-technological triad with social media content in the sphere of young netizens, who keep in touch anywhere in the world and instantly breaking the space-time convention to interact online with acquaintances and strangers, however, a young person is not exempt from danger and threat. "It seems to be clear that teenagers and young people live special situations in the world. This is why they depend closely —although sometimes it does not seem so— on the consideration of others and seek, by countless means, to build their own relational status" (Costa, 1997, p.253).

In Spain, according to a survey conducted in 2018 by Universia (university cooperation network with reference for Latin America which groups 1341 universities) among 685 Spanish, mostly women (59% vs 41%), between 21 and 26 years (64 %), university graduates or master students (55%). It is stated that 51% is considered totally dependent on their mobile phone and what 37% considers essential in their daily activities. (Universia, 2018). Being constantly connected to cyberspace, young people are even more likely to face cyberbullying, which is part of youth cyberculture, an almost normal teasing activity among young people that is usually practiced in social media and communication apps, However, this activity can exceed the limits of respect for a user with the purpose of cyberbullying and setting a malicious plan of media harassment of its cyberspace life, which directly affects her or his life.

Cyberbullying cannot only be a harassment problem and social isolation for an individual who is being

frequently and repeatedly persecuted by one or more users through different communication channels in the computer network, but also converges, in a notable break mood and mental exhaustion of who is suffering these constant aggressions within their social sphere in a given context. These offensive behaviors occur in high school and universities, since these are places where victims are found and more likely to be physically and psychologically be assaulted by their own companions or strangers, therefore causing those who are attacked to find themselves in an environment of disappointment and discouragement which leads to destroy their social, academic and sentimental life to be affected.

According to the World Health Organization (WHO), Spain is one of the countries where online violence has progressively increased in recent years, as revealed by the ANAR Foundation and the Mutua Madrileña Foundation in a study conducted by the WHO, the study results showed that: “one in four cases of bullying is cyberbullying and the average age at which they usually begin to be practiced is at 13 years. Girls suffer more from this type of abuse (70% versus 30%) and the most used social network for bullies is WhatsApp (81%).”

Cyberbullying was identified as a problem established in young people in the Spanish society. There is consensus, and awareness, about the growing planetary dimension of harassment in the digital world, and, should be a concern in the Spanish social sphere. Given this problem, design intervenes by creating a bridge between the regulation of the young man's human behavior and a suggestion and stimulation towards a better behavior of the stalker in order to shield the victims. “From the point of view of a strategy of social and cultural development, design will then occupy a key place and should be empowered to internalize the cultural contents and the analytical and operational methodologies at the highest level, in order to assume the responsibilities, they compete.” (Arfurch, Chaves and Ledesma, 1997, p.124). Thus, design can operate strategically with the sum of various efforts made by educational institutions and the

social environment in which they operate, thereby managing to intervene, transfigure and persuade the incorrect position of not only the cyber-aggressor but also those who observe the inappropriate online and offline attitude as a process of positive change within the mentioned group and its human relationships.

In this sense, design and visual communications can be invited to the digital world and the social sphere of young people where cyberbullying is located, their cultural codes and their symbolic meaning with the firm determination of intervening on the basis of meaning. “Meaning, in terms of the concept of design, explains how forms assume meaning according to the way in which they are used, or assigned functions and meanings, which often become powerful symbols or icons”(Heskket, 2002, p. 40).

In the creation of images and their representation, young people are approached with the purpose of awakening their critical thinking in cyberspace. These images must communicate and stimulate the perception of the young person so its meaning is constructed materially and mentally in an iconic and figurative way based on their iconicity that correlates to the disturbing situation that a young man is going through, suggesting in this manner a positive change against cyberbullying. “The images are an optical vicarious experience that is established either between one point to another and, therefore, between one individual and another or as a message through space” (Moles, 2005, p.24). The image is a fundamental component of visual communication that materializes a segment of the youth's perceptual ecosystem through duration and relies on the mass media to achieve a particular task.

Design can be a social mediator for this project and will intermediate in the aggressors-assaulted-observers triad which proposes to recover the digital and real-world identity of the cyberbullying victim and its integration into their social sphere.

## II.METHODOLOGY

This research work has a qualitative and quantitative

approach since the paradigm used turns out to be a critical proposition and it is related to the always changeful reality. It consists of a prospective data collection planning made for university students in Barcelona, Spain. Also, it compounds by two variables of interest: design as the first variable and the field of communications as the second, which makes this research proposal an analytical study. The use of qualitative techniques supported by a survey results in is formalized and deployed favorably according to the project objectives, consequently, obtaining the information relies on the needs of the project and can contribute to develop a visual communication and design strategy against cyberbullying.

The Design Thinking methodology was applied due to its systematic five phases: 1) Empathize, 2) Define, 3) Ideate, 4) Prototype, and 5) Test.

## 1. Empathize

In order to better understand cyberbullying within the academic context in the city of Barcelona, an *in situ* visit was made to university campuses corresponding to the public sector such as The Polytechnic University of Catalonia and the University of Barcelona. Likewise, the private sector research was carried out at the University of Pompeu Fabra, Elisava, and Esade. In this sense, and during the survey of university students, different forms of behavior were observed from one faculty to another. To cite an example, the students of the Faculty of Economics at the University of Barcelona were very open to the subject, to the point that several of the students wanted to give their opinion, and stated: "Even though we are in a university, where maturity is supposed to exist, you can still see cyberbullying. I know a particular case of a girl who is isolated by her peers". At the same university, in the Faculty of Fine Arts, a student claimed: "There are people who want to attract attention, so they decide to kill themselves for being harassed".

On the other hand, at the Faculty of Architecture of the Polytechnic University of Catalonia, the interviewees expressed a sense of belonging to the

subject and knew how to recognize the problem as a social phenomenon that exists, but it is preferred not to intervene when observing a cyber-aggression in social networks.

In the private sector, it was observed that students are aware of the existence of cyberbullying, however, the variables of mistreatment are quite different, as stated by a student: "People pay close attention if you have an expensive car and the brand clothes you are wearing". Therefore, it is understood that, within this high economic class context, a student may be prone to comments against him or her.

The object of the university visit in question was to conduct a field research technique (survey) of university students (221 in total) which establishes around the "empathy" of the student's problem. A sampling was calculated using the following formula:

$$n = \frac{Z_2 \times PQN}{Z_2 PQ + Ne_2}$$

n=383 university students

(N) corresponds to the population of 207,000 students existing in the city according to the INE (National Statistics Institute) where the simple random sample (n) with qualitative variable is 383 university students with 95% confidence ( $Z = 1.96$ ) and 5% in the margin of error ( $p = 0.5$  and  $q = 0.5$ ). As a result, a sample of 383 students has been studied. The goals of the survey were: a) Identify the connection times during the day to the Internet by university students. b) Interpret the position that the survey respondents assume in front of the stalker in social networks.

c) Recognize the emotions that students express when faced with the greatest effect: the victim's suicide.

The results by the survey in different universities of Barcelona: 75% of the respondents revealed that the period where they spend the most time connected to the internet includes the hours from 6:00 p.m. to 12:00 p.m., while 25% choose to invest more time in the network from 12:00 p.m. to 6:00 p.m. None of the respondents go online in the morning from 8:00

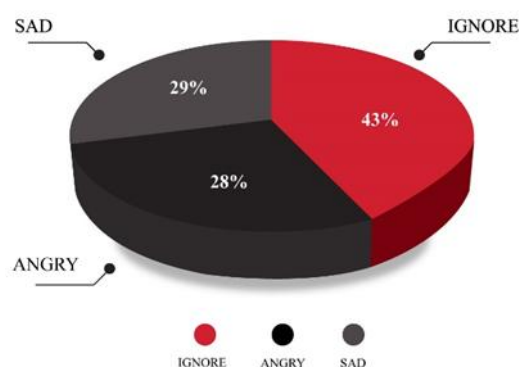


a.m. to 12:00 p.m. These data confirm that university students may tentatively be victims of cyberbullying at night. 11% have been victims of cyberbullying. This result is due to the great investment of time that university students provide for their daily chores. 82% of university students surveyed consider that joking among friends on social networks does appear within the framework of cyberbullying and can draw a thin line between joking and the offense that denigrates the identity of a person. When looking a cyberbully in action on social networks, 84% prefer not to intercede. On the other hand, 15% assume a neutral position, but at the same time negative: to ignore. 1% decide to press the "haha" button when observing that a user is being shot down by comments, photos and negative attitudes by cyberbullies in Facebook.

1% of the public surveyed declared themselves to be a cyberbully. While 97% prefer to observe this social offensive phenomenon in networks. 1% is considered to be a victim of cyberbullying. 69%

would face a cyberbully, while 31% would not.

When looking at social networks a letter from a person who committed suicide for being harassed 45% ignores. 32% show their emotional side by choosing "saddens me". On the other hand, 23% show anger when opting for the option "angry". While the options "like", "haha" and "wow" are not considered. (This information is shown in **Fig. 1** and in **Table 2.1**)



**Fig.1.** Average Percentage of Suicide Letter Reaction in Social Media by Barcelona University Students

**Table 2.1. Reaction of suicide letter in social networks**

Universities	Ignore percentage		angry percentage		sad percentage		Total percentage	Total surveys
Universitat de Barcelona	62%		19%		19%		100%	98
Politécnica de Catalunya	32%		40%		28%		100%	95
La Salle	56%		20%		24%		100%	69
EINA	38%		22%		40%		100%	45
Universitat Pompeu Fabra	29%		39%		32%		100%	76
	average	43%	average	28%	average	29%	100%	383

## 2. Define

This project is established in the world of cyberspace, the interaction and the communication that exists between Barcelona university students, the language used by them to communicate. And the aggressions that take place in this cyber place: Cyberbullying.

### a. Ideate

Hypothesis: A communication strategy concatenated

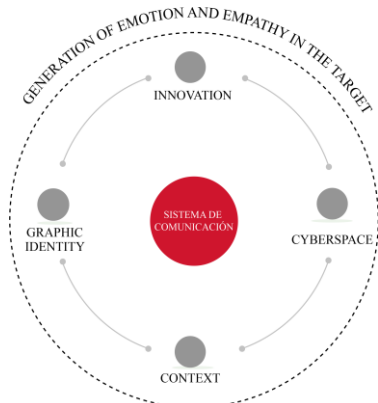
with design may suggest active participation in the observing public against cyberbullying.

## 3. Prototype

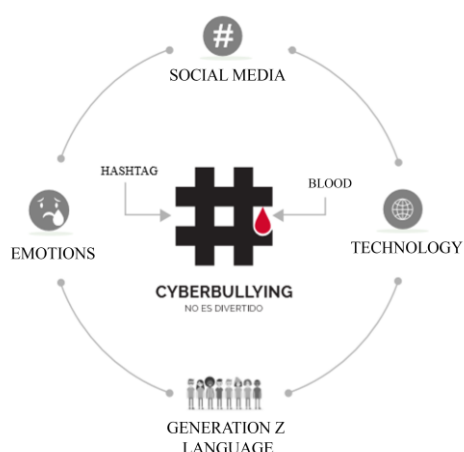
The communication system strategy is proposed based on 4 axes: Innovation, Graphic Identity, Cyberspace and the cultural context. **Fig. 2.**

The DNA of the present communication system is its identifier (hashtag). For this purpose, the most significant aspects of cyberbullying were taken into

account, these include the use of the hashtag pad sign (#) which is composed of two horizontal and vertical segments of similar and parallel lines, crossed with each other. Additionally, it was considered the inclusion of the graphic synthesis of an emotion, the sadness, the same that later disappears to be replaced by a drop of blood to evoke suicide. For this purpose, a conceptual wheel of the identifier was proposed in **Fig. 3** in which shows four dimensions: Emotion, social networks, language of generation Z and Technology.



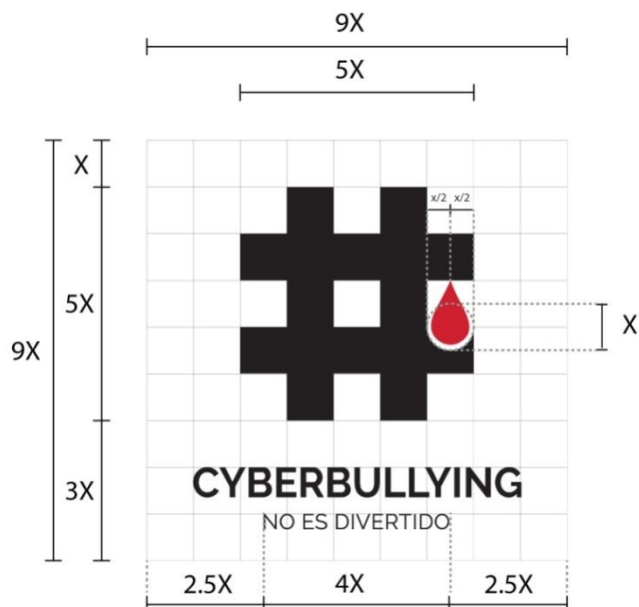
**Fig. 2.** Communication System Strategy



**Fig. 3.** Conceptual wheel of the identifier

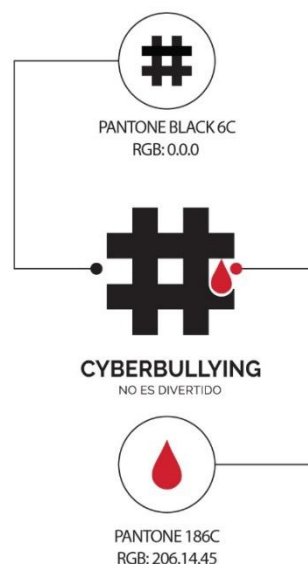
The corporate identifier is built in a 9x9 mesh, where the X unit corresponds to a perfect square.

**Fig. 4.**



**Fig. 4.** Cyberbullying Corporate Identifier

A color palette consisting of two (red and black) flat colors was used. On the right side there is a red tear falling that alludes to the blood that the victims of cyberbullying spill once they have decided to commit suicide. **Fig. 5.**



**Fig. 5.** Cyberbullying Color Palette

The application of positive-negative color was taken from the chromaticity of the corporate identifier, so it consists of three colors, thus establishing six background variables to be used. **Fig. 6**

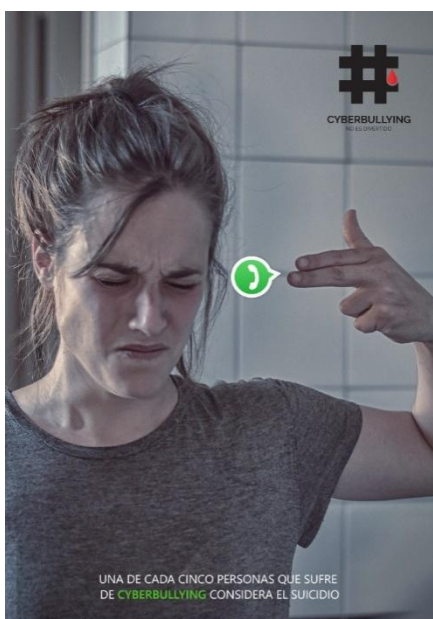


**Fig. 6.** Cyberbullying Color Background

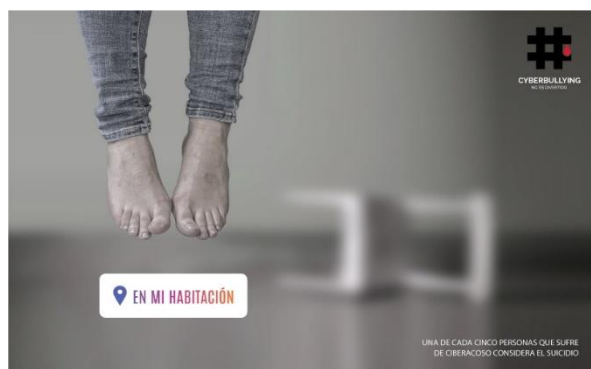
A series of posters were designed in which social media corporate isotypes are alluding to cyberbullying and its super-effect: suicide. **Fig. 7-12.**



**Fig. 7.** Cyberbullying Facebook Poster



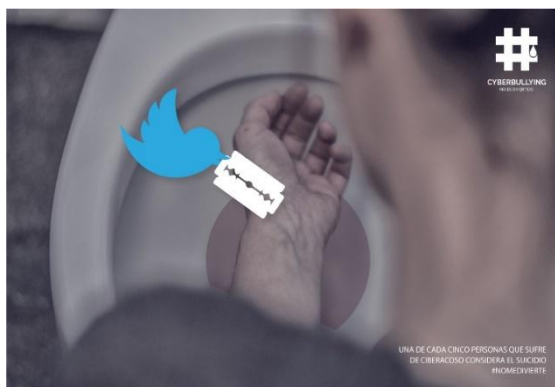
**Fig. 8.** Cyberbullying Whatsapp Poster



**Fig. 9.** Cyberbullying Instagram Poster



**Fig. 10.** Cyberbullying Youtube Poster



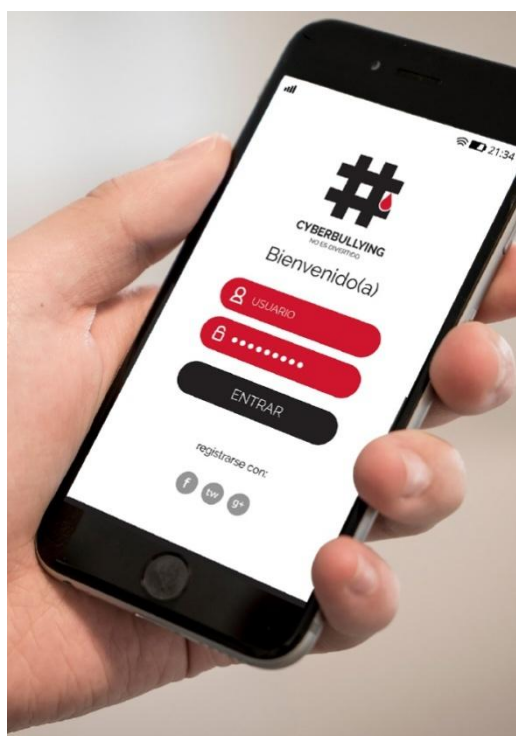
**Fig. 11.** Cyberbullying Twitter Poster



**Fig. 12.** Cyberbullying Facebook Poster

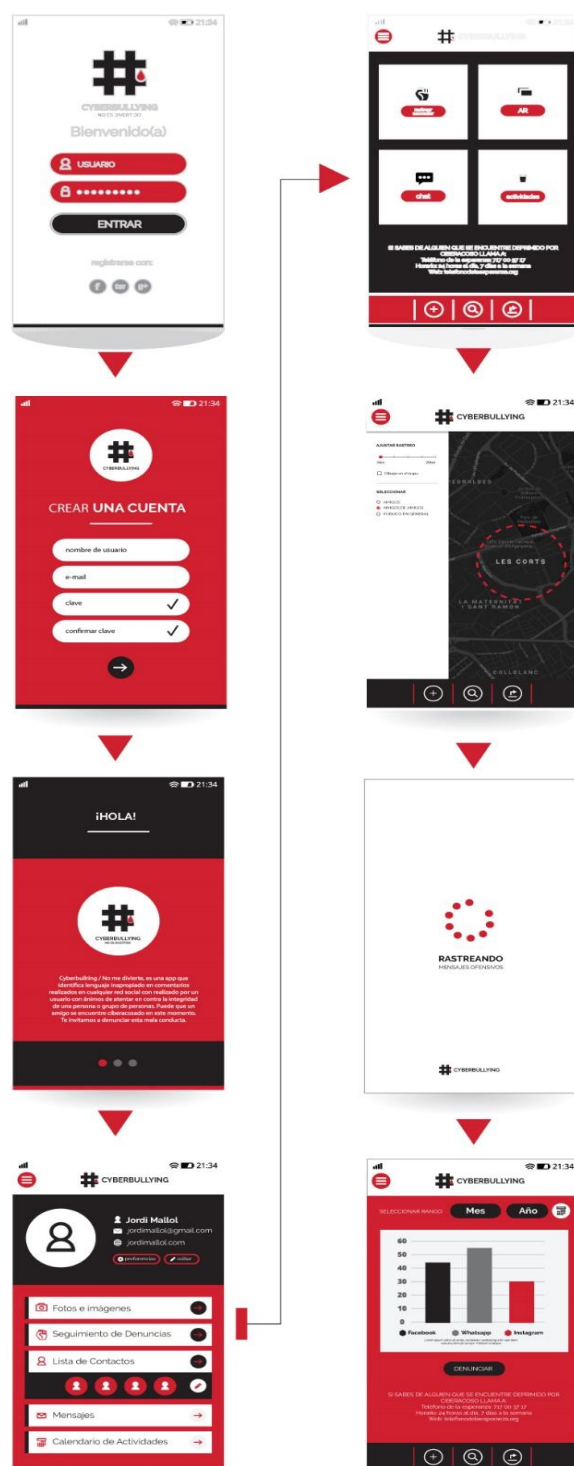
With the purpose of providing innovative content in the communication system, the design of an app called Cyberbullying is proposed, where a user can register with a pseudonym. And, can access tracking offensive messages to friends or the general public in order to report the online harasser. In addition, the user can be able to use an augmented reality section to find the hashtag identifier icon located in strategic places in different universities of Barcelona.

In order to report an attack on social media, one of the characteristics of the app is to allow cyber attackers to be tracked using google maps. **Fig. 13.**



**Fig. 13.** Cyberbullying App

**Fig. 14.** shows the interface design path of the app based on the corporate identifier brand management manual which allowed the design of different products.



**Fig. 14.** Cyberbullying App Interface

In order to encourage university students to use the app an augmented reality game was proposed in which for every 10 logos the user would find near his/her university campus, FC Barcelona would donate € 10 to the Aprender y Mirar Bullying Foundation. In addition, the students can also participate for two VIP tickets to a concert they



would like to go. **Fig. 15.**



**Fig. 15.** Cyberbullying App Augmented Reality  
In the end of the game, the students will be able to discover the story of Gaby, a cyberbullied girl who unfortunately could not graduate this year because of committing suicide at her university campus. **Fig. 16.**



**Fig. 16.** Cyberbullying App Gaby's Story

Merchandising objects were created to position the campaign in the university student's mind **Fig. 17.**



**Fig. 17.** Cyberbullying Merchandising

The design of the t-shirts consists in the application of the positive-negative background corporate. They can be dressed as identifying clothing of the cyberbullying communication system. **Fig. 18.**



**Fig. 18.** Cyberbullying T-Shirts

**Fig. 19.** is a still image of the video to be projected by teachers in their classrooms. Gaby, the main actress of the entire communication system is the protagonist. The scenes were recorded in the bathroom of the Faculty of Fine Arts of the University of Barcelona.



**Fig. 19.** Cyberbullying Video

### III. RESULTS

The concrete aim of this research, which has a central basis in design practice and communications, was to study cyberbullying in social media and the vast breakdown of information and communication technology within the student conglomerate of university students. Throughout this document, different theoretical aspects were presented from the perspective of design communication, image and perception. Thus, based on this theoretical building, design—in its meaningful and holistic sense—was able to intervene transversely as a suggestive and change agent against cyberbullying within the university context. The most unfortunate effect of this social-digital phenomenon was identified: suicide. Through the above, a communication strategy concatenated with design that suggests an active participation in the public against cyberbullying was hypothesized.

Additionally, Design Thinking was used as a methodology and its three phases: Inspiration, Ideation and Implementation. As a methodological guideline, empathy with university students was considered, for this purpose, a survey of the public in question was carried out in the facilities of different private and public universities in Barcelona.

Twitter, Youtube, Facebook, Instagram, and Whatsapp were selected as the social media network commonly used by young people to communicate with each other.

The posters were designed based on the use of

metonymy, a rhetorical figure that designates one object or concept with the name another. The social media logos were considered by replacing the cyberbully evil actions. Also, the slogan was used to reinforce the image: "One in five persons suffering from cyberbullying consider suicide".

### IV CONCLUSION

Information and communication technologies (ICT) have improved people's living standards and greatly facilitated society communication due to its speed and instantaneousness. Information distribution and sharing have made ICT gain a well-deserved protagonist and absolute role in everyday life. Thus ICT have become the center of attention around the world due to their ever changing technology and how they help to better perform a person's daily activities. In this sense, and in a positive way, communication in general has benefited from revolutionizing the modus vivendi of humanity, however, and as in any context of human relations, different negative aspects of misuse of these technologies have been presented. where cyberbullying has emerged as a damaging social phenomenon in the digital world.

This work has presented a communication system with design as its ally to propose a tentative solution that approximates prevention and intervention in cyberbullying in the university context of Barcelona, Spain. Thus, exposing the greatest negative effect of this persecution in cyberspace: The suicide of a victim by cyberbullying.

Since the attitude of a cyberbully is aggressive and intentional against a person or group of people, design had to dress according to the occasion and carry a rigorous and unforgiving message which its symbolic connotation had to follow the parameters of aesthetics and function, however, design had an intrinsic duty to offer a discharge of meaning that transgresses the imaginary of the target audience by making a suggestive call to the audience to actively participate when cyberbullying takes place.

Design and Communications are omnipresent, both

can be found in any social sphere from any dimension, perspective, and context. Therefore, both fields were able to be used as a mixed product to aware and fight cyberbullying. Design —with its transversal interdisciplinary characteristic— intervened in the university context of Barcelona. Also, the field of communications was a suggestive problem-solving tool for young people, in this sense, it is a holistic multi-instrument capable of identifying and / or creating a need in young public. It can be concluded that using disturbing graphic content images in a communications system may suggest public awareness of cyberbullying and visually demonstrate the negative effect of it. However, these images are not enough to effectively reach this social evil in universities. It is the obligation of the authorities of each institution to deploy relevant actions inside and outside the classrooms. Also, the moral and emotional support of family and friends is mandatory to face this problem in cyberspace.

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