Countervalues of the digital ethos perceived by future trainers

Contravalores del ethos digital percibidos por futuros formadores

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ABSTRACT

The digital ethosphere, as a cultural environment of digital interactions, provides spaces for social and citizen participation where certain values and counter-values are promoted that determine the users' construction of their personal and cultural identity. The lack of studies that analyze the counter-values immersed in digital interactions and spaces has led to the development of this study, which seeks to analyze the students' perception of the presence of counter-values on the Internet by examining the social sphere (with classmates, friends or family), the type and the way in which they are transmitted, as well as the associated risks (information or communication) and the resources or applications available. A mixed methodological approach study was designed through an ad-hoc questionnaire that was answered by 305 students from education and teacher training faculties. The results indicated that the majority of students identify the presence of counter-values when using the Internet, highlighting manipulation and violence, followed by lack of respect, inequality, and dishonesty, as well as the risks associated with information and communication, emphasizing the implicit presence of counter-values in the social networks logics and discourses. The conclusions provide evidence on the need to include values education in critical media education, reinforcing the preparation of future teachers who can teach how to deconstruct and eradicate counter-values in the digital sphere.

RESUMEN

La ethosfera digital, como entorno cultural de interacciones digitales, propicia espacios de participación social y ciudadana donde se promueven valores y contravalores que determinan la construcción de la identidad personal de sus usuarios. La carencia de estudios para analizar los contravalores inmersos en las interacciones y espacios digitales ha propiciado el desarrollo de esta investigación, que busca analizar el alcance de la percepción de los estudiantes sobre la presencia de contravalores en Internet examinando en qué esfera social (con compañeros, amigos o familiares), de qué tipo y cómo se transmiten, a qué riesgos pueden asociarse (información o comunicación) y en qué recursos o aplicaciones. Se diseñó un estudio de enfoque metodológico mixto con un cuestionario ad-hoc que fue respondido por 305 estudiantes de facultades de educación y formación docente. Los resultados indican que la mayoría de los estudiantes identifican la presencia de contravalores cuando usan Internet, destacando la manipulación y la violencia, seguido de la falta de respeto, la desigualdad y la deshonestidad, así como los riesgos asociados a la información y la comunicación, evidenciando la presencia implícita de contravalores en los discursos de las redes sociales. Se concluye resaltando la necesidad de incluir la educación en valores en la educación crítica para los medios, reforzando la formación de futuros formadores que pueden enseñar a deconstruir y erradicar los contravalores de la esfera digital.

KEYWORDS | PALABRAS CLAVE

Digital culture, higher education, students, countervalues, digital risks, media education.
Cultura digital, educación superior, estudiantes, contravalores, riesgos digitales, educación en medios.

1. Introduction

Our environment is techno-social, not only because the technosphere is already part of our life domain (García-Carrasco & García-Peñalvo, 2015), but because of the existence of an ethosphere, as a digital public sphere, where rationales, discourses and interactions exist as part of the global digital culture itself (Glauner, 2018). Thus, the beliefs and aspirations of this culture conform to the spaces of virtual participation and interaction (Ballesta et al., 201); the places from which group values and countervalues of belonging to that culture emerge, which are then normalized by the users until they become part of their identity. The modification of the ethos (moral features of a person or a community), in this case by the action of the digital routines, is based on the Aristotelian idea of social persuasion centered on group confirmation of the ways of being that are derived or established into our digital habits. This is the reason why the concept of digital ethos will be used during the analysis of the present work, itself derived from the rhetorical concept of ethos. This digital ethos is constructed in technological environments through the features of social ethos, shaped by the moral qualities and values perceived by people, related to the context which spells a certain content or message, and the discursive ethos, understood as the virtual presence or profile of a person, the status it has within a digital context, and the interest of the individuals with which one interacts in the digital sphere (Olaizola, 2018).

This modification or shaping of the digital ethos is created in an environment that has naturally allowed diverse practices, habits, or beliefs, which are sometimes contradictory but co-exist. Thus, while the social media "increase the probability that the perspectives, opinions, and individual matters become incorporated into the public sphere" (Turégano-Mansilla, 2020: 274), we also recognize the presence of challenges and threats to democracy, such as disinformation, or the radicalization of discourses, which exacerbate certain voices, and structure the collective attention towards "moral panic" (Jungherr & Schroeder, 2021).

Considering that the technosphere does not involve itself with a set of commitments, values, or ways of being, we can warn that the use of technologies is not neutral either (Lewin & Lundie, 2016). Participating in the digital ethos, either to consume or produce nodes of knowledge, has an influence on what we can think about it or not, as well as what we feel, and experience (Vlieghe, 2016), because the values and countervalues implicit in this public sphere can shape not only our expectations and intentions, but also our actions (Burbules, 2016). The digital divide is an example of the countervalue of inequality, determined by the purposes with which technologies are developed and applied, which discriminate, for different reasons, those who cannot access the Internet, or do so in a limited manner, making their social participation and interaction difficult (De-Agrela-Gonçalves-Jardim et al., 2017).

Diverse studies on the culture of consumption have revealed the existence of values that are implicit in different media utilized by children and youth (Hernández-Serrano et al, 2017; Oregui & Aierbe, 2019). Less frequent are specific studies on countervalues, as the present study, from the perspective of future teachers, of whom we demand not only technology-computer skills, but also "moral and ethical qualities that allow them to transform their environment and contribute with a more human society" (Llamas et al., 2020). Authors such as Kumar (2019) and Komljenovic (2020) echo this demand, and wager on extending values from education to higher education, justified, among other arguments, by the effect exerted by the digitalization of contents and interactivity, as well as by the large number of hours spent by the university students connected to the internet and the social networks (Atas & Çelik, 2019; Rostaminezhad et al., 2019). Along the same line, international commitments such as the Digital Education Action Plan, 2021-2027 from the European Union (European Commission, 2021), the 2030 Agenda (2020), or the Child and Youth Manifesto from UNICEF (2020), have demanded the development of citizens and the attainment of adequate values for co-habiting, and correct social interaction, both in-person and virtually.

1.1. Countervalues in the digital ethosphere

Ethos is a public system of values, which is socially constructed in the social interactions that provide meaning to community living, in this case, in the digital sphere. And it is the people who have shaped these values, by providing meaning, organizing, and regulating the relationships in the digital world. Starting from this, values can be defined as valued, real, or symbolic qualities, but collectively produced, which question social cohesion and the regulation of the relationships. In agreement with this concept, countervalues

would be the opposite meanings of each value (Gervilla-Castillo, 1997; Medina, 2007), as qualities that are not valued by people or groups, and which could affect the development and social co-habiting in the digital world. This process of evaluation, until a habit, a behavior, or a norm becomes a social value, is determined by the digital culture within which it is framed, with the intervention of the collective belief that this action is shared by most, makes sense for everyone, or at least, that is based on a practical reason for the subject (Parga, 2008). As a result, values can be subjective or have a universal reach. Likewise, with countervalues, which are adapted to collective beliefs or individual reasons. The most important aspect is that the effect of this structure of social values could be determined from the effects they generate (Berkowitz, 2011), by studying the presence or impact perceived starting with these values, or their countervalues.

In the digital ethosphere, the diversity and freedom of individual moral choices is assumed, but also a system of values that is socially constructed and defined. This system will be analyzed in the present study from the conception of the Internet as a socially-perceived cultural structure. The analysis will be conducted from the perspective of students, because, although previous studies have stated that this collective is aware of the existence of risky behaviors (Ramos-Soler et al., 2018; De-la-Villa-Moral-Jiménez & Fernández-Domínguez, 2019), they do not always perceive them by associating them to the countervalues that the digital medium promotes or the user re-enforces. This requires a more critical analysis of the countervalues that are recreated in the behaviors of users, equipping the students to be able to decrease or face what the medium itself absorbs (Thoman & Jolls, 2003; Lee, 2010). The objective of the critical commitment of young generations starts by considering media education that contemplates values education, to provide them with an ethical compass (Van-Stekelenburg et al., 2020) that can be used to deal with the reproduction of countervalues that oppose complete digital co-habiting. The present work is found along this line of media education, which intends to discover how the future teachers intuitively or explicitly perceive the meanings of the countervalues and the associated risks. Beginning with these consequences, it is important to establish guidelines, strategies or dynamics to empower the students and convert them into proactive teachers towards the media. The number of hours they spend connected to the networks have to become actions and behaviors that invite them not only to consume content (Rostaminezhad et al., 2019), but to interact with it, creating, designing, and modifying information on the Internet, thus becoming prosumers and prodesigners (Hernández-Serrano et al., 2017), with initiative and critical analysis of values that are needed for the development of interactions mediated by technologies (Thoman & Jolls, 2003; Lee, 2010).

According to the above, the present study is centered on analyzing the reach of student perception on the presence of countervalues on the Internet, considering the following: 1) The variables age and gender, as well as the social sphere in which these are perceived (classmates, friends, or family); 2) The types and how they are transmitted; 3) The risks they may be associated with (information or communication); 4) The resources or applications were they appear (web, videos, and social networks).

2. Material and methods

2.1. Sample

A non-probabilistic, incidental sampling method was used, selecting the samples by accessibility to the higher education centers. The study sample was comprised of 305 university students from the faculties of education, enrolled in their first (79%) and second (21%) years, from 4 universities. Three of these universities were located in Spain, and one in Chile, from the areas of social sciences in the spheres of education or teacher training. In agreement with the population, the gender distribution was heterogeneous, 15% were men, and 85% women, given the high female participation that is considered normal in teaching degrees (Figueroa & Hernández, 2019). Most of the students were younger than 20 years old (59%), followed by those who were aged between 20 and 30 (39%), and lastly, by those older than 30 (2%).

2.2. Design

A mixed methods approach was utilized to collect, analyze and relate the quantitative and qualitative data in the same study. The qualitative process served to collect information about non-numerical data,

through the description and interpretation of the answers, while the quantitative process allowed obtaining and analyzing numerical data that were contrasted to respond to the objectives of the study (Ruiz-Medina et al., 2013). Likewise, it followed a concurrent mixed design, which, according to Hernández-Sampieri and Mendoza (2018), allows systematic, empirical, and critical processes to simultaneously analyze the quantitative and qualitative data. The data were collected in a parallel manner, but separately in the instrument, just as the analysis was performed independently, although in the conclusions, one or many meta-inferences were made from both, which comprise the results found in both approaches (García-Ruiz & Lena-Acebo, 2019).

2.3. Instrument

To conduct the study, a questionnaire that measured the presence of countervalues on the Internet was designed. It was comprised by 37 items, which were answered with a Likert scale ranging from a little to a lot, and which was divided into 5 dimensions. It was completed online by the university students, who answered it voluntarily and confidentially. Afterwards, the relationships between the variables were analyzed through the use of the Chi-square test with the software program SPSS v20. Before providing the questionnaire, the items were revised to assess their validity through the validation by specialists in the area of education. The analysis data of the reliability of the dimensions of the questionnaire on the presence of countervalues on the Internet, based on Cronbach's Alpha, are the following: 1) The Internet transmits countervalues (1 item, $\alpha=0.894$); 2) The Internet promotes countervalues (9 items, $\alpha=0.894$); 3) Identification of countervalues with colleagues in Internet communication (9 items, $\alpha=0.894$); 4) Identification of countervalues with friends in Internet communication (9 items, $\alpha=0.962$); 5) Identification of countervalues with family members in Internet communication (9 items, $\alpha=0.962$).

Table 1. Presence of countervalues on the Internet		
Perception of university students (Quantitative Design)	Academic Year	First
		Second
	Specialty	Primary Education
		Early childhood Education
		Special Education
		Pedagogy in English
		Pedagogy in Spanish
	Gender	Male
		Female
	Age	Younger than 20 years old
		20 to 30 years old
		Older than 35 years old
Presence of countervalues on the Internet (Quantitative Design)	The Internet transmits values	
	The Internet promotes countervalues	
	Identification of countervalues with colleagues in Internet communication	
	Identification of countervalues with friends in Internet communication	
	Identification of countervalues with families in Internet communication	
Categories (Qualitative design	Countervalues perceived on the Internet	Concept of value vs countervalue
		Transmission of countervalues
	Type of countervalues perceived	Inequality
		Lack of respect
		Dishonesty
		Violence and manipulation
		Selfishness
		Insecurity
		Irresponsibility
		Oppression
	Internet, countervalues, and risks	Countervalues associated to information risks
		Countervalues associated to communication risks
	Internet resources and countervalues	Webpages, videos or comments, and countervalues
		Social networks and countervalues

For the qualitative approach, the open-ended questions were selected, and a content analysis was conducted with the objective of finding elements of the dominant narrative in the responses evaluated, through the analysis of each fragment by two of the researchers, until a satisfactory consensus was found for the assignment of categories. More specifically, content analysis was utilized as the research technique to systematically and objectively describe the themes found, and whose advantage is also the enrichment of the quantitative analysis. To achieve this, the individual responses of the students were codified, as suggested by Gil-Flores et al. (1996), after which the categories, sub-categories, and expressions of

agreement were defined, depending on the countervalues described by the students. We tried to be rigorous in the definition of the categories, by considering all the opinions in the analysis of the data, and by focusing on the analysis of the semantic meaning of the expressions. Likewise, to identify the countervalues, we took into account some studies on social and antisocial values (Sevillano, 2001; Kepowics-Malinowska, 2003; Morales-Rodríguez et al., 2013; Hernández-Serrano et al., 2016). As for the variables, the study included the presence of countervalues on the Internet, and the perception of university students for the quantitative analysis, in which we underline the variables of academic year, specialty, gender, and age; and the categories and sub-categories for the qualitative analysis. Table 1 organizes the variables analyzed.

3. Analysis and results

Table 2 was created starting with the analysis of the participant students' perception about the presence of countervalues on the Internet, to verify the existence of significant differences with the different variables selected. Within it, we analyze the presence of countervalues on the Internet from participants' perception according to gender and age, through the use of the Chi-square test. It can be observed that dimension 5 (Identification of countervalues with family members) is associated with a greater degree of significance according to gender (p=0.029). This is followed by dimension 4 (Identification of countervalues with friends in Internet communication), with statistically significant differences found (p=0.046) according to gender, without associations found between the dimensions of presence of values on the Internet, and age. As for the Chi-square analysis of the perception of future teachers on the presence of countervalues on the Internet according to specialty and academic year, it was observed that the dimension related to the identification of countervalues with family members in Internet communication was associated with a high statistically significant difference (p=0.022) with the specialty. An association with the rest of the dimensions was not found.

Table 2. Analysis of the presence of countervalues on the Internet								
	Gender		Age		Specialty		Academic year	
Dimensions	Chi-square	Sig.	Chi-square	Sig.	Chi-square	Sig.	Chi-square	Sig.
1. The Internet transmits countervalues	0.620	0.431	3.575	0.167	0.607	0.962	0.784	0.376
2. The Internet promotes countervalues	0.656	0.720	3.616	0.461	4.345	0.825	0.250	0.883
3. Identification of countervalues with colleagues in Internet communication	4.378	0.112	2.398	0.663	12.252	0.140	3.602	0.165
4. Identification of countervalues with friends in Internet communication	6.179	0.046*	1.789	0.774	12.556	0.128	4.196	0.123
5. Identification of countervalues with family members in Internet communication	7.072	0.029*	4.555	0.336	17.876	0.022*	3.646	0.162

Note. *p<0.05 significant difference.

As for the descriptive analysis, the relationship between gender, the presence of countervalues on the Internet, and age should be underlined. More specifically, and as observed in Figure 1, 71.7% of the students aged from 20 to 35 years old, and 68.9% of those younger than 20 years old, both female, stated that they regularly perceived the presence of countervalues on the Internet.

Figure 1. Relationship between gender, presence of countervalues on the Internet, and age
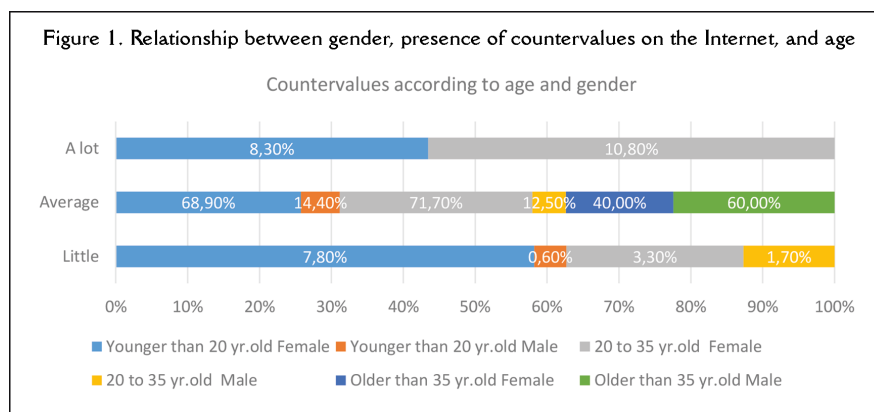
As for the analysis of the qualitative results, first of all, and considering the category "Countervalues perceived on the Internet", the students described the concept they had about value versus countervalue, showing that they were aware of the presence of countervalues on the Internet, with statements such as: "Just as values are transmitted, countervalues are also transmitted" (Stdnt.9, female, 18 years old, 1st year); "Given that, if there are values, there are countervalues" (Stdnt.37, female, 19 years old, 1st year). And the difference that exists between the two concepts on the Internet, as shown by the answer: "…I think there is the same number of values on the Internet as countervalues. You only have to know where to look, where to be, and what to use it for" (Stdnt.60, female, 21 years old, 1st year).

Also, university students stated that they were not only able to perceive that the Internet promoted countervalues, but they also described the effects they could have, highlighting their connection with digital risks: "I think that countervalues can be generated on the Internet. The creation of the Internet has provoked, among others, Internet bullying. Also, when you are not face-to-face with the person you are talking to, you are not worried about what you are going to say, so that we become more egotistical, and less respectful towards others" (Stdnt.104, female, 18 years old, 1st year).

More specifically, when asked about what types of countervalues they were able to perceive when they used the Internet, it was observed that there was a degree of identification of countervalues (Figure 2). More specifically, manipulation was found to have the greatest presence on the Internet, obtaining 88.19% of high responses in its identification by the students. Aside from manipulation, other countervalues were highly identified, such as violence, the lack of respect and inequality, and with a lesser prevalence than the rest, but still with a high percentage, dishonesty was highlighted.

Figure 2. Identification of the countervalues that were most perceived by the students on the Internet
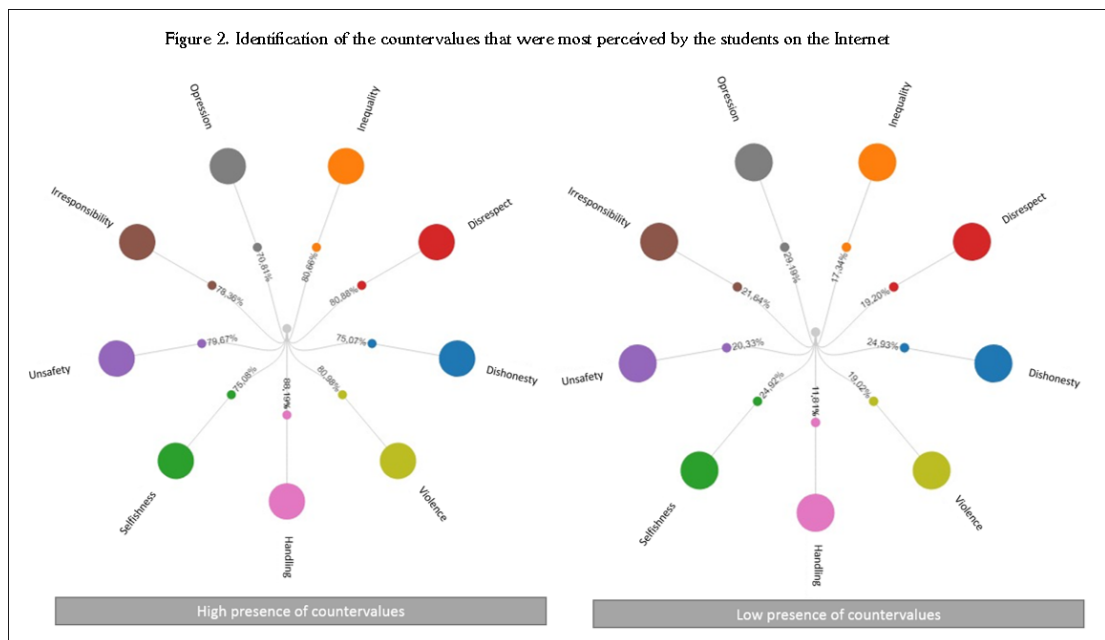
Looking into the countervalues mentioned previously, the university students stated in their answers that manipulation and violence were countervalues that were observed when using the Internet, because some people could consider that being behind the screen strengthened them, undervaluing the content that was being shared with other users: "I consider that the countervalues are aggravated, as one could think that being behind a screen makes one stronger, and damage can be done to others, which implies the lack of respect, violence, or manipulation" (Stdnt.249, female, 19 years old, 1st year). Also, in other findings extracted from the students' discourse, we identified violence and manipulation with other risks: "The Internet has many good things, but is it also a source of dangerous information, a broadcaster of countervalues such as manipulation, consumerism, violence" (Stdnt.94, female, 21 years old, 1st year). The students described these countervalues in related terms such as stealing or hitting, as shown by their

answers: "Just as values are transmitted through the Internet, countervalues as well, since we watch many videos, which show us the opposite. We can observe that people steal, hit" (Stdnt.93 females, 25 years old, 2nd year). Violence and manipulation were also identified with hate derived from membership to other cultures or ethnic groups: "there is an immeasurable hate against other beliefs, cultures, people, genders…" (Stdnt.279, male, 30 years old, 1st year). There was also the lack of respect as a countervalue, as evidenced from the answers, through which we inferred that this countervalue was associated to one of the characteristics of the digital medium –anonymity, and more specifically on the use of the social networks- that favored it: "the Internet gives us the possibility of giving an anonymous opinion, especially in the social networks, and many values are lost, such as respect" (Stdnt.221, female, 23 years old, 2nd year). If the lack of respect was identified by diverse students as a countervalue that was very much present in the use of the Internet, then access, as power or privilege in the ethosphere, where we find discourses, rationales, and interactions belonging to the digital culture, can become a reason for inequality, and therefore for countervalues, as perceived by the younger students: "For example, not having a computer or access to the Internet: inequality" (Stdnt.211, female, 19 years old, 2nd year). Likewise, the students also indicated that the fact that the Internet offered users the opportunity to anonymously give their opinions could provide a reason for taking advantage and not caring about the way in which they related with other users, which verifies the presence of certain values such as selfishness or irresponsibility. More specifically, dishonesty was found, identified as the countervalue that appeared on the Internet when access and the information offered by it did not require filters that ensured the quality of the content, "On the one hand, uploading the information on the Internet could be considered positive, but the fact that no filter exists that can attest that the information is true, results in that the information may not be true" (Stdnt.243, female, 32 years old, 1st year.

The students also showed their opinions with respect to the risks implied by the presence of countervalues on the Internet, associating them with two areas: information and communication. The information risks were identified with inequality or vulnerability of the people when they faced the excess of information and content present on the Internet, with statements such as the following: "We are vulnerable and we are exposed to information that is not apt" (Stdnt.285, female, 22 years old, 1st year); or "Many times, due to bad information or too much freedom in the web, countervalues appear" (Stdnt.189, female, 20 years old, 2nd year). As for the communication risks, moral aspects appeared associated to the existence of the countervalues: "The Internet is so accessible to everyone that it is merely impossible that all the content is ethically correct. Thus, we find pages that promote illnesses such as anorexia or bulimia, violence, fanaticisms…" (Stdnt.253, female, 18 years old, 2nd year), with similar statements provided by other students: "I think that many times, when we try to teach values through the Internet, the opposite occurs, as a misunderstanding could occur" (Stdnt.298, female, 18 years old, 1st year). These data provide evidence about the presence of countervalues such as oppression, insecurity, or irresponsibility.

Lastly, with respect to the countervalues present in the different digital spaces within which the students socialize on the Internet, and their capacity to perceive their presence, most attested to how the social networks had become the privileged forums where one could find and expose countervalues. More specifically, some of the comments referred to enmity or selfishness: "Many times, enmity and selfishness is produced in the social networks, for example" (Stdnt.10, female, 18 years old, 1st year); "In the social networks, such as Twitter or Instagram, each person gives his or her opinions, ideas, and you can find many publications that are sexist, homophobic, xenophobic, etc." (Stdnt.40, female, 18 years old, 1st year). Likewise, within social networks, the students referred to the comments that could be made of videos, publications…in which countervalues are transmitted, as affirmed by the following student: "On the Internet, you can publish everything, and it's true that now situations that could be inappropriate are monitored, but even then, comments, videos, applications, can create countervalues" (Stdnt.297, female, 18 years old, 1st year).

4. Discussion and conclusion

The study presented allows us to confirm that the university students who participated in the study were able to perceive countervalues when they utilized the Internet, thereby answering the general

objective of the present work, and which in contrast with the results by Parra-Ortiz (2015) and Pérez-Pérez (2008) when they argued that values must be perceived through the actions of others, in the relationship established with others, in the environment and context, just as it occurred with the countervalues identified in the present study by the future teachers. Likewise, in regard to the analysis of the presence of countervalues on the Internet, considering the variables age and gender, and linked with the specific objective of the digital ethosphere in which the countervalues were identified, it can be affirmed that the identification of countervalues when the students interacted with family members and friends, was especially evident when a comparison with gender was made. As for the identification of countervalues by the future teachers when they used the Internet with the colleagues, highly significant results were not observed with respect to the dimensions analyzed. Also, in the relationship established with gender, the presence of countervalues on the Internet, and age, it was observed that the female students, especially the older ones, identified the most countervalues when they utilized the Internet normally, as opposed to the male students, indicating the need to replicate this result with similar samples.

As for the next objective, the type of countervalues perceived by the students and how they are transmitted, the results obtained from the open-ended questions discourses analyzed, showed that the students identified and differentiated value from countervalue, thereby confirming, as in other studies, that the future teachers were aware of the existence of values on the Internet (Morais et al., 2019). Aside from being aware of the presence of countervalues, they were able to identify some unwanted effects that could occur, alluding to risks such as digital bullying, or egotistical behaviors (Osorio-Tamayo & Millán Otero, 2020; Grotto & Makridis, 2020). As for the types of countervalues identified by the students in the ethosphere, the most perceived were mainly manipulation and violence, followed by lack of respect and inequality, and with a lower prevalence, although with high percentages, dishonesty, selfishness, insecurity, irresponsibility, and oppression.

The third objective was to analyze the reach of the perception of the students about the presence of countervalues on the Internet, considering the risks, either associated to the information available on the Internet, or to the communication established through the networks. In both cases, the students identified these risks through their discourses, and associated them to the inequality or vulnerability of the people when facing an excess of information; or the presence of content that was ethically incorrect, which incites violence or fanaticism through the networks, or even simple errors or discords due to misunderstanding, when focusing on the risks associated to communication processes. As for the fourth and last objective, related to the resources or applications that the students were able to identify when they used the Internet, it was observed that the webpages, videos, or social networks were perceived as spaces in which individuals could transmit countervalues. More specifically, evidence was shown about the presence of countervalues in social networks, when referring to Twitter or Instagram as spaces in which everyone could freely expose their opinions or ideas, sometimes unfiltered, allowing for the publication of sexist or xenophobic publications, or inappropriate expressions that not only resulted in new spaces for discrimination, but which also promoted victimization spots that could lead to self-esteem or depression problems, as indicated by De-la-Villa-Moral-Jiménez and Fernández-Domínguez (2019).

As a conclusion, the evidence found in this study centered on the identification of countervalues of the digital ethos by students, the future teachers, and allowed us to observe that they were able to perceive certain countervalues, as well as to associate them with the risk of using networks and services offered through the Internet. Due to this, it is of vital importance to include values education for the digital ethosphere, to teach future teachers how to identify and limit the countervalues associated to online risks. The aim of this type of education is that the future teachers acquire the necessary competences to participate in the digital ethos in which the values and countervalues shape interpersonal relations (Vlieghe, 2016; Burbules, 2016). Lastly, although the present study is considered to be limited and centered on future teachers, the findings provide indications about what has started to become an important topic –the digital ethosphere-, specifically for educommunication, as described by authors such as Prendes-Espinosa et al. (2018), and which has also been included in the new European Digital Education Action Plan, 2021-2027 (European Commission, 2021). This study adds interest to the studies about media teaching for the new citizens, re-enforcing the thesis by Baker and Bilbro (2017), who affirmed that the more we commit

ourselves with our new spaces and places of interaction, in this case digital, the more our system of values will be modified, and with them the canons of behavior, thought, and representation of the interactions.

Author Contribution

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