ABSTRACT

The existence of gender stereotypes in relation to the use of the Internet led to the need to carry out the present study, which approaches young people perception of the use of the Internet and technologies. Based on knowledge of the existence of gender stereotypes in relation to the use of the Internet, the objective of the study is to detect whether the age of young people, with some previous experience on the Internet, marks differences in relation to the use they make of the Internet; in other words, whether the use made of the world network and the existing stereotypes may or may not have some type of dependent relationship with the age of the subjects. The study was applied in a group of the University of Salamanca (Spain) during the academic year 2018/2019, after the previous realization of activities during four months of sensitization, under the European project WYRED (netWorked Youth Research for Empowerment in the Digital). The final sample was composed by 48 subjects. For this purpose, a questionnaire was applied with 40 final items, which collected different activities that can be carried out on the Internet in order to find out what trend of use they presented in relation to the Internet, in comparison to their age. The two groups consisted of 26 people aged 20 or younger, and 22 people aged 20 or older. By means of a descriptive analysis, and the application of normality tests and non-parametric tests, no dependent relationships were detected between the use of the Internet after carrying out the survey and the age group in which the subject belonged. For the future it would be of special interest to be able to repeat the study comparing the opinion and use of young people on the Internet according to gender.

1 Introduction

Gender stereotypes are sociologically one of the bases of differentiation from diversity. Thus it retracts in the stereotypes about the current Digital Society, the handling and technological development, and those stereotypes that are forged from the perception that is possessed in relation to the use of the technology, in function of the gender. Authors such as [23] maintain that with the beginning of the network it was thought that social and gender inequalities could cease to have a presence in virtual life, through the idea of control over oneself and one's virtual life, and the possibility of detaching oneself from conditions such as gender, ethnicity or race. However, the current reality on the Internet continues to show clear differences in relation to gender. As [18] indicate, the problem of the digital gender gap is a phenomenon that continues to exist, women and men are on the Internet, but not in the same way, or with the same visibility, or with the same aims.

Concern about students’ perceptions of gender stereotypes towards Internet use is turned into studies. This is the case of the recent research carried out by [4], where a study was carried out on the access, experience, frequency and use made of both computers and the Internet by young people in Galicia (Spain). The results revealed that there are clear gender differences in the activities they tend to do on the Internet. Men tend to spend more
time playing online games, participating in forums, downloading programs, while women use the Internet to connect to social networks, chat, send emails and search for information of interest to the subject. On the other hand, women tend to use word processors, digital presentations and image editions to a greater extent than their male counterparts. Young men, on the other hand, tend to spend time calculating and processing data.

These results provide a glimpse of the gender differentiation studied in this paper, which seeks to respond to the stereotypes presented in relation to Internet consumption by young people. For the development of the research of the present work, the questionnaire of [18] has been applied from a quantitative perspective.

Finally, this work is presented in six sections. The second section delves into recent literature and studies in relation to existing gender stereotypes in the use of the Internet. This gives rise to the third section, which deals with the context in which the study has been carried out, described in section four, the research methodology. The analysis of the data and the results of the research give rise to section five. And finally, in the sixth section, the main conclusions of the study are summarized.

2 Stereotypes on the use of technologies and the Internet

Nowadays, technology has taken on a special role in people’s lives, for whom it has become an element in their daily lives. It is therefore desirable and expected an equal use and management of it. To this goal, the inclusion of social values can be a key, introducing the concepts of diversity and inclusion in technology, thus allowing equitable access and use [8]. The reason why the integration of these values is necessary is the still existing social inequality, both significant and lasting, in the context of the new information and communication technologies. ICT (Information and Communication Technology) persist with a high gender component and at all levels, both socio-economic and educational [7]. Digital environments can be designed as a result of gender roles and biases, which implies the risk of reproducing the gender stereotyped culture within the technological and computational context [24].

However, when it comes to what young people use new technologies for and research is conducted to detect differences in use in relation to gender, few studies have followed this line of research. [17] carried out a study with the aim of ascertaining the media consumption habits of adolescents and young people in Spain in relation to their gender. To this aim, a quantitative study was implemented with adolescents from Barcelona (Spain) and some of the results that were concluded from the aforementioned research were that Internet consumption by young people is stereotyped by the condition of gender. Girls tend to consume mostly dramatic products, where the central focus is on interpersonal relationships, while on the other hand, boys tend to resort to products based on humor and video games. Along the same lines, the results of research [6] reveal that new information and communication technologies and their relationship with the stereotyped view of gender affect the practices carried out by children and young people, among which are their decisions regarding possible educational and professional options.

This global reality is in turn combined with another issue of concern for decades for different systems, and it is the gender gap that exists around the STEM sector (Science, Technology, Engineering and Mathematics). An international concern is the low representation that minorities and women have in the field of technology, so [9] developed a study, which sought to represent the general view of the current context in Europe, and thus made a systematic mapping of projects related to the gender gap in STEM in the databases CORDIS, Erasmus + and KEEP. This type of initiatives are a fundamental piece to be able to continue advancing in the field, and to be able to know, among other purposes, the motivation and interests of people [22], since the intrinsic forces of the individual direct the direction and utility that he gives to his use and consumption of the Internet; and as researchers the knowledge of endogenous causes can lead to the proposal of new initiatives aimed at redirecting these forces.

Continuing with that, a relevant question would also be what young people are using online social networks for today. As it has been commented, technologies have become an everyday part of people’s lives, and deepening the process of constructing gender identity is necessary to answer the question. In the study they carried out [20] they detected classic gender stereotypes in relation to the use of online social networks. These stereotypes clearly modulate the psychological well-being of users. Furthermore, as the authors also stress, the lack of studies in relation to Internet consumption and what surrounds it, in Spain, implies the importance of emerging studies.

As with online social networks, so do digital games involving young people. The games available through the network are resources where gender stereotypes can be identified, which condition the use of people who use them. The research of [15] explored a series of factors and their impact on stereotyped perceptions and attitudes towards female players, since although women are also active in the sector, the stereotyped vision is a phenomenon of analysis, due to the conditioning that the individual entails.

For its part, the study by [13] explored possible gender differences, in relation to Internet use habits, reasons for use and problematic behaviour and use of the Internet by young people. In addition, the study also approaches the role of parents in the above dynamics. The results obtained confirmed relevant gender differences in the reasons for their use, in social networks, the use of mobile phones and instant messaging.

The indicated effects of gender differentiation on media consumption, on social networks, on digital games, on the widespread use of the Internet, on technological devices, including on equitable representation in studies and professions in the technological field are rooted, among other issues such as gender roles, in the threat of stereotyping. This concept means the risk of confirming a negative stereotype about one’s own social group [21]. The fear that some people, such as women and minorities, have of being classified as nerds, can lead to women not developing and growing in the same way as their male counterparts in these contexts [21].
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In order to respond to these situations, the recruitment of young people is considered, fundamentally those who are under-represented in the field, such as women and other minorities. This mechanism is particularly applicable in the field of education. And in this line [5] they investigated whether a gaming environment can be used to generate interest and commitment among young people. To achieve this, a group of young people were asked to design and develop a game. The result reflected the roles assumed, young women tended to aspire to jobs in health sciences, while young men sought a wider range of scientific careers.

Finally, and with a positive perspective, the most recent theories have been able to confirm the emergence of an empowered citizenship thanks to technology, which they use for the common good. Within this spectrum fostered in part by Internet activism, it is worth noting the gender difference in the use of technologies, where it is qualified that "young women use the Internet in a way that contributes to social welfare" [14].

3 Context
The initiative of the study presented in this paper was born from the project WYRED (netWorked Youth Research for Empowerment in the Digital). This project is funded through the Horizon 2020 programme and aims to give young people a voice in Digital Society issues [10, 11]. The main topic investigated in the project is the opinion on the influence of technology on the various aspects of young people lives. In addition, other related topics dealt with in the so-called conversations between young people held under the project, and maintained through the platform, are: gender stereotypes, self-image, fakes news, digital participation, and so on.

4 Methodology
The study carried out has been implemented from a quantitative perspective, through the application of an instrument that investigates gender stereotypes in relation to the use of the Internet. After the application of the instrument of [18] the tests of normality have been calculated to know the distribution of the samples, which has led to the later application of the non-parametric test of U of Mann-Whitney.

4.1 Participants
The questionnaire was sent to 58 participants. These participants were part of the second group of Pedagogy Degree of the University of Salamanca in the academic year 2018/2019, which worked on the platform of the WYRED Project through the subject of Methodology of Qualitative Research. The group was composed of 55 women and 3 men, of different nationalities: Spanish, Belgian and Bulgarian, and all of them were born between 1991 and 1999.

4.2 Instrumentation
In delimiting the field of research and establishing the object of study as the deepening of the existence of gender stereotypes in relation to the use of the Internet, a deep and detailed analysis of instruments was carried out to deepen this matter. Some interesting instruments on stereotypes in the technology sector were those of [2, 3, 12, 16]: the IRIS-Q questionnaire, and the Sustainability and Gender in Engineering (SaGE) survey. However, these were aimed at finding out why there is a gender gap in the education sector in the fields of technology and science, and yet none of the instruments indicated approaches gender stereotypes on the Internet.

However, this analysis led to the investigation of the [18] questionnaire, which delved into gender differences in relation to Internet use. This led to the conclusion of the analysis with the application of the aforementioned instrument, since it made it possible to achieve the stated objective.

The tool can be found in the publication "Gender differences of the Internet-related stereotypes in Russia". The aim of the research in [18] was to reveal stereotypes and self-stereotypes concerning women and men, and related to the use of the Internet by people of both sexes. The target population was all those people who had or had had some experience in the use of the Internet. The research was carried out using the psycho-semantic technique of "multiple identification" [19].

The [18] study investigated the gender stereotypes that Russians have towards the Internet. For this purpose, a 45-item questionnaire was defined, by means of which different types of behaviour linked to the Internet were described. The questionnaire included 45 questions that included 45 different types of Internet-related activities. The items were organized in eight different scales: "Scale 1. Professional and business uses of the Internet", "Scale 2. Internet-based education of children", "Scale 3. Entertainments", "Scale 4. Competent Internet use in order to realize personal goals", "Scale 5. Compensatory Internet use", "Scale 6. Cognitive uses of the Internet", "Scale 7. Highly qualified use of the Internet", and "Scale 8. Internet-mediated communication". The number of final items used in the questionnaire was forty, out of the forty-five initial items raised in the original instrument. The items can be seen in Table 1.

| Table 1: Scales and items from the [18] instrument scale on gender stereotypes on the Internet. |
| --- |
| **SCALE 1. PROFESSIONAL AND BUSINESS USES OF THE INTERNET** |
| 1. Be employed at a company supporting Internet- interactions between the employees |
| 2. Use e-mail at the workplace to communicate with colleagues and clients |
| 3. Search on the Internet information relevant for the current work |
| 4. Organize web-presentations of one’s professional activity or the activity of the company one is employed at |
| 5. Use of the Internet to realize one’s professional activity (e.g., distant trade, education, consulting service, etc.) |
| 6. Search professional contacts with persons and organizations through the Internet |
The odd scale used was defined as follows: 0 Never; 1 Very seldom; 2 Sometimes; 3 Occasionally; 4 Often; 5 Usually; 6 Always. In the survey of [18] the respondents were 95 volunteer university students in Moscow, 47 men and 48 women, with an average age of 22.9 years. Participants were asked to respond to the questionnaire imagining that they were responding in situations of different characters. This allowed the authors to carry out the analysis of the results, evaluating the results for the different characters requested from the Russian students.

The characters to be scaled by the respondents were the following: the self (each individual), the permanent Internet user (woman - man), the typical Russian person (woman - man), his ideal person (woman - man). Most of these characters (e.g., the case of the self and the typical Russian person both male and female) are common for research within the "multiple identification" paradigm. On the other hand, the role of ideals is also often counted on in order to be able to detect possible gender stereotypes related to the use of the Internet. And finally, behavioral specificities (permanent Internet users) are often included when respondents (myself) distance themselves from experts exclusively competent in the field.

The administration of the questionnaire that was carried out in the study of [18] was individual, rejecting a group administration or group work. In addition, the instrument was dispensed during breaks between classes or in a space where the person was alone. Before answering the questionnaire, they were given instructions, along with a resolution of doubts.

For data analysis and processing, confirmation factor analysis and non-linear multiple regression were implemented. The use of non-linear regression makes it possible to reveal the effect of the interrelations of different independent factors on their influence on the variables it determines [1].

Each person surveyed in the study fills in his or her individual matrix and, therefore, the set of all responses represents a three-dimensional data cube [19]. The average response matrix leads to a reduction from a cube to a two-dimensional matrix, one dimension less. To avoid loss of information, respondent responses are analyzed by columns, separately for each character. Thus, in the study, as a result, seven different matrices were obtained corresponding to the ranks of those surveyed for each character.

The results of the [18] study showed that self-stereotypes and gender stereotypes of men and women are close, especially at higher levels of competence in Internet use.

### 4.3 Study design and data collection

The **object of the study** was the gender stereotyped view on the use of the Internet and technology.

The **objective of the study** was to detect if the age of the young people, with some previous experience in Internet, marked differences in relation to the use of Internet. The aim of the study was to detect whether or not there was a dependence between the opinion items of the questionnaire and the age group of people surveyed.

For the determined objective, the instrument already described was applied, with the forty items indicated and the valuation scale for the items was followed.

Prior to the application of the questionnaire, a dynamic was developed throughout the weeks in the second year of the Degree in Pedagogy of the subject of Methodology of Qualitative

| SCALE 8. INTERNET-MEDIATED COMMUNICATION |
|------------------------------------------|
| 16. Spend time chatting                   |
| 18. Use the Internet to gain new acquaintances|
| 19. Seek on the Internet the one to become your future spouse |
| 32. Send out web cards                     |
Research of the University of Salamanca. This activity was supported by the European Project WYRED (netWorked Youth Research for Empowerment in the Digital); and was extended during the months of February, March, April and May 2019. The work was based on participation in the international conversations available on the project platform, through forums. The international conversations consisted in giving each young person his or her opinion freely on the subject raised, in an anonymous manner, guaranteeing his or her privacy. The forum was open to young people from different countries. In order to establish conversations where the different members of the forum understood each other, conversations were held in English. The thematic conversations in which the study group was involved were those from 25 February to 10 March 2019: “Exploration: gender stereotypes” and “How the way we use Internet or technology influence?”. Major themes approaches by the participants were: stereotypes about body image, stereotypes in sports, in the media, in children’s stories/movies, stereotypes implanted through gender roles in childhood, stereotypes about different sexual orientations and entities, etc.

The interactions generated and the debates produced were subsequently analysed using qualitative methodology and phenomenological method. The analysis of the contents of different types (text, images and videos) was carried out from CAQDAS Nvivo 12. In this process of analysis and interpretation of the contents was integrated into the sample itself participant with the aim of promoting awareness of the reality studied. The involvement of students and their interaction in the platform gave rise to the study that concerns us.

For the implementation of the questionnaire, after the aforementioned practice, Google Forms were used in such a way as to allow the students to respond digitally. The questionnaire of [18] was answered by the sample anonymously and outside the classroom. The answer had to be individual and they were asked to previously perform a reflective exercise on their answer. They were given some guidelines for carrying out the questionnaire in a classroom, with the purpose of being able to answer and share any doubts they had.

Unlike the study of [18], in the application of this study the students were not asked to respond by putting themselves in the situation of the different characters that were explained in the application with the Russian students. In this research the priority was to know the opinion of the subjects about themselves in relation to gender stereotypes and the use of the Internet, that is, their self-perception. The link to access the questionnaire was provided through the Studium Plus platform that the University of Salamanca puts at the service of the university community. They were told that their response was voluntary and that their responses would be treated in a completely anonymous manner, in accordance with the current Data Protection Law. Their access to the questionnaire was kept operational for four weeks in April, so that they could respond to the questionnaire calmly and in a moment of reflection. To encourage voluntary student participation, a first message was sent through the platform and two subsequent reminders.

4.4 Sample
The final sample was 48 people, 45 women and 3 men. 54.2% of the sample was born in 1999, 12.5% in 1998, 12.5% in 1997 and 12.5% in 1996, 6.3% in 1995, and 2.1% of the sample in 1991. 95.8% of the participants were of Spanish nationality, 2.1% Belgian nationality and 2.1% Bulgarian nationality. 95.8% of the participants spoke Spanish, coinciding with the same figure of Spanish nationality. 75% of the sample was studying or working, 8.3% of the sample was unemployed at the time of the study. 8.3%, in addition to carrying out their studies, were working for others and 10.4% were carrying out internships simultaneously with their studies.

5 Results and analysis
The analysis was carried out using IBM SPSS Statistics version 25 data analysis software, calculating the descriptive statistics.

First, a descriptive statistical analysis of student responses to the study items grouped by the two main age groups: ≤20 years and >20 years (Table 2) was performed. In the ≤20 age group, a sample of 26 people was available, compared to 22 people in the >20 age group, constituting two homogeneous distribution groups. Means and standard deviation of responses were extracted.

| Item | n | Medium ≤20 years | Typ. dev. ≤20 years | n | Medium >20 years | Typ. dev. >20 years |
|------|---|------------------|---------------------|---|------------------|---------------------|
| Item 1 | 26 | 3.23 | 1.65 | 22 | 3.45 | 1.59 |
| Item 2 | 26 | 3.54 | 1.98 | 22 | 3.77 | 1.82 |
| Item 3 | 26 | 4.58 | 1.30 | 22 | 4.55 | 1.50 |
| Item 4 | 26 | 3.35 | 1.81 | 22 | 3.73 | 1.93 |
| Item 5 | 26 | 4.23 | 1.70 | 22 | 4.64 | 2.17 |
| Item 6 | 26 | 3.35 | 2.17 | 22 | 3.73 | 1.90 |
| Item 7 | 26 | 2.46 | 1.88 | 22 | 3.05 | 1.83 |
| Item 8 | 26 | 3.69 | 1.28 | 22 | 4.09 | 1.41 |
| Item 9 | 26 | 3.88 | 1.65 | 22 | 4.00 | 1.19 |
| Item 10 | 26 | 3.69 | 1.64 | 22 | 3.86 | 1.42 |
| Item 11 | 26 | 5.31 | 1.78 | 22 | 4.86 | 0.83 |
| Item 12 | 26 | 3.73 | 1.28 | 22 | 4.23 | 1.13 |
| Item 13 | 26 | 1.88 | 1.83 | 22 | 2.64 | 1.64 |
| Item 14 | 26 | 4.88 | 1.21 | 22 | 4.77 | 1.06 |
| Item 15 | 26 | 3.31 | 1.40 | 22 | 3.45 | 1.68 |
| Item 16 | 26 | 2.92 | 1.62 | 22 | 2.45 | 1.81 |
| Item 17 | 26 | 2.15 | 2.05 | 22 | 1.23 | 1.60 |
| Item 18 | 26 | 1.96 | 1.50 | 22 | 2.77 | 1.82 |
| Item 19 | 26 | 2.85 | 1.66 | 22 | 3.32 | 1.75 |
| Item 20 | 26 | 5.19 | 1.74 | 22 | 4.91 | 1.37 |
| Item 21 | 26 | 5.77 | 4.30 | 22 | 5.50 | 5.12 |
| Item 22 | 26 | 3.12 | 1.77 | 22 | 3.59 | 1.68 |
| Item 23 | 26 | 3.31 | 1.78 | 22 | 3.64 | 1.89 |
Once the standard deviation of the responses to the items had been identified, the nonparametric Kolmogorov-Smirnov test (Table 3), also known as the nonparametric K-S test, was applied to determine the goodness of fit of the two distributions of the age groups. The Shapiro-Wilk (Table 3) normality test was also calculated to know, as with the previous test, whether the population had a normal distribution.

The null hypothesis (Hₐ) that the population had a normal distribution was taken as opposed to the alternative hypothesis (H₀) that the distribution was not normal.

The p-value results in the Kolmogorov-Smirnov test showed <.05 results of significance, leading to rejection of H₀ because the sample distribution was not normal. Only in one of the results was the null hypothesis accepted, due to the fact that in both distributions the p-value was > .05. This was item 17.

Table 3: Results of the Kolmogorov-Smirnov and Shapiro Wilk normality tests.

| Subject's age | Kolmogorov-Smirnov | Shapiro-Wilk |
|---------------|---------------------|--------------|
|               | Statistics g        | g Ne xt      | Statistics g | g Ne xt |
| Item 1        | ≤20                 | .294 26      | .00 0        | .890 26 | .010 |
|               | >20                 | .225 22      | .00 3        | .938 22 | .183 |
| Item 2        | ≤20                 | .284 26      | .00 0        | .823 26 | .000 |
|               | >20                 | .186 22      | .04 6        | .918 22 | .070 |
| Item 3        | ≤20                 | .320 26      | .00 0        | .748 26 | .000 |
|               | >20                 | .255 22      | .00 0        | .829 22 | .001 |
| Item 4        | ≤20                 | .218 26      | .00 3        | .912 26 | .029 |
|               | >20                 | .238 22      | .00 2        | .887 22 | .017 |
| Item 5        | ≤20                 | .251 26      | .00 0        | .848 26 | .001 |
|               | >20                 | .208 22      | .01 3        | .870 22 | .008 |
| Item 6        | ≤20                 | .238 26      | .00 1        | .848 26 | .001 |
|               | >20                 | .248 22      | .00 1        | .892 22 | .021 |
| Item 8        | ≤20                 | .216 26      | .00 3        | .861 26 | .002 |
|               | >20                 | .192 22      | .03 5        | .931 22 | .126 |
| Item 9        | ≤20                 | .248 26      | .00 0        | .919 26 | .042 |
|               | >20                 | .292 22      | .00 0        | .860 22 | .005 |
| Item 10       | ≤20                 | .220 26      | .00 2        | .890 26 | .009 |
|               | >20                 | .208 22      | .01 4        | .902 22 | .033 |
| Item 11       | ≤20                 | .156 26      | .10 3        | .913 26 | .032 |
|               | >20                 | .197 22      | .02 7        | .918 22 | .068 |
| Item 12       | ≤20                 | .272 26      | .00 0        | .772 26 | .000 |
|               | >20                 | .247 22      | .00 1        | .868 22 | .007 |
| Item 13       | ≤20                 | .199 26      | .01 0        | .918 26 | .041 |
|               | >20                 | .166 22      | .11 5        | .909 22 | .046 |
| Item 14       | ≤20                 | .226 26      | .00 1        | .840 26 | .001 |
|               | >20                 | .160 22      | .15 1        | .942 22 | .216 |
| Item 15       | ≤20                 | .230 26      | .00 1        | .823 26 | .000 |
|               | >20                 | .221 22      | .00 7        | .874 22 | .009 |
| Item 16       | ≤20                 | .155 26      | .11 2        | .905 26 | .020 |
|               | >20                 | .173 22      | .08 7        | .944 22 | .239 |
| Item 17       | ≤20                 | .208 26      | .00 5        | .927 26 | .067 |
|               | >20                 | .144 22      | .20 0*       | .926 22 | .102 |
| Item 18       | ≤20                 | .199 26      | .00 9        | .873 26 | .004 |
|               | >20                 | .278 22      | .00 0        | .777 22 | .000 |
| Item 19       | ≤20                 | .238 26      | .00 1        | .892 26 | .011 |
|               | >20                 | .210 22      | .01 3        | .929 22 | .116 |
| Item 20       | ≤20                 | .194 26      | .01 3        | .898 26 | .014 |
|               | >20                 | .151 22      | .20 0*       | .906 22 | .039 |
| Item 21       | ≤20                 | .244 26      | .00 0        | .800 26 | .000 |
|               | >20                 | .299 22      | .00 0        | .765 22 | .000 |
| Item 22       | ≤20                 | .474 26      | .00 0        | .524 26 | .000 |
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Thus, in order to detect possible dependencies between the students’s opinion responses and the age group to which they belonged, the non-parametric Mann-Whitney U test was applied. In addition, for item 17 of the study, the parametric T test was applied to independent samples to check whether the means of the two samples differed from each other or not.

For the hypothesis contrast it was taken as null hypothesis ($H_0$) that the opinion answers did not depend on the age group of belonging versus the alternative hypothesis ($H_1$) that the opinion answers did depend on the age group of belonging.

As can be seen from the results of the Mann-Whitney U test (Table 4) for the p-value the asymptotic significance was > .05, so no significant dependency ratio was detected, and the $H_0$ was accepted.

| Item 25 | ≤20 | .336 | 22 | .000 | 0 | ≤20 | .640 | 22 | .000 |
|--------|-----|------|----|------|---|-----|------|----|------|
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 26 | ≤20 | .191 | 22 | .01  | 5 | ≤20 | .922 | 26 | .050 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 27 | ≤20 | .167 | 22 | .11  | 2 | ≤20 | .901 | 22 | .031 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 28 | ≤20 | .207 | 26 | .00  | 5 | ≤20 | .807 | 26 | .000 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 29 | ≤20 | .237 | 26 | .00  | 1 | ≤20 | .845 | 26 | .001 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 30 | ≤20 | .209 | 22 | .00  | 5 | ≤20 | .922 | 26 | .050 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 31 | ≤20 | .173 | 22 | .08  | 7 | ≤20 | .949 | 26 | .303 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 32 | ≤20 | .187 | 22 | .02  | 0 | ≤20 | .885 | 26 | .007 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 33 | ≤20 | .313 | 26 | .00  | 0 | ≤20 | .769 | 26 | .000 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 34 | ≤20 | .222 | 26 | .00  | 0 | ≤20 | .869 | 26 | .003 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 35 | ≤20 | .308 | 26 | .00  | 0 | ≤20 | .649 | 26 | .000 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 36 | ≤20 | .220 | 22 | .00  | 2 | ≤20 | .910 | 26 | .026 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 37 | ≤20 | .266 | 26 | .00  | 0 | ≤20 | .880 | 26 | .006 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 38 | ≤20 | .182 | 26 | .02  | 7 | ≤20 | .899 | 26 | .015 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 39 | ≤20 | .124 | 22 | .20  | 0 | ≤20 | .937 | 22 | .173 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 40 | ≤20 | .280 | 26 | .00  | 0 | ≤20 | .810 | 26 | .000 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 41 | ≤20 | .272 | 22 | .00  | 0 | ≤20 | .885 | 22 | .015 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 42 | ≤20 | .192 | 26 | .04  | 5 | ≤20 | .883 | 26 | .007 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 43 | ≤20 | .212 | 26 | .00  | 4 | ≤20 | .895 | 26 | .012 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 44 | ≤20 | .245 | 26 | .00  | 1 | ≤20 | .909 | 22 | .046 |
| >20    |     |      |    |      |   | >20 |      |    |      |
| Item 45 | ≤20 | .163 | 26 | .00  | 1 | ≤20 | .932 | 26 | .087 |
| >20    |     |      |    |      |   | >20 |      |    |      |

Table 4: Results of the non-parametric Mann-Whitney U test.
As it was possible to conclude from the normality tests and the independence between the age group and the young people, the hypothesis of dependence between the age group and the young people opinion.

6 Discussion and conclusions

As it was possible to conclude from the normality tests and the non-parametric Mann-Whitney U test, together with the T test for independent samples applied on item 17, no evidence was detected showing that in the investigation the age group and the opinion and responses in relation to the use of the Internet were dependent on each other, thus accepting the H0.

On the other hand, the descriptive statistics carried out showed that, for the participants in the study, the young people of ≤20 years (n=26; \(\bar{x}=5.77; S=4.30\)) and >20 years (n=22; \(\bar{x}=5.50; S=1.193\)) agree that what they use the Internet most is for item 24 (Listen to music on the Internet).

Then, in order of preference, both groups agree on the use of item 28 (Use the Internet to make reservations for plane or train tickets), the item 29 (Use the Internet for planning out a tour), the item 35 (Use the Internet for item 24 (Listen to music on the Internet)).

At the same time, as a result for the T test for independent samples carried out for item 17, it could be observed that no significance was detected that would lead us to think about the dependence between age and answers, since p-value for Levene’s test was 0.311, and p-value for the T test was >0.740; therefore the H0 was also accepted for item 17, that is, the hypothesis of independence between the age group and the young people opinion.

Finally, it can be concluded that there is a need for further research on the subject, since, as has been shown, there is a clear differentiation by gender in the perceptions of technology and in the use of the Internet by young people. Starting from the scarce literature in the field, a socially important field of work is opened, on which to apply strategies that will be able to generate sociological and educational advances.

In relation to the constraints encountered in the study, the main one was the low equitable gender representation in the class group in which the study was applied. 94.8% of the total participants in the group were women. On the other hand, due to the limitations of the context of the class and of the subject, it was not possible to invest the necessary time involved in the application of the questionnaire as in its original study, with the answer depending on the different roles.

As a prospective, the ideal and expected for future studies will be to repeat the study with a representative and egalitarian sample of genders, and with a wider range of ages, in order to carry out a contrast of hypotheses considering the possible relationship between the opinion of young people and their use of new technologies and the Internet, and their gender, and wider age groups.

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