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# Reasons for Plagiarism in Higher Education

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**Background and Purpose:** The survey was performed to determine the reasons that lead students to possibly commit plagiarism during their studies. By doing so, we wanted to determine the main reason for the appearance of plagiarism and how, within this main reasons, various indicators of plagiarism are judged and, finally, how demographic data and student motivation for study are associated with the reasons for plagiarism.

**Design/Methodology/Approach:** A paper-and-pencil survey was carried out among 17 faculties of the University of Maribor in Slovenia. A sample of 139 students 85 males and 54 females participated in this study, ages ranged from 19 to 36 years. The questionnaire contained 95 closed questions referring to: (i) general data, (ii) education, (iii) social status, (iv) awareness of plagiarism, and (v) reasons for plagiarism. Parametric and nonparametric statistical tests were performed depending on distributions of the answers.

**Results:** The results reveal that information and communication technology is largely responsible for the plagiarism with two reasons highlighted: ease of copying and ease of access to materials and new technologies. We also found some differences between low and high motivated students. Different average values of the answers considering motivation for study were confirmed for academic skills, teaching factors and other reasons for plagiarism, where the average for lower motivated students is significantly different (higher) than the average for higher motivated students. At the end we could find no direct relationship between the average time spent on the Internet and plagiarism.

**Conclusion:** The transmission of knowledge is the basic mission of faculties. This mission is based on moral beliefs about the harmfulness of its abuse, and plagiarism is exactly such abuse. Regardless of the students past at this point professors are those who could greatly contribute to the right set of skills to keep students off plagiarising.

**Keywords:** plagiarism, higher education, reasons for plagiarism, academic skills, teachers

## 1 Introduction

Plagiarism is a recurring problem in higher education (Jiang, Emmerton, & Mckange, 2013; Lorenz, 2013). While we search for a common definition of plagiarism, we are coping with a challenge for which no answer yet exists. Various authors advocate different definitions: citing direct text without attribution (Belter & DuPre, 2009), citing parts of text of another author, using parts of text without citing (Colnerud & Rosander, 2009), presentation of foreign ideas as their own, without a clear reference to the source ((Hard, Conway, & Moran, 2006). Furthermore, Perrin (2009), Larkham (2002) and Culwin (2001)

define plagiarism as the use of the author's words, ideas, reflections and thoughts without proper acknowledgment of the source. An extended definition of plagiarism takes into account the fact that if a student does not think about it and doesn't write his text all alone and does not apply the appropriate bibliographical references, this is indeed plagiarism (Lathrop & Foss, 2000).

Students are under enormous pressure from family, peers, and instructors to compete for scholarships, admissions, and, of course, place in the job market. They often see education as a rung in the ladder to success, and not an active process valuable in itself. Because of this, students tend to focus on the end results of their research,

rather than the skills they learn in doing it (Turnitin.com and Research Resources). This often results in plagiarism. Students justify plagiarism by pointing out that since their peers plagiarize, they must do the same to keep up (Turnitin.com and Research Resources, n.d.). It is clear that a lot of students plagiarise intentionally. Many authors tried to explain the reasons which led students to plagiarise. These reasons vary from being lazy (Dordoy, 2002), poor time management (Dordoy, 2002), pressure from other students, (Devlin, & Gray, 2007; Dordoy, 2002; Errey, 2002; Park, 2003; Wilhoit, 1994;), pressure to receive higher grades (Dordoy, 2002; Park, 2003; Wilhoit 1994), gaining easy access to material via the internet (Dordoy, 2002), fear of failure and taking risks because they think they will not get caught (Dordoy, 2002, & Sutherland, 2004). Reasons for plagiarising unintentionally may include collaborative team work in producing an assignment (Wilhoit 1994), misunderstanding of rules (Dordoy, 2002) and not being aware of what plagiarism entails (Dordoy, 2002).

Along these lines, the purpose of our study was to investigate the reasons for plagiarism in higher education. Our findings might aid in preventing or reducing plagiarism among students. The survey was aimed at obtaining a view toward the retention and the continuation of academic integrity. We wanted to highlight how students evaluate individual sets of causes for possible plagiarism, which of this causes are dominant and what the correlations between the general and opinion parts of the survey are. Furthermore, we wanted to find out, how the wider academic community, and finally the social environment could support the student in coping with this problem. We classified the reasons for plagiarism as following: information and communication technology, control, punishment and consequences, academic skills, teacher factor, different pressures of the external public, pride, and other reasons.

The research questions of the study were divided into three groups:

RQ group 1: What are the reasons for plagiarism in higher education, according to students? Are there any differences between male and female students regarding this? Are the reasons for plagiarism connected with specific study areas (formal, social, natural sciences)?

RQ group 2: Does the student's motivation affect his/her reasons for plagiarism? Do higher motivated students plagiarise less?

RQ group 3: Is plagiarism correlated with time spent on the internet (web)? Does social status connected with work and scholarship affect plagiarism?

Next the theoretical background is presented.

## 2 Theoretical background

The reasons for the plagiarism such as self-esteem, achievement desire and study motivation, are discussed by many authors (Angell, 2006; Rettinger & Kramer, 2009; Williams, Nathanson, & Paulus, 2010). In contrast Barnas (2000) claims that one of the main causes is the teacher factor. Songsriwittaya, Kongsuwan, Jitgarum, Kaewkuekool, and Koul (2009) state that the reason that motivates students to plagiarize is the goal to get good grades and to compare their success to their peers. Students with performance goals are more likely to engage in plagiarism than students with mastery goals. The views of Engler, Landau, & Epstein (2008), Hard, Conway, & Moran (2006) are also noteworthy. They say that plagiarism arises out of social norms and peer relationships. As a very common cause, the growing diversity of sources and form is emphasized, which (as such) often represents uncertainty regarding correct information usage (Evering & Moorman, 2012). The flood of online resources, without precisely stated authorship, may be one of the problems where students have difficulty determining what is right and what is wrong. Online resources are also available 24 hours a day, 7 days a week and enable a flood of information, which often leads to a confused state in a student. Given students' ease of access to both digital information and sophisticated digital technology, several researchers have noted that students may be more likely to ignore academic ethics and to engage in plagiarism than would otherwise be the case (Chang, Chen, Huang, & Chou, 2015). Many students simply do not view copying homework answers as wrong-at least not when it is done with technology (Yang, 2014).

A common reason is the poor preparation of notes on lectures (Rettinger & Kramer, 2009), which can lead to inadequate referencing of the text. We need to know that authors' words are not only written but also oral. Many students come with the question of primary and secondary sources, which can also become a reason for plagiarism. Additional reasons are related to the problem of increasing the number of students per professor, the pressure for high estimates, time pressures and the dissatisfaction of students with their study (Carrol, 2002). As we mentioned before the reason for plagiarism may also arise from personal factors, such as student age, sex, study program, study level and cultural background.

Fish and Hura (2013) think that plagiarism is much more likely to occur if students have an unclear perception of plagiarism and that plagiarism is quite common among their peers, and that the consequences are minor Okoro (2011) also highlights studies that reveal that 90% of students are aware that plagiarism is wrong and unethical but, at the same time, there is the academic world that is aware of the facts that students plagiarize (despite all the mentioned risks), because they feel that nobody will catch them. Some studies argue that students do not know

the actual nature of plagiarism because they have not been taught about proper citation methods (Blum, 2009; Carrol, 2007; Hansen, 2003).

The results of a study conducted in the US and Canadian universities present the incidence of plagiarism, since one of five students admitted that he/she has cheated on tests or exams at least once in the last year, but the number rises to 59% for undergraduate students (McCabe, 2005). Selwyn (2008) presents results from the UK, where about 60% of undergraduate students admitted plagiarism connected to the internet in the previous year and the fact that those who work on the internet better are more prone to plagiarism.

The idea of our research is presented in the initial part of the paper. The method and results of the research are presented in the next chapter.

### 3 Method

#### Sample

The paper-and-pencil survey was carried out in 2015 among 17 faculties of the University of Maribor in Slovenia. The survey was carried out by the Faculty of Organizational Sciences, University of Maribor.

A sample of 139 students (85 males (61%) and 54 (39%) females) participated in this study. Ages ranged from 19 to 36 years, with a mean of 21 years and 7 months ( $M=21.57$  and  $SD=2.164$ ). More than half (53%) of the participants

were formal sciences students, 23% were social sciences and 23% natural sciences students. The majority (75.5%) attended traditional courses, and 24.5% blended learning. More than half (52.5%) were working at the time of the study, and 42% of all participants had scholarships. More than two thirds (70%) of them were highly motivated for study and 30% less so; 27.5% of students spend 2 or fewer hours per day on the internet, 40.5% spend between 2 and 5 hours and 32% spend 5 or more hours on the internet per day. The general data can be seen in Table 1.

#### Instrument

The questionnaire contained 95 closed questions referring to: (i) general data (gender, age, study motivation, time spent on the internet), (ii) education (study level, study area, way of study, average grade), (iii) social status (working status, scholarship, financial situation, residence, father's and mother's educational level), (iv) awareness of plagiarism, and (v) reasons for plagiarism (ICT and web, control, academic skills, teaching factors, pressure, pride, other). The items in the (iv) and (v) groups used a 5-point Likert scale from strongly disagree (1) to strongly agree (5), with larger values indicating stronger orientation.

### 4 Results

All statistical tests were performed with SPSS at the significance level of 0.05. Parametric tests (Independent – Sam-

Table 1: General data

Gender	Male	85	61%
	Female	57	39%
Study level	Bachelor	118	85%
	Masters	21	15%
Study area	Formal sciences	74	53%
	Social sciences	32	23%
	Natural sciences	32	23%
Way of study	Classic learning	105	75.5%
	Blended learning	34	24.5%
Working within time of study	Yes	73	52.5%
	No	66	47.5%
Scholarship	Yes	58	42%
	No	81	58%
Motivation for study	Lower	41	30%
	Higher	97	70%
Average time spent on the internet in hours	2 or fewer hours	38	27.5%
	between 2 and 5 hours	56	40.5%
	5 or more hours	44	32%

Table 2: Average values and standard deviations of the answers

		Mean	St. deviation
1.1	It is easy for me to copy/paste due to contemporary technology	4.22	0.805
1.2	I do not know how to cite electronic information	2.35	1.054
1.3	It is hard for me to keep track of information sources on the web	2.93	1.075
1.4	I can easily access material from the internet	4.20	0.800
1.5	Easy access to new technologies	4.20	0.800
1.6	I can easily translate from other languages	3.49	1.093
1.7	I can easily combine material from multiple sources	3.82	1.002
1.8	It is easy to share documents, information, data	4.14	0.844
<b>1</b>	<b>ICT and Web</b>	<b>3.67</b>	<b>0.577</b>
2.1	There is no teacher control on plagiarism	2.50	0.912
2.2	There is no faculty control on plagiarism	2.35	0.859
2.3	There is no university control on plagiarism	2.27	0.839
2.4	There are no penalties	2.12	0.910
2.5	There are no honour codes on plagiarism	2.41	0.915
2.6	There are no electronic systems of control	2.14	0.929
2.7	There is no systematic tracking of violators	2.60	1.034
2.8	I will not get caught	2.17	1.096
2.9	I am not aware of penalties	2.55	1.078
2.10	I do not understand the consequences	2.58	1.135
2.11	The penalties are minor	2.51	0.898
2.12	The gains are higher than the losses	2.57	1.008
<b>2</b>	<b>Control</b>	<b>2.40</b>	<b>0.615</b>
3.1	I run out of time	3.39	1.113
3.2	I am unable to cope with the workload	2.79	1.087
3.3	I do not know how to cite	2.54	1.088
3.4	I do not know how to find material	2.40	1.004
3.5	I do not know how to research	2.31	0.939
3.6	My reading comprehension skills are weak	1.75	0.790
3.7	My writing skills are weak	2.14	0.967
3.8	I sometimes have difficulty expressing my ideas	2.58	1.089
<b>3</b>	<b>Academic skills</b>	<b>2.49</b>	<b>0.708</b>
4.1	The tasks are too difficult	2.84	0.968
4.2	Poor explanation - bad teaching	3.11	1.081
4.3	Too many assignments in a short time	3.36	1.022
4.4	Plagiarism is not explained	2.78	1.220
4.5	I am not satisfied with course contents	3.05	1.038
4.6	Teachers do not care	2.76	0.989
4.7	Teachers do not read students' assignments	2.65	0.962
<b>4</b>	<b>Teaching factors</b>	<b>2.93</b>	<b>0.702</b>

Table 2: Average values and standard deviations of the answers (continued)

5.1	Family pressure	1.86	0.827
5.2	Peers pressure	1.93	0.881
5.3	Under stress	2.76	1.221
5.4	Faculty pressure	2.64	1.183
5.5	Money pressure	2.37	1.105
5.6	Afraid to fail	2.83	1.197
5.7	Job pressure	2.32	1.131
<b>5</b>	<b>Pressure</b>	<b>2.39</b>	<b>0.845</b>
6.1	I do not want to look stupid in front of peers	2.40	1.108
6.2	I do not want to look stupid in front of professor	2.47	1.131
6.3	I do not want to embarrass my family	2.38	1.182
6.4	I do not want to embarrass myself	2.45	1.240
6.5	I focus on how my competences will be judged relative to others	2.45	1.047
6.6	I am focused on learning according to self-set standards	3.04	1.128
6.7	I am afraid to ask for help	2.26	0.981
6.8	My fear of performing poorly motivates me to plagiarize	2.27	0.997
6.9	Assigned academic work will not help me personally/professionally	2.19	1.078
<b>6</b>	<b>Pride</b>	<b>2.43</b>	<b>0.845</b>
7.1	I do not want to work hard	2.48	1.132
7.2	I do not want to learn anything, just pass	2.00	0.956
7.3	My work is not good enough	2.09	0.900
7.4	It is easier to plagiarize than to work	2.65	1.148
7.5	To get better-higher mark (score)	2.71	1.124
<b>7</b>	<b>Other reasons</b>	<b>2.39</b>	<b>0.811</b>

ples *t*-Test, Paired – Samples *t*-Test, One-Way ANOVA) were selected for normal and near normal distributions of the answers. Nonparametric tests (Mann-Whitney Test, Kruskal-Wallis Test, Friedman's ANOVA) were used for significantly non-normal distributions.

### RQ group 1

The average values of the answers (and standard deviations) in the sample, referring to the reasons for plagiarism are shown in Table 2.

According to Friedman's ANOVA, the reasons for plagiarism can be divided into three homogeneous groups. First and dominating are ICT and Web reasons (Group 1), the second group consists of teaching factors (Group 4) and all the other reasons (2, 3, 5, 6 and 7) belong to Group 3. The distributions of the average values of the answers in Groups 2, 3, 5, 6 and 7 are not significantly different

( $p=.066$ ; see Table 3).

ICT and Web reasons were detected as dominating reasons for plagiarism and, as such, they were investigated in more detail (Table 2). That the distributions of the answers to the questions 1.1, 1.4, 1.5 and 1.8 are not significantly different was confirmed by Friedman Test ( $Chi-Square = 1.638, p=.651$ ). Consequently, the average values (means) of the answers to the questions 1.1, 1.4, 1.5 and 1.8 are not significantly different, whereas the distributions of the answers for all the other pairs were confirmed to be significantly different.

Different distributions of the answers considering gender were confirmed for 1.2 and 1.4 by the Mann-Whitney Test ( $p=.020; p=.048$ ). It seems that male students on average have more problems with knowing how to cite electronic information than female students do; female students can also access material from the internet more easily (Table 4). Different distributions of the answers con-

Table 3: Homogeneous subsets according to Friedman's ANOVA

Group	Sample average rank		
	Subset 1	Subset 2	Subset 3
5	3.094		
2	3.216		
7	3.295		
6	3.511		
3	3.543		
4		4.903	
1			6.439
Test Statistic	8.806		
Sig (2-sided)	.066		

Table 4: Descriptive statistics for individual statements (ICT and Web) according to gender and results for Mann-Whitney Test

	ICT and Web	Male		Female		Mann-Whitney Test	
		Mean	Std. Dev.	Mean	Std. Dev.	Z	p
1.2	I do not know how to cite electronic information	2.49	1.042	2.11	1.040	-2.322	.020
1.4	I can easily access material from the internet	4.08	0.862	4.39	0.656	-1.976	.048

Table 5: Descriptive statistics for individual statements (ICT and Web) according to study area and results for Kruskal-Wallis Test

	ICT and Web	Formal Sciences		Social Sciences		Natural Sciences		Kruskal-Wallis Test	
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Chi-Square	p
1.2	I do not know how to cite electronic information	2.54	1.088	1.91	1.027	2.31	0.896	9.574	.008
1.6	I can easy translate from other languages	3.73	0.983	3.25	1.136	3.22	1.184	6.065	.048

sidering study area were confirmed for 1.2 and 1.6 by the Kruskal-Wallis Test ( $p=.008$ ;  $p=.048$ ). Students enrolled in social sciences seem to have fewer problems with citing electronic information than students of formal and natural sciences. However, students of formal sciences find translating from other languages easier than students from the other two science areas do (Table 5).

Different average values of the answers considering gender were confirmed by the Independent  $t$ -Test ( $t=2.247$ ,  $p=.026$ ). This was also done for the pride reasons, where the average for male ( $M=2.56$  and  $SD=.854$ ) is significant-

ly different (higher) than the average for female ( $M=2.24$  and  $SD=.797$ ). The normality of distribution for average values of the answers within groups (male and female) was checked with a Kolmogorov-Smirnov test, the results of which were not significant. The average values of the answers for individual statements 6.5, 6.7 and 6.9 and the significances for  $t$ -Test for equality of means are shown in Table 6. The average values of the answers for these three statements are significantly different (higher for male than female).

Table 6: Descriptive statistics for individual statements (pride group) and results for *t*-Test

	Pride	Male		Female		<i>t</i> -Test	
		Mean	Std. Dev.	Mean	Std. Dev.	<i>t</i>	<i>p</i>
6.5	I focus on how my competences will be judged relative to others	2.65	1.081	2.13	0.912	3.067	.003
6.7	I am afraid to ask for help	2.44	1.017	1.98	0.858	2.826	.005
6.9	Assigned academic work will not help me personally/professionally	2.42	1.100	1.83	0.947	3.207	.002

Table 7: Descriptive statistics for individual statements (academic skills, teaching factors and other reasons) according to motivation and results for *t*-Test

			Lower motivation		Higher motivation		<i>t</i> -Test	
			Mean	Std. Dev.	Mean	Std. Dev.	<i>t</i>	<i>p</i>
Academic skills	3.1	I run out of time	3.71	1.209	3.25	1.051	2.244	.026
	3.2	I am unable to cope with the workload	3.10	1.136	2.65	1.041	2.248	.026
	3.3	I do not know how to cite	2.95	1.176	2.38	1.015	2.844	.005
	3.4	I do not know how to find material	2.71	1.031	2.27	0.974	2.380	.019
	3.5	I do not know how to research	2.61	0.972	2.19	0.905	2.461	.015
	3.8	I sometimes have difficulty expressing my own ideas	2.88	1.208	2.44	1.010	2.177	.031
Teaching factors	4.2	Poor explanation - bad teaching	3.44	1.001	2.97	1.094	2.363	.020
	4.3	Too many assignments in a short time	3.66	0.938	3.23	1.036	2.299	.023
	4.5	I am not satisfied with course contents	3.34	1.087	2.94	0.998	2.113	.036
	4.6	Teachers do not care	3.13	0.939	2.61	0.977	2.807	.006
Other reasons	7.1	I do not want to work hard	2.80	1.269	2.35	1.051	2.178	.031
	7.2	I do not want to learn anything, just pass	2.56	1.074	1.76	0.801	4.283	.000
	7.3	My work is not good enough	2.39	1.046	1.97	0.809	2.303	.025

## RQ group 2

Different average values of the answers considering motivation for study were confirmed with ANOVA for academic skills, teaching factors and other reasons for plagiarism, where the average for lower motivated students is significantly different (higher) than the average for higher motivated students ( $p=.002$ ;  $p=.008$ ;  $p=.017$ ). Means and standard deviations of the answers for individual statements and the results for *t*-Test of equality of means are shown in Table 7.

As can be seen in Table 7, on average students with lower motivation run out of time, are unable to cope with the workload, do not know how to cite, do not know how

to find material or draw conclusions from the research, and have difficulties in expressing their own ideas. They also find that teachers give poor explanations and think they get too many assignments in a short time. The question here could also be why their motivation is low. It could be that they are not satisfied with course contents. Since higher motivated students seem to be much more satisfied with course contents ( $t=2.113$ ,  $p=.036$ ) (see statement 4.5 in Table 7). Lower motivation could also be due to students' perception of teachers' relation with them. As can be seen in Table 7, students with lower motivation think that teachers do not care ( $t=2.807$ ,  $p=.006$ ). Lower study motivation is also more obvious for students who do not want to work

Table 8: Descriptive statistics for statement "It is easier to plagiarize than to work" according plagiarism and results for ANOVA

	Other reasons	Students plagiarised						ANOVA	
		never		once		2 or more time		F	p
		Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.		
7.4	It is easier to plagiarize than to work	2.33	1.012	2.73	1.087	2.90	1.300	3.040	.051

Table 9: Results for Independent t-Test for Statement 7.4 regarding plagiarism

7.4	It is easier to plagiarize than to work	Students plagiarised		t-Test	
		never	once	t	p
		never	2 or more time	-1.900	.060
once	2 or more time	-2.320	.023		
		once	2 or more time	-0.693	.490

Table 10: Cross-tabulation

		Students plagiarised		
		never	once	2 or more times
Motivation	lower	16	14	11
	higher	30	37	30

hard ( $t=2.178$ ,  $p=.031$ ) and just want to pass and do not want to learn anything ( $t=4.283$ ,  $p=.000$ ) and those who think their work is not good enough ( $t=2.303$ ,  $p=.025$ ).

Results of the ANOVA test showed that the frequency of plagiarising does not affect other reasons for the plagiarism group. The only statistically important difference concerns the statement that it is easier to plagiarise than to work (Table 8). Students who plagiarised two or more times in average think that it is easier to plagiarise than to work than students who never plagiarised. Different average values of the answers to the statement were confirmed by an Independent  $t$ -Test ( $t=-2.320$ ,  $p=.023$ ) for the students in groups "never" and "2 or more" (Table 9).

Chi-Square Test of Independence was also used to determine whether higher motivated students plagiarise less. The relationship between variables can be seen in Table 10. According to the calculated  $p$ -value ( $Chi-Square=0.854$ ,  $p=.652$ ), the independence of the variables cannot be declined.

The Spearman's correlation coefficient between motivation (higher and lower motivated students) and plagiarism for the sample data is 0.071. Based on the significance of the correlation test ( $p=.409$ ) we cannot say that high motivated students plagiarise less.

### RQ group 3

A Chi-Square Test of Independence was used to determine whether there is a significant association between the average time spent on the internet and plagiarism. The relationship between variables can be seen in Table 11. According to the calculated  $p$ -value ( $Chi-Square=4.364$ ,  $p=.359$ ), the null hypothesis that the variables are independent cannot be declined. The Spearman's correlation coefficient between average time spent on the internet and plagiarism for the sample data is 0.088. Based on the significance of the correlation test ( $p=.306$ ), we cannot say that plagiarising is correlated with time spent on the internet.

Regarding social status, such as work and scholarships, we determined that the only statistically important difference between students who work ( $M=2.30$  and  $SD=0.622$ ) and who do not ( $M=2.51$  and  $SD=0.593$ ) regarding the reasons for plagiarism concerns the group control ( $t=-1.996$ ,  $p=.048$ ).

Different distributions of the answers considering work within the time of the study were confirmed by statements 2.1 ( $Z=-3.274$ ,  $p=.001$ ) and 2.2 ( $Z=-2.158$ ,  $p=.031$ ) using the Mann-Whitney Test (Table 12). As can be seen, students who do not work more often think that there is no teacher and no faculty control on plagiarism than those who work.

Table 11: Cross-tabulation

		Student plagiarised		
		never	once	2 or more times
Average time spent on the internet in hours	2 or fewer hours	12	16	10
	between 2 and 5 hours	23	17	16
	5 or more hours	10	19	15

Table 12: Results for Mann-Whitney Test

	Control	work: Yes		work: No		Mann-Whitney Test	
		Mean	Std. Dev.	Mean	Std. Dev.	Z	p
2.1	There is no teacher control on plagiarism	2.26	0.800	2.77	0.957	-3.274	.001
2.2	There is no faculty control on plagiarism	2.19	0.828	2.53	0.863	-2.158	.031

Descriptive statistics (*t*-Test) of the reasons for plagiarism according to the scholarship was also calculated but showed no statistically important differences between those who have and do not have scholarships.

## 5 Discussion

### *The predominant causes for plagiarism*

The results of our research showed that information and communication technology are the most apparent cause with an average value of 3.67 (see Table 2). Since the plagiarism is highlighted not only as an academic question, it is important to relate the personal lives of students with a high degree of causal relationship between plagiarism and social factors such as living in the digital age, daily Internet exposure and the inclusion of the Internet in the academic environment. Although there is no empirical research which would directly link the plagiarism and the Internet (Carter, 2008), numerous studies show the ease of access to Internet material as a catalyst for plagiarism (Emerson, 2008; Ma, Wan, & Lu, 2008; Ma et al., 2007; Power, 2009; Senders, 2008; Suarez & Martin, 2001; Sulikowski, 2008). Students in our research indicate the information communication technology (ICT) to be the cause for plagiarism. Within the ICT cause, two reasons are highlighted: ease of copying, with an average value of 4.22 (see Table 2) and ease of access to materials and new technologies, with an average value of 4.20 (see Table 2).

Technology has become a major cultural communication tool and, despite offering better access to a variety of ideas and information, it also presents an opportunity for misrepresented ideas and information (Howard & Davies, 2009). We are aware that authorship may become blurred

because of the abundance of ways to access information (Moorman & Horton, 2007). Students have frequent experience with the various internet search browsers, different social media, social networks and multimedia tools (such as digital, video cameras) outside the academic environment. The problem occurs because the digital literacy experience is not automatically connected with the skills knowledge and expertise that are necessary for searching, navigation and evaluation of information in an ethical sense (Poe, 2010). Taking responsibility for teaching skills and competencies related to plagiarism is an urgent imperative (Evering & Moorman, 2012).

The second most important cause for plagiarism are items related to teachers with an average of 2.93 (see Table 2). The reason may be supported by the fact that many students still cannot accept responsibility for their behaviour. They follow fixed principles that are specific to their practices, especially when they are a part of the education system. Many youths avoid responsibility (Arnett, 2000); according to several authors there is a lack of the responsibility of students, and this is a widespread concern (Kolbert, 2012; Trzesniewski & Donnellan, 2010).

Following the survey on this topic (Evering & Moorman, 2012), the orientation of schools, parents and the wider social environment should be focused on the way the information is collected online according to ethical principles and not only by the evaluation of what is right and what is wrong. We are not coping with a problem of a given technology and the development guidelines, neither of the availability of resources. We would like to present the thesis that is necessary for young people to be oriented to the proper field of education where they can get the full range of skills, abilities and competencies within the ICT hand-in-hand with moral and ethical judgement when dis-

cussing the internet and plagiarism.

Furthermore, our goal was to discover differences between male and female students while considering ICT as the dominant cause for plagiarism. A study published at the University of the Balearic Islands in Spain has found that, on the whole, male students are more likely to plagiarize than their female counterparts in their college courses. The study did not attribute it to an ethical difference of judgement between the sexes, but rather that male students are more likely to procrastinate and then turn to plagiarism in the rush to complete the assignment. The study, which looked at nearly 2800 students at the college, found that 81.3% of those queries had copied fragments from websites and 72.5% had copied from encyclopaedias and other printed sources ("As of March 30, 2015, the Plagiarism today listed on its website <https://www.plagiarismtoday.com/2015/03/30/do-men-plagiarize-more-than-women/>"). Our research showed that male students more than female students disclose pride, unwillingness to help others and the belief that their academic work will do no good for them (see Table 4). However, there are also some studies which show us that there are no differences between male and female students regarding plagiarism. One study determined that students plagiarize regardless of gender or age (Jurdi, Hage, & Henry, 2011), and another one indicated that plagiarism is more based on moral values developed in the primary family (Kecici, Bulduk, Oruc, & Celik, 2011). Our research showed differences according to the statements "I do not know how to cite electronic information" and "I can easily access material from the internet" (see Table 4). Responses indicate that male students have more problems with ways of citing Internet information, and female students seek material from the Internet more easily.

It is evident that there are differences in the academic instructions presented to students, which very clearly present ways of seeking information and ways of accompanying research work. We propose that the academic world clarify the instructions for proper citations and consider tools that would prepare young people to properly handle electronic resources. The different methods of citation, could also be one of the reasons for improper citations of sources. This highlights the possible standardization of ways of quoting sources, which could make work easier.

Regardless, plagiarism is not only the problem of our time. Students who intentionally or inadvertently copied the words of another author have existed for the last two hundred years (Carter 2008). Plagiarism has been known from the outset of over civilisation: the only thing that changed is the media and socio cultural expectations of our society (Sulikowski, 2008). Although plagiarism has always been an academic issue, from students' perspective, the main reason for plagiarism was ICT technology. The internet, including different search engines, social networks and the possibility of electronic communication,

have given students an extremely large field of access to information materials for study projects. The survey *Pew Internet and American Life Project* (Lenhart, Madden, & Hitlin, 2005) showed that almost 90% of students aged between 12 and 17 years use the internet, and that most of the students and their parents believe that the internet helps in meeting the study requirements (Sisti, 2007).

### ***Plagiarism in connection with motivation***

Based on the results of our research, we find that the difference between low and highly motivated students largely lay in different academic skills, teaching factors and other reasons for plagiarism. This is a view of human behaviour that is supported by various studies that show us if individuals believe that they can perform a particular job effectively they are more eager to use any means to achieve their goal (Bandura, 1986). Among the reasons that were detected in low-motivated students we find the lack of time, inability to cope with the workload, lack of knowledge to cite, how to find material and how to research, and of abilities to express their ideas (see Table 7). Zimmerman (2002) claims that individuals who are self-regulated are more aware of the importance of their learning, their determination of personal goals, determination of strategies to achieve the objectives, projections of their behaviour and increasing their motivation. Particularly among low-motivated students we find that the reasons given by them are poor explanations by their teachers and too many assignments in too little time for them. It is interesting that there are no differences between low and highly motivated students within the frequency of plagiarism (see Table 7). Some researchers argue that self-efficacy has an enormous impact on student performance (Coutinho & Neuman, 2008; Long, Monoi, Harper, Knoblauch, & Murphy, 2007; Pajares, 1996; Schunk, 1989).

Our perspective is that professors are those who greatly contribute to the right set of skills and abilities of students in the conditions of plagiarism (here we agree with Fish & Hura, 2013). Higher motivated students are more satisfied with the content of the curriculum and teacher's involvement. Less motivated students do not want to invest too much effort in study; they just want to pass the exam, and they feel that their work is not good enough. However, we have to be aware that lower motivated students also blame the allegedly poor explanations of their teachers (see Table 7).

### ***Time spent on the Internet and Social status***

Our research has shown that there is no direct relationship between the average time spent on the Internet and plagiarism and that within the social status of students there are differences only between those who work during their studies and those who do not work. Students who do not work largely reveal control (see Table 2) as a reason for plagiarism. Among students who receive a scholarship for

study and students who do not, we did not find any differences in the causes for plagiarism (see Table 12).

Despite the obvious advantages of the Internet, the time spent online may be a cause for concern. Students who have trouble with controlling their own time may suffer from internet addiction, which has a negative impact on students in general (Young, 1998; Chen & Peng, 2008; Cao & Su, 2007).

Advances in computer technology have enabled the internet to serve as a platform not only to seek information, but also to exchange ideas and knowledge with other users, and obtain expert opinions via email, teleconferencing, chatting and other avenues. Nevertheless, the advent of social network sites such as Facebook, Twitter, LinkedIn and others that include chatting and online games have changed the perception of internet use from one that is associated with learning to that of a socializing facility. Such website applications have resulted on the internet being used for both academic and non-academic activities (Ayub, Hamid, & Nawawi, 2014).

Websites can certainly affect how students use the Internet, and they change their educational habits, which manifests as the progressive growth of e-tools for learning, e-classrooms and other benefits that faculties may offer students as the form of information and communication technologies through which can enrich competencies and knowledge.

Understanding and achieving results based on what is already known as well as anticipated in advance, such as in the work environment is also important in the academic environment. The transmission of knowledge is the basic mission of faculties. This mission is based on moral beliefs about the harmfulness of its abuse, and plagiarism is exactly such abuse. Teachers should be able to transmit the knowledge of these moral beliefs to students in such a way that they will be able to cope with plagiarism.

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