

## CAUSES OF THE UNETHICAL USE OF INFORMATION TECHNOLOGY IN THE ACADEMIC ENVIRONMENT

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### Abstract

*The problems related to information technology are present across various domains, including the educational one. The accelerated development of information technology has inevitably led to the adaptation of the educational system to the demands of the knowledge society. In nowadays society, the use of information technology by students can be both an opportunity and a threat. One of the negative consequences of resorting to information technology is related to unethical use. Plagiarism, the improper use of certain programs, hacking different software etc. are cases of unethical use of information technology by students. The purpose of this paper is to perform a review of the literature and highlight the reasons why students choose to resort to such methods, but also to emphasise their approach to unethical use of information technology.*

**Key words:** Causes; higher education; unethical use of information technology

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### 1. Introduction

Education is a fundamental component of any society because it ensures cultural transmission and cultural reproduction, as well as socialisation of the members from the younger generation. From the sociologic perspective, education may be viewed as „a particular case of the socialisation process, consisting in the intergenerational transmission and reproduction of the contents and cultural instruments of a society” (Hatos, 2011). Nowadays, the emphasis is increasingly placed on the education-Internet relation given the fact that the new technologies contribute largely to changes in education. The changes consist in the fact that students use the Internet to accomplish academic tasks more than classical methods (visiting the library, for example). We are not

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implying that students no longer go to library, however, using the Internet is, for some, the easiest way to complete various projects. In other words, the Internet generates an essential change of the educational system, influencing how students relate to the tasks they have to accomplish, by means of a culture of virtuality.

In today's information age, the use of IT (information technology) is universal. However, with easy access to technology and the proliferation of the Internet, the possibility to use technology for unethical purposes has also increased. In many instances, unethical behaviors using IT are also illegal, and these include software piracy, hacking, spoofing, and plagiarism. One researcher has suggested that the „notion of software piracy as an unethical practice is being driven home by expensive lawsuits brought against major corporations and other offenders pirating software” (Mason, 1990, p. 114). Academic dishonesty at universities is a common phenomenon among students of all ages and study programmes. According to Sheard et al. (2003), many types of academic dishonesty have been observed. For example, collaborating on assignments, namely completely or partially copying assignments from another student, using the Internet as a source for help to solve difficult problems, copying text from various sources, etc. Moon (2006) has classified academic dishonesty into three main categories: cheating, plagiarism and collusion. The first two categories seem to be the most common among students, especially those of younger ages. Cheating is considered an intended violation of rules in order to acquire illegal advantages or better academic results in exams or similar forms of assessment.

Opinions about the Internet are highly controversial: on the one hand, some authors believe that it has a positive effect on society but, on the other hand, other authors believe that it has a negative impact. In terms of its utility for a community, some authors believe that the Internet makes contributions to "renewing communities by emphasising ties with the social world and by increasing their own power in this world" (Kollock and Smith, 1998). As for the social implications of the Internet, Proulx (2006) has highlighted several perspectives:

- the realistic perspective, according to which the Internet should be understood as a constituent element of individual, collective and institutional action;
- the expressiveness perspective, according to which the Internet mediates a new type of report between the individual and one's subjectivity, between the individual and „others”;
- the utopian perspective, which considers virtual reality a resource capable of giving people an authentic sense of freedom and community.

Therefore, incorporating the Internet into teaching and learning in the educational area has become an important issue. The use of Internet and the Web has become an essential part of

our lives and this feeling is more acute among young people. Since we live in an era of information technology society and information, most people live and work in the context of information technology (McCarthy, Halawi, Aronson, 2005). Today, in the digital era, companies depend on computers in almost every field, including the educational one and discussions on ethical or unethical use of IT have increased. The lack of scientific integrity in educational environments that make the most use of technology is an issue that should be considered. Illegal downloading of software is common among all social classes, especially students. The use of Internet is an inseparable part of the lives of many people and the nature of students. These cases have different effects on their lifestyle, especially on their academic performance and the length of their studies, according to Kirschner and Karpinski (2010). The Internet provides unparalleled temptation and almost unrestricted opportunities for students to cheat by engaging in what has variously been described as „cybercheating” (Stebelman, 1998), „cyberplagiarism” (Anderson, 1999), „mouse click plagiarism” (Auer & Krupar, 2001) and „academic cyber-sloth” (Carnie, 2001). Laird (2001) has suggested that „Internet plagiarism may be gathering sufficient force to become an academic hurricane”. The unethical use of IT in academic life is present in various educational contexts and affects the quality of the educational process. With the development of the Internet and access to a large amount of information, the opportunities resulting from this situation can be transformed into threats. Free access to all sorts of information and the lack of informational control can lead to the situation where certain ethical principles of IT use, in our case, are not respected by students. Rogerson (1997) quoted that „it is a misconception to regard the Internet as a network of individuals pursuing self-indulgence, self-expression or self-improvement, rather it should be thought of as a high level single entity where the focus is on co-operation and community”. Wong (2012) disclosed that:

„there is a mismatch between ethics taught at university to prepare new professionals for the workplace, and the types of ethical issues which they consequently confront in the workplace. That is, there is a need to discover and better document the types of ethical situations that professionals actually confront, and then to communicate those effectively to the tertiary sector, so that future graduates can be better prepared to handle the types of situations that they will confront”.

The progress made in the field of information technology has brought a significant gain to both scientific knowledge and social actors benefiting from these innovative elements. One of the interesting topics in the field of information technology science is computer ethics or IT ethics.

## 2. The reference framework

In the general sense, the concept of ethics is defined as "principle or standard of human behavior" (Jamil, 2013, p. 73). According to the Explanatory Dictionary of the Romanian Language, ethics is defined as „a set of rules in relation to which a human group adjusts its behaviour to distinguish what is legitimate and acceptable in achieving the purpose” (2016, p. 395). If we approach the concept of ethics in relation to IT, the situation is that „moral decisions” are made when technology is used, covering "the legal, ethical and security aspects of computer use" (Zeid, 2009). Heersmink et al., (2011) defined computer ethics as a branch of ethics that emerged in the 1980s, studying the social and ethical impact of information and communication technology on individuals and society. The general purpose of ethics is the integration of IT and human values in such a way that IT advances and human values are protected.

Mason defined privacy, accuracy, property, and accessibility as four ethical issues of the information age. These may be summarized by means of an acronym: PAPA. Mason explains each of these issues as follows (1986, p. 5): *privacy* (privacy may be best understood as the concern with the information one discloses and how best to protect that information); *accuracy* (accuracy may be understood as concerned with the veracity of information that we receive, send, and even modify); *property* (property may be understood as the concept related to the ownership of information and the ability to determine compensation based on that ownership); *accessibility* (accessibility refers to the ability of an individual to gain access to information and the safeguards in place to ensure that the information is not compromised).

The non-ethical use of IT in the educational field can include plagiarized, inappropriate use of programs, piracy of software, etc. Plagiarism is a serious form of violation of academic norms and is one of the most widespread practices faced by university education worldwide (McCabe et al., 2001; Simkin & McLeod, 2010). Whether it is about minor cases such as inadequate citation, or about massive and intentional takeovers of paragraphs, pages or whole chapters in a book or through the use of IT, plagiarism is seen as a real problem in the academic environment. For Mason (1986), unethical use of IT can be defined as „the willful violation - by any individual, group, or organization - of privacy, and/or property, and/or accuracy, and/or access - with respect to information/information goods residing within or part of an information system, owned/controlled by any other individual, group, or organization”.

If we refer to students, there are many forms of plagiarism. For Wilhoit (1994), Brandt (2002) and Howard (2002), students plagiarise in four main ways:

- stealing material from another source and passing it off as their own;
- submitting a paper written by someone else (e.g. a peer or relative) and passing it off as their own;
- copying sections of material from one or more source texts, supplying proper documentation (including the full reference) but leaving out quotation marks, thus giving the impression that the material has been paraphrased rather than directly quoted.
- paraphrasing material from one or more source texts without supplying appropriate documentation.

### **3. Causes of unethical use of information and communication technologies**

Studies conducted in the academic environment over the years have reached various conclusions regarding the position of students towards intellectual fraud. Fishbein and Ajzen (1975) define attitude toward an act as the degree to which a person is favorable or unfavorable about the act.

Baruchson-Arbib and Yaari (2004) conducted a study to investigate the differences between plagiarism from printed sources and Internet sources. A total of 284 students completed the questionnaire. The authors suggest that potential information sources must be treated separately in the research, in order to gain a full understanding of the phenomenon. It is also essential to: a) perfect students' insights regarding the ethical use of online information; b) teach students how to cite Internet sources properly and c) explain the importance of protecting intellectual property rights. By doing so, universities can reduce the extent of plagiarism, and particularly Internet plagiarism, committed by students.

Woodson (2002) conducted a study to investigate students' uses and attitudes towards computer and Internet ethics. One of its purposes was to determine the task based and non-task based use of computer lab Internet by sampled students. The study was descriptive and hence survey instruments were used; statistics, frequency distribution and percentages were used to conclude the results. They concluded that the university population that visits the computer lab shows higher usage of Internet for academic purposes. For non-task based categories i.e., chat, music and video download etc, the usage rates were on the low end of the survey scale.

Berry et.al. (2006) studied the relationship between demographic factors that may be related to student tendency to cheat. The most relevant demographic factors include: gender, age,

educational level and extra-curricular activity. The study shows that at least 90% of students engage in some form of cheating.

A study by Lim and See (2001) based in Singapore, which they describe as „one of the most competitive educational systems in the world”, found that students „are morally ambivalent about academic cheating and are rather tolerant of dishonesty among their peers. On the issue of whether cheating behaviours should be reported...a majority of students chose to take the expedient measure of ignoring the problem rather than to blow the whistle on their peers”.

A study conducted in Romania by Professor Adrian Netedu correlated concepts of emotion and intellectual fraud to determine how students of "Alexandru Ioan Cuza" University of Iași (UAIC) relate to this phenomenon that occurs quite often in their training process. This research was conducted between the 19<sup>th</sup> to 25<sup>th</sup> of May 2013 on a representative sample of UAIC students from the Bachelor and Master study programmes. Sampling was a probabilistic, stratified cluster type. The sample volume was 723 subjects and the error allowed for the results obtained, guaranteed with a probability of 95% was  $\pm 3.7\%$ . According to the study, the reasons leading to plagiarism are the following: the possibility to easily download materials from the Internet, the overloaded study program syllabus, the loss of interest in the study due to the fact that scholarships are few, lack of monitorization and sanction for such actions, lack of moral values, self-esteem, educational shortcomings, etc. If we are referring to assessing the seriousness of fraudulent actions, for 38% of the respondents it is very serious to copy texts from the Internet without specifying this, and for 51% it is very serious to copy passages from different works without indicating the source. Finally, for 73% of the respondents, presenting a reference written by someone else as their own work is very serious, just as it is very serious to help a colleague to pass an exam by fraud (47% of the respondents). We can find that most respondents criticize these practices, however, they are more permissive when it comes to copying texts from the Internet.

Unethical computer using behaviors of Turkish high school students is another study on unethical behaviors of high school students in terms of Internet use in the field of information technology. This study was conducted by Meltem Kürtüncü, Birsal Canan Demirbağ and Hicran Yıldız. The research is a population-based cross-sectional study. Research data were collected between February 13<sup>th</sup> and June 30<sup>th</sup> of 2012. The research group consisted of 900 students studying at five different high schools located in Zonguldak, Turkey, whereas 643 students (86 girls, 557 boys) constituted the actual sampling. For the authors, „the students” age is influential on their unethical use of information technologies. Along with basic computer training, teachers

are supposed to raise the students' awareness with regard to ethical issues that arise from computer technologies and are of particular concern to the society, and teach them how they should act in terms of ethical problems" (2015, p. 49).

The research of Haines and Leonard (2007) revealed that gender is the strongest factor in ethical decision-making. Erdem (2008) and Genç et al. (2013) confirmed that female students adopted a more ethical attitude when using information technologies, than male students. A study by Erdem (2008) revealed that students whose families lived in a metropolitan municipality or in a city, acted more ethically when using information technologies, compared to students whose families lived in a town or village.

There are derived some conclusions from studies focusing on this issue: vocational profile students declare that they have copied to a greater extent, compared to students from the intellectual profile (Bowers, 1964); the reasons invoked by those who have copied are diverse: getting a higher mark, lack of time, difficulty of tests and courses, absenteeism (Vilarba, 2001); copying is associated with the gender variable and less with other socio-economic variables (Poltorak, 1995); different cultural contexts generate different reactions to the whistlers of intellectual fraud (Magnus, 2002); where there is certainty about the spread of intellectual fraud, more such deviations will be produced (Tsang & Tuck, 2005).

A brief typology of reasons why students plagiarise, based particularly on the work of Stevens & Stevens (1987), Davis et al. (1992), Love & Simmons (1998) and Straw (2002), highlights the multiple and contingent motives of plagiarism committed by students. The authors mention nine reasons: genuine lack of understanding; efficiency gain; time management; personal values/attitudes; defiance; students' attitudes towards teachers; denial or neutralisation; temptation and opportunity; lack of deterrence. As noted above, there are many reasons behind plagiarism. Some students plagiarise unintentionally, when they are not familiar with proper ways of quoting, paraphrasing, citing and referencing and/or when they are unclear about the meaning of common knowledge and of the expression „to reproduce information using their own words". It is both easier and more tempting for students to plagiarise as information becomes more accessible on the Internet and web search tools make it easier and quicker to find and copy.

#### **4. Conclusion**

The problematics of an unethical use of IT by the students is a subject that implies different valences. The unethical use of IT by students has different causes; we believe that the most

relevant of these is the lack of real sanctions. The research on this phenomenon is even more important especially in the context in which one can discover an unethical use of IT at different social layers. Also, the lack of Internet control and the easy download of different academic materials, programs, software etc. fosters an unethical approach to technology.

The reasons for plagiarism are multiple and they depend of the values of students. The literature highlights reasons such as: efficiency gain, time management, personal values/attitudes, defiance, students' attitudes towards teachers and others. At the same time, many students generally regard plagiarism as „no big deal”. Of course, many studies have shown that academic staff and students have very different attitudes towards cheating and plagiarism.

The lack of real sanctions determines certain students to choose the easiest way in solving precise tasks. Therefore, we believe that universities should tackle the problematics of unethical use of technology by students by organizing certain events (seminaries, face to face/online courses, workshops etc.) where students may be informed and become aware of the gravity of the situation that can reflect on both educational act and personal development.

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