Factors Influencing Higher Education Teachers' Attitudes towards Unethical Use of Information Technology: A Review

Roxana Maria GHIATĂU1, Liliana MÂțĂ2

1 Associate Professor, “Vasile Alecsandri” University of Bacău, Bacău, Romania, roxanag@uaic.ro
2 Associate Professor, “Vasile Alecsandri” University of Bacău, Bacău, Romania, liliana.mata@ub.ro

Abstract: In this article, we intend to review the factors that contribute to the non-ethical use of information technology by academics. The ultimate goal of this approach is to construct a possible explanatory model of teachers' unethical attitudes. As premises, we consider that such a model of factors must take into account several theoretical and empirical previous variables and achievements, such as: theories or models that explain the relationship between attitudes and behavior; models of ethical decision making; the environment and values of information and communication technologies (ICT); research that highlights the relationship between individual factors and ethical judgment versus ethical behavior; research that highlights the relationship between external factors and ethical judgment versus ethical behavior. Therefore, our presentation will take these support points into account in how content is structured.

Keywords: Attitude; ethics; factors; higher education; information technology; teachers;

1. Introduction

The professional and ethical conduct of the members of the academic community is a special concern of the general public. Due to the nature of professional responsibilities, information technologies are very frequently used by members of the teaching staff in universities. It is therefore natural to look at how teachers relate to technology. Most often, research has turned to unethical conduct of students (fraud, copying, plagiarism) and less to that of teachers. Also, regarding students, there were conducted many consistent assessments of the factors and conditions that contribute to these phenomena (Crown and Spiller, 1998; Lambert et al., 2003). The incidence of academic malpractice in various studies is approximately between 25% (Honig and Bedi, 2012) and 33% (Anderson, 2008) which is not at all encouraging. On the other hand, the absence of studies and models of factors explaining unethical conduct for the academic segment is striking. The impact of this study concerns several levels: the cognitive level, useful to the academic world in general, to increase the knowledge base about teacher-technology relationship; the formative level, which consists of developing an explanatory model of the factors that interfere with the unethical behavior of teachers, could support institutional, leadership activities, etc.

Some phenomena cannot be easily explained without resorting to attitudes. This is also the case with the use of Information and Communications Technology (ICT). The best-known theories explaining the relation between attitudes and behavior are the “theory of reasoned action” (TRA) and “theory of planned behavior” (TPB). The theory of reasoned action suggests that intent is the best and most reliable predictor of behavior, but that it is also important to take into account skills and abilities as well as environmental factors as possible behavioral factors (Fishbein and Ajzen, 2011). Thus, people will behave in a certain way because they have this intention, they have the skills and abilities to implement action, but they are also free of environmental, external constraints. The direct determinants of intention are the attitude about the action taken, but also the subjective norm associated with behavior. The theory of planned behavior (TPB) adds perceived behavioral control (Montaño and Kasprzyk, 2015), taking into account situations where one may not have complete voluntary control over behavior. Attitudes can provide an excellent context for understanding the use and acceptance of technology by teachers (Al-Emran et al., 2016). Attitude significantly affects the intention of an individual to behave ethically or unethically (Fishbein and Ajzen, 1975; Leonard and Cronan, 2001). The
goal of this approach is to construct a possible explanatory model of the factors underlying teachers' unethical attitudes.

2. The Relationship between individual factors and ethical judgment versus ethical behavior of teachers

The role that individual factors play in achieving ethical behavior has been analyzed in various studies. Numerous variables have been studied in this regard, including demographic and personality factors. A number of internal, individual factors have been extensively studied, as follows.

2.1. Gender

Akdemir et al. (2015), in a research with a sample of 352 prospective teachers, have shown that men are more likely to carry out unethical activities in the virtual environment than women. In a research using an instrument called Unethical computer use behavior scale (UECUBS) developed by Namlu and Odabasi (2007), Beycioglu (2009) showed that prospective female teachers were more concerned with ethical issues than men. Other studies have also highlighted differences between men and women in ethical judgments (Leonard and Cronan, 2001).

2.2. Age

In a very recent study, Hodges et al. (2017) pointed out that senior teachers tend to self-plagiarize more than juniors. Glor (2001) also conducted a research in which he concluded, among other things, that the way of understanding work ethics differs according to the age of the population. Thus, three age categories with different attitudes and values in relation to work can be distinguished on the labor market today: the Matures, the Baby Boomers and Generation X. We will synthesize the author's positions on the professional ethics of each of these generations. The mature generation: its representatives are disciplined and hardworking. “Doing one’s duty and being rewarded for one’s work” is a strong belief. Faith in authority and institution, conformism and work in the interests of others are characteristics of the mature professional ethics. The Boomers: representatives of this generation are morally rebellious and permissive. They do not need to be told how to work, so they do not believe in codes of conduct. Generation X: they are vigilant and adaptable, and work is not a permanent concern that consumes all of their time. “Take care of yourself” is a commandment. Skepticism about codes of conduct is also a defining trait.
2.3. Religiosity

Religious people can more clearly define moral norms, and such rules can play a decisive role in ethical judgment. Extrinsic religiosity has a low impact on ethical beliefs, while intrinsic religiosity is a determining factor (Hunt and Vittel, 2006).

2.4. Personal Value System

Teachers bring with them in the classroom their own moral sense of what should or should not be done as practitioners (Althof, 1990). They should be able to look beyond their personal interest and make sound moral judgments that lead to the diminution of discrimination of any kind (Cummings et al., 2007). Hyytinen and Löfström (2016) showed that the views of academics on the responsibility for the integrity of research, the teaching methods used for it and the need to intervene vary. The person's belief system about how the world works shapes his/her conduct. For example, the extent to which a person believes that all people are motivated by selfish or altruistic interests. The teaching profession involves altruistic guidelines. In a research in Russia, Pavenkov and colleagues (2014) pointed out the lack of altruistic behavior of prospective teachers of inclusive education. The strength of moral character is an important moderator of the relationship between intention and behavior. Hence, we infer the extremely important role of models in character development. Persons with character, with virtues, will behave in a manner consistent with their ethical judgments. One’s character, way of being is the safest protection against moral obstacles. Nothing compares to a well-built character. The models provided through education and socialization have a special role in acquiring moral qualities. These ideas were well represented in Greek philosophy (virtue ethics, Aristotle).

2.5. The level of cognitive - moral development

Several authors have conducted research in this direction (Jean Piaget and Lawrence Kohlberg are the most famous). There is a proven parallelism between cognitive development and intellectual development. In general, the highest scores in socio-moral judgments are obtained by female respondents with a high level of education and who are very socially responsible (Hunt and Vittel, 2006). The higher a person’s level of socio-cognitive development, the more deontological norms or interests of other parties he/she will take into account in the decision-making process. The development of moral judgment plays a crucial role in the professional
practice of teachers. It affects the understanding of educational concepts, the quality of teaching and the approach to professional roles (Chang, 1994, pp. 75-77). Teachers with high levels of moral development see their professional roles as democratic and facilitating, having a sense of humor and showing receptivity in relation to young people. Conversely, others perceive roles as coercive and punitive, and behave accordingly.

Investigating the moral reasoning of teachers has been the subject of research since the late 1970s, but not very systematically. Chang (1994) has shown that teachers with a higher level of moral judgment can be more empathic with students but, at the same time, more objective and producing higher achievements in student outcomes. With regard to the pedagogical plan, Johnston and Lubomudrov (1987) have found that the level of moral reasoning of teachers influences the teachers' understanding of the class rules. What can we say about the moral reasoning of teachers? As a whole, several authors (Chang, 1994; Cummings et al., 2007) consider that the level of moral judgment development of beginner and tenured teachers is not satisfactory. How has this finding been reached? In most studies on the identification of teachers’ level of moral reasoning there were used established tools elaborated by Kohlberg (Moral Judgment Interview) and James Rest (Defining Issues Test). A summary of these studies by Diessner (1991) indicates that the expressed moral reasoning of teachers (after Kohlberg) is at the conventional level, and that moral reasoning (after Rest) indicates a preference, 30-50% of the time, for postconventional, principle-based thinking. Another study by Chang (1994) converges with these results. It also shows that most teachers are at the conventional level. More precisely, teachers can recognize, but cannot produce postconventional thinking. And Cummings et al. (2001) have shown in their research that students training to become teachers demonstrate lower moral reasoning than students with other specializations.

The assessment of the given situation is another internal factor that was explained in detail by Hunt and Vittel (2006). Ethical judgments of individuals can go in two opposite directions: a deontological assessment or a teleological assessment. In deontological assessment, the person assesses the fairness or lack of fairness of the behavior involved in each alternative. The process involves comparing each alternative behavior with a set of predetermined deontological norms. These norms are personal values or rules of moral behavior. In contrast, the teleological evaluation of the process focuses on four constructs: 1. the perceived consequences of each alternative for the persons involved; 2. the likelihood that each consequence will happen for the participant involved in the given case. 3. the desirability
or undesirability of each consequence; 4. the importance of each interested member of the group. For example, a member of the group may / may not take into account family, friends, community. The core of the theory is the following: a person's ethical judgments are based on his/her evaluation orientation, which may be deontological (application of the norms of behavior for each alternative) or teleological, utilitarian (the evaluation of the total quantity of good or bad assumed by each alternative for all members relevant in the ethical situation). The previous ideas can be compressed in the formula \(JE = \text{function} \,(ED, \, ET)\) where \(JE\) are ethical judgments, \(DE\) deontological evaluation, and \(TE\) teleological evaluation. It is possible for some people, in certain situations, to be strictly deontological, and therefore totally ignore the consequences of alternative actions. Also, some may be strictly utilitarian, ignoring the correctness of the applied rules.

The moral intensity of the problem is another internal factor for Jones (1991). Each ethical issue can be represented in terms of moral intensity, a construct that includes six components: the magnitude of the consequences, the social consensus, the probability of the effect, the temporal approximation, the proximity and the concentration of the effect.

2.6. Ethical orientation

With direct reference to the ethical orientation of teachers and its various components and processes, we are reviewing several studies. Deering (1998) shows that the ethical orientation of teachers depends on the cultural context in which they work. By comparing and evaluating the ethical (relativism or idealism) orientation of American and British trainee teachers based on Forsyth's Ethics Position Questionnaire (EPQ), Deering discovered that British teachers have a different moral philosophy than American teachers. Based on the model of Reidenbach and Robin, GökÇe (2013) investigated the ethical orientation of teachers according to five ethical trends (theory of justice, deontology, utilitarianism, relativism and selfishness). The results have shown that philosophical values affect teacher's ethical evaluation, especially the value of justice. It has the most powerful effect on ethical reasoning. In another research, Patricia Melo (2003) found that early-stage teachers have embedded a utilitarian framework in decision-making.

2.7. Ethical sensitivity

Measuring ethical sensitivity according to the model offered by Kuusisto, Tirri and Rissanen (2012) led to the finding that Finnish teachers believe that their level of ethical sensitivity was high, so they internalized the
ethical professionalism of teaching. Chubbuck et al. (2007) have synthesized three categories of moral sensitivity that trainee teachers manifest: a concentrated individual sensitivity (responsibility for individuals, fairness, compassion); a social sensitivity (responsibility for social issues and community perspective); and a concentrated intellectual sensitivity (open to complexity, reflection, humility). Other researchers, Sparks and Hunt (1998) found a significant negative relationship between ethical sensitivity and formal ethical training of research participants. One possible explanation is that ethical programs can serve only to strengthen relativistic views.

3. External, situational factors

3.1. Organizational culture

The university is not just the institution that provides education. Its attributions do not begin or end only in front of students. Beyond this interaction there is its unseen dimension, the university as a professional organization, with its rules. Universities, as organizations, operate based on sets of written and unwritten norms. They provide the framework within which people are socialized in their own profession. Sets of informal rules seem to play a prominent role in achieving the moral assessment of the situation. Individual values can be remodeled by managerial practices, such as fair rewards, the induction of a trustworthy climate, security, the possibility of promotions, etc.

A generous topic of discussion is the diminishing of the moral sense of people in organizations. The larger organizations grow, the more bureaucratic they become, which makes them be perceived as morally negative or neutral (Mount Jr., 1990, p. 49). The structures, procedures, command networks and constraining policies are powerful inhibitors of moral responsibility. Zigmunt Bauman (apud Kumar and Mitchell, 2004) lists several managerial strategies that lead to the diminution of ethical sense in organizations. The first strategy is based on encouraging “denial of proximity”. Proximity is a condition of morality, because it gives birth to attachment. Instead, the intentional creation and maintenance of physical distance reduces the moral impulse. The vertical arrangement of institutional relationships, the increasing distances between top executives and executing employees implies the exemption of moral responsibilities for both categories. These strategies are also applied in universities. Thus, in the traditional way of placing school furniture and teacher's desks, the distance between teacher and students is increased. Physical distance then becomes a psychological distance. The second strategy is based on the so-called
sociological phenomenon of "depersonalization" as a process of dehumanizing employees by disregarding the specificity of their personality. The workplace is only interested in conforming to a professional role. Personalities are reduced to a collection of features that define the role and place in the organization, and people no longer expect to be treated according to moral standards. Expectations of this kind are considered naive and irrational. In the organization one is only a pawn within a structure.

Other variables that contribute to the decrease of moral responsibility are the implied rules of the organization, namely the imperative of efficiency, the diffusion of responsibility, the obscurity of the cause (the difficulty of determining where the problem started), the simplification and the dispatch of the solution. The other organizational factors affecting the moral climate in universities include: (a) increasing pressure for efficiency (Kogan, 2007) and increased controls over academic tasks (Musselin, 2007). The academic staff is under increasing pressure not only to research and publish quality papers in ranked magazines, but also to deliver excellence in teaching and learning (Fitzmaurice, 2008). In response to that pressure, people may engage in ‘questionable behavior’ (Kirrane, 1990); (b) marketization, understood as the use of competition to attract students by means of aggressive marketing strategies; (c) massification of admission to faculties and massification of research, which entails a deterioration in the quality of academic activity (Vincent-Lancrin, 2006; Welch, 2005). Klein (2005) warned about the lack of formal instruction in ethics for professors.

3.2. Legislation and rules in the field of ICT, computer ethics

As of 1986, Richard Mason has identified privacy, accuracy, ownership and access to four ethical issues for the information age. For Moor (2001), computer ethics is the analysis of the nature and social impact of computer technology, the appropriate formulation and the justification of policies for the ethical use of this technology.

The legislation and norms in the field of university refer to the laws, the regulations in force, but also to the ethical codes operating in the academic profession. We shall further attempt to outline the fundamental categories with which the ethics and deontology of higher education in Romania operate: a). The Law of National Education; b). Regulations on the functioning of higher education; c). Institution regulations; d). The charters of university institutions; Ethical and deontological codes (codes of honor); Professional oaths or covenants - for certain universities, such as medicine. Written and unwritten codes are an important subcategory, highlighted in
many researches. Shapiro and Stefkovich (2005) identify the elements of an ethics of the teaching profession, insisting on the component of codes. The authors draw a subtle distinction between the ethical code of the profession, codes of personal ethics and codes of individual professional ethics. The three types of codes have different levels of contextualization of norms, as contradictions, tensions, but also congruences may arise between personal values and professional responsibilities. We present a typology of organizational cultures as “moral cultures” to highlight the possible discrepancy between the presence of ethical documents in organizations and the moral quality of the organizational climate (Sims and Brinkmann, 2003). The first type, “preconventional morality”, is specific to organizations where respect for norms is based solely on external and inconsistent criteria, such as punishments and rewards. The second type, “facade ethics”, belongs to organizations “covered” by a multitude of ethical documents, but which does not guarantee moral correctness. Ethics is just rhetoric, speech. The third type, “collective moral conscience”, is the stage reached by “old-fashioned” organizations that do not need special provisions for respecting the rules. A series of internalized values are sufficient. The fourth type, the “moral modeling of the role”, which is characteristic of powerful organizational cultures, refers to the happy blending between the moral agent’s duty of conscience and the constructive reflection on ethical documents, with a support role in decision making.

3.3. Years of computer use experience

Beycioglu (2009) found that prospective teachers who have up to five years of personal computer experience take ethical behavior into account more than teachers with more than five years of experience.

3.4. Domain and disciplines taught

Based on a mixed, qualitative and quantitative approach involving 141 university professors, Tiong et al. (2018) revealed the fact that various forms of academic misconduct have higher prevalence among medical academics than their counterparts in non-medical settings. Beycioglu's (2009) study has also highlighted the fact that the subject taught is important: the judgments of teachers teaching science or computer science were less ethical than those teaching social sciences.

3.5. Training in other cultural spaces

Lei and Hu (2015) conducted a research with 112 Chinese teachers of English separated into two groups (home trained teachers and teachers
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trained in other countries). They demonstrated that teachers trained in other countries had more subtle understandings of the transgressional intertextualities present in plagiarism than teachers trained at home. Surprisingly and in contradiction, in a quantitative study using Turnitin software and the textual analysis of 763 summaries presented at a conference, Hodges et al. (2017) found that participants from a non-Western context did not plagiarize more than the Western ones.

4. Conclusions

We attempted to synthesize the most valuable approaches and research on the factors that influence teachers' attitudes towards non-ethical use of technologies. In order to achieve this review, we had to corroborate many theoretical and empirical perspectives. The explanation for this manner of work is given by the fact that the presented research did not directly and globally address the ethical conduct of university professors, but had narrower objectives. A first limitation was that many of the listed studies had subjects from pre-university education. A second limitation was related to the fact that many models did not address the didactic context, but the organizational context in general: business environment, marketing, etc. Although the literature is very rich, each study offered only part of a puzzle to be built.

The first conclusion drawn from the research is that teachers' attitudes towards the ethical use of technology are not fixed but dynamic, that is, they may change over time and vary depending on the stages of their career. As observed, during their academic studies, prospective teachers hold certain beliefs that change over time. As a rule, in the beginning, job candidates and debutants are very drastic, but subsequently become, gradually, more relaxed and looser, which may not be auspicious for the ethical climate. A second conclusion, derived from the first, is the following: years of teaching experience and years of computer experience do not increase the ethical sensitivity of teachers, but, on the contrary, diminish it. This evidence is quite a strong alarm signal: a worn ethical sensitivity is the first step for unethical conduct to emerge. A question arises: how can academic honesty be maintained under these circumstances?

A fundamental idea that we wish to highlight is the following: internal and external factors work together to influence conduct. Or, better said, external factors work through internal conditions. It is possible that in some situations external factors are more important, whereas in others, internal factors. A future research path would be to explain more thoroughly
the relationship between internal and external factors. Which of these factors play the role of moderators of non-ethical behavior? Depending on the answer to this question, we can predict a plausible explanatory model of the factors influencing higher education teachers' attitudes towards the unethical use of information technology.

Acknowledgement

This work was supported by a grant of Ministry of Research and Innovation, CNCS - UEFISCDI, project number PN-III-P1-1.1-TE-2016-0773, within PNCDI III.

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