



Lived Experience of Faculty Members of Ethics in Virtual Education

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Abstract

The use of virtual education in teaching has provided a wide range of new educational opportunities; but the combination of ethical and legal risks associated with accessing and exchanging information in the form of ethical issues in the digital space has challenged this type of education. In this regard, in the present study, an attempt has been made to express the faculty members' experiences of ethics in virtual education. The research method was qualitative and based on this, 15 samples were interviewed from two groups of experts in technology and computer science and the field of social and humanities sciences. Content analysis method was used to analyze qualitative data. The results showed that faculty members' perceptions of the issue of ethics in virtual education originates from two approaches: ethical character and ethical security. Also, the results of research related to the ethical issues of using virtual education in higher education by faculty members show that these issues are raised in four dimensions of learning environmental health, cultural dimension, security dimension and identity dimension. In addition, the results show that ethical standards can be placed in three levels of civil liability to students, civil liability as a professional faculty member, and civil liability to the virtual education system. These ethical standards can include ethical issues try to solve them.

Keywords Lived experience · Virtual education · Ethics · Faculty members

1 Introduction

In the present age, technology has become an integral part of human life and have penetrated and influenced all areas of human society. Technologies have become ingrained in human life and have revolutionized its philosophy. Technology determines the structure of other sections of society and culture and is their cause. This connection of technology with human is such that it can be said that if an artificial or a piece of hardware wants to be technology, it must be in the human context that it employs or maintains and repairs. It

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expresses the concept of a technological system that includes both the hardware and human skills as well as the organization needed to operate and maintain it.

Today, in developed countries, computers have imposed itself on people's everything. Lifestyle, people's tastes, way of thinking and colloquial language and expressive and literary metaphors... Everything is dictated to people by the computer. The role of the educational system in the excellence of mankind and the formation of human civilizations are not hidden from anyone. In the meantime, higher education centers and universities have a special role in different societies. On the other hand, in the last few decades, educational systems in many countries of the world have changed significantly due to information technology (IT) (Vrana, 2011). IT has become a powerful tool in the field of education; in such a way that educational systems try to integrate IT in education (Musheer, 2018). This has led the learning environment to virtualization. With the advent and expansion of the Internet and communication and information networks, this media has been used as a supplement to meet the needs of information and education (Ahmadi, 2018) and has put increasing pressure on the higher education system in different parts of the world to move towards the use of these technologies (Inglis et al., 2009).

In this regard, ethics is the most important issue that has been questioned with the advent of these technologies, and in its design and application, ethical considerations have not been considered or are very few. Basically, important questions related to technology and ethics are raised in two areas of designers' decisions at the time of design as well as the consequences of using technological tools (Jones, 2000). According to Vermaas et al. (2011), values (important ethical values in the design of technical artifacts), norms (recommendations for action to achieve values), virtues (positive personality traits that are manifested in actions) and responsibility (holding man responsible for all actions and consequences) are among the ethical principles in technology. Universities, as organizations that use technology, can control and moderate the potential ethical challenges that technological artifacts have brought to the higher education institution during the production phase and with proper management in its use in universities, to prevent future ethical issues and challenges that these technologies will create. Also, the use of technologies in the application phase by faculty members, the main manifestation of which is the provision of virtual education, can be associated with several ethical issues that require the observance of certain ethical considerations by them. Understanding and practicing the values and norms that are associated with the requirements of technology in education, the teacher personality traits in confrontation and application of technologies in teaching–learning strategies in education and their sense of responsibility in how to use technology in education, are key issues that need to be seriously considered in higher education.

Quantitative development of education (increase of software and hardware, computers, mobile and tablet, distance conferencing, distance education) through IT, regardless of its quality aspect (teaching and learning) by faculty members as one of the main pillars of higher education has brought some problems (Narimani et al., 2013). However, the use of each terms is also challenging because of philosophical differences in the goals of higher education (Watson, 2006); nevertheless, quality is the main focus of services in education and the use of information and communication technology (ICT) in this field (quality of teaching and learning) should have a wide range of opportunities, especially increasing accessibility and sharing educational content and information resources, flexibility, attractiveness in its use and public access, absence of time and space restrictions and the use of knowledge for people with disabilities, employees and adults (Stanly, 2013). Despite all these benefits and opportunities, diversity of facilities and lack of supervision of students facilitate unethical behaviors such as copying content, sharing content on the Internet and

communication with friends (Sarwar et al, 2018). In this regard, Muhammad et al. (2020) consider dishonesty and truthfulness in the educational process as one of the consequences of virtual education in the post-corona era. They argue that integrating technology into the university learning environment and the flexibility and access to information through it will be the biggest incentive for unfair behavior in the post-Corona era.

In fact, with the advent of ICT, the education system has faced a series of ethical and legal risks related to access and exchange of information in digital. Ethical and legal risks that, on the one hand, express the dimension of behavioral-communication models based on respect for rights and on the other hand the normative dimension related to the establishment of special laws that must be observed for ethical use of ICT by faculty members (Mata & Boghian, 2019).

With all these interpretations, due to the not so long history of virtual education in Iran, the vacancy of research to guide ethical practices in virtual education is strongly felt and few studies have been conducted in Iran (Alikhani & Bazrafshan, 2011; Narimani et al, 2013) and internationally (Jamil & Shah, 2014; Sargolzaei & Nikbakht, 2017; Thunman et al., 2018; Vesna & Niveditha, 2012) indicates that the faculty members' experience of this type of educations has not been clear. In this regard, Mata and Boghian (2019) state that ensuring a fair and efficient use of new technologies in teaching, which is an increasingly important part of personal and professional life, is one of the main challenges of the twenty-first century.

In fact, the digital issues that impact the ethical culture of educational institutions and the free flow of communication in virtual education and the occurrence of immoral behaviors in it, the need for research in the field of ethics in virtual education has become increasingly apparent. Therefore, the purpose of this study is to express the experiences of faculty members in the field of teaching, learning, evaluation, and research activities in order to provide ethical standards in virtual education in universities and higher education institutions. The set of issues raised requires faculty and educators to recognize the ethical nature of these challenges and the factors involved and develop their role as the ethical model of a responsible digital citizen. In this regard, by examining the lived experience of faculty members of ethics in virtual education, it is possible to help identify issues in this field and solve them, and plan to take advantage of its opportunities. For this purpose, the first step is to examine the faculty members' experiences of ethics in virtual education. In the following, the ethical issues raised in virtual education are examined and then, the ethical standards for solving the ethical issues of the faculty members in virtual education were discussed based on the views of the faculty members.

2 Theoretical Background and Related Work

In the contemporary world, virtual space has been widely used and there are few people who do not use this space and its facilities directly or indirectly. The term virtual space is used to describe a vast electronic world in which computer technology is linked to advanced communication systems (Jefferis & Irvine, 1999).

Today, anyone can enter the virtual world with a home computer or mobile. In this space, everyone can easily communicate with another person. So, all over the world, virtual space users can easily communicate with each other. From this perspective, science and technology is also part of the human way to know and reform, and in this way, experience has revealed some aspects of science and technology (Alamolhoda 2009). Due to extensive

use of this space, attention to the issue of ethics and compliance in this space makes more sense. Ethics as a character or temperament is rooted in human nature and common historical experiences. Ethics nature includes talents that arise before birth and are common to all people and are a major part of human attitudes to ethics action. Since ethical character is both the root and origin of ethical action and the product and consequence of the repetition and continuation of social actions and ethics behaviors, therefore, it is very important to study the lived experience of faculty members in terms of occurrence and emergence as well as the frequency of ethical behaviors. In other words, although virtual education has made dramatic changes in the field of education, the nature of virtual education is such that it raises new issues in the field of ethics (firozehchian and dadgaran, 2015).

It can be said that with the entry of virtual space into the field of higher education, such a space should have its own ethical norms; therefore, universities should increase the necessary trust for these methods and practices, an element that is missing in the virtual space (Myskja, 2008). Given this perspective on higher education and the role of faculty members in achieving the goals of higher education and the learning environment, although faculty members and instructors may accept the ethical foundations of their profession, but when it comes to virtual education, it is different from what is available in face-to-face education (Zembylas & Vrasidas, 2005).

The combination of technology and education has created unique ethical issues in academic learning environments. The emergence of the realm of virtual education resulting from the use of IT and the expansion of the use of the Internet in the teaching space, has led to the emergence of numerous emerging ethical issues that are sometimes more complex and unknown than past ethical issues. Ethical guidance and the application of the principles of protection of people and human issues in virtual education has its own complexities, because usually students and faculty members do not face each other, They are not very aware about the possibilities of new ICT and their potential dangers, interactions between them take place on a diverse global arena and no clear distinction is made between privacy and public policy (Seghatoleslami, 2011): However, according to the authors, the main criticism of such an atmosphere can be considered as a security perspective (privacy, sharing, keeping confidential and encryption) and ignoring the ethical attitudes and values of faculty members in virtual and electronic space. Taking into account such a phenomenon and many other complex and intertwined issues, paying attention to the values and attitudes of faculty members is more than just looking at the issue of ethics in virtual education.

The issues of attitudes are beyond knowledge; because they receive an educational dimension. In fact, the purpose of education is to correct the attitudes and educability is, in fact, a function of the attitudes. In other words, educational systems should not only consider the dimension of knowledge transfer, but also consider its normative and value aspects (Berkowitz & Bier, 2015). Today, if we consider the duty of faculty members to educate the new generation, and also if we accept the comprehensiveness of the term education, which goes beyond paying attention to the scientific development of personality, the function of faculty members will be beyond the distribution of knowledge.

If we consider the issue of education as a process of changing the person, it should be considered that the behavior does not change until the attitudes of the person that depend on his values change. These changes in humans are based on intuition as well as objective observations (Alamolhoda, 2019). Therefore, any theory about a faculty member should provide an acceptable explanation for the changes (attitudes and values) of faculty members. However, most of the research on the subject of ethics in virtual education (Ugbogbo & Michael, 2016; Regan & Jesse, 2019; Necasova, 2018; Mukherjee & Clark, 2012) is

related to security issues. From this perspective, the police view and security approach, which has prevailed in scientific institutions as well as other social institutions, also threatens virtual education. Therefore, the discussion of attitudes and values in the study of ethics in virtual education has often been ignored by researchers and scholars. For example, Kelly, and Seppälä (2016) in a study that examined the Changing Policies Concerning Student Privacy and Ethics in Online Education, identified Items such as (1) Recruitment of Participants (2) informed consent (3) privacy (4) Jurisdictional Issues and (5) Ownership of Data as ethical issues related to online learning. Also, Beardsley et al., (2019) In this regard, they conclude that most teachers have not received formal training related to responsibly managing data; and both teachers and students see the need for such training as they come to realize that their understanding of responsible data management is underdeveloped.

According to the theoretical foundations and work related to this field, in the present study, in addition to the security-ethical issues involved in virtual education, the ethical attitudes and values involved in virtual education are also examined. In this study, considering some ethical principles such as the principle of freedom, the principle of mutual respect, the principle of honesty and the principle of justice, an attempt has been made to examine the lived experience of faculty members in the field of behavioral changes and ethical threats resulting from virtual education in the behavior and character of academics. Therefore, the categories that are more important in the lived experience of faculty members are: the freedom of professors and students, the relationship between learners and teachers, and discrimination and injustice between them, Equality in access to education, equality in learning facilities, and support for academics who are being harassed, intimidated and subjected to unethical discrimination is part of these principles. Hence, the lived experience of faculty members in relation to ethical behaviors in virtual education based on the authors' point of view relies on the bipolar model produced by the authors.

- The dimension of values and attitudes that are related to how people socialize, temperament, beliefs and insights of people in such an environment;
- Police and security dimension, which is related to ensuring the safety and confidentiality of information in the virtual education space.

As shown in Fig. 1, these two dimensions and their components are interdependent to complete the discussion of ethics in virtual education.

Therefore, according to the purpose of the research and based on what was raised in this research, the following three questions have been considered:

1. What is faculty members' perception of ethics in virtual education?
2. In the view of faculty members, what are the ethical issues in virtual education?
3. What can be included in the ethical standards in order to solve the issues of virtual education among faculty members?

3 Methodology

The approach used in this research is a qualitative approach of phenomenological type and the study method is thematic content analysis which allows the analysis of coded texts (Agabrian, 2006). In this approach, while responding to the situations, conditions and

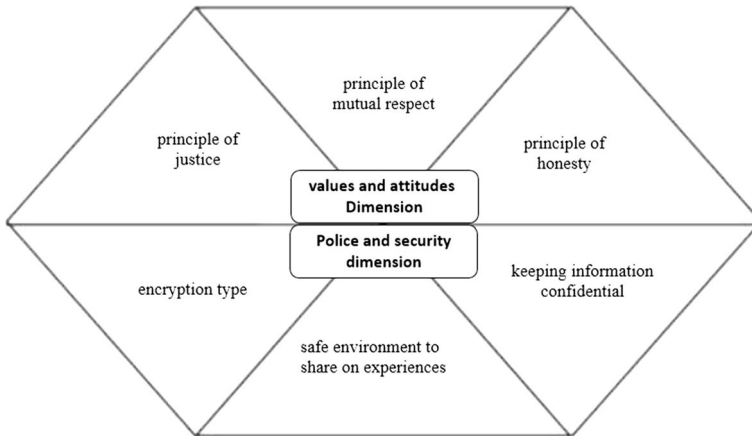


Fig. 1 The Bipolar model for investigating in on ethical use of IT in the virtual education

needs of research people, an attempt is made to provide an analysis based on the context and situation.

3.1 Participants

Participants in the present study were faculty members from Iranian public universities. As the topic of research borders on information and ethics, faculty member from both IT science and socio-human domains have been selected. The participants were selected according to the following criteria: scientific articles, writings and scientific experiences, having a PhD degree in a specialized field, having a teaching position at a university, using ICT for their courses and/or seminar activities (Table 1).

For this purpose, participants were selected using purposive sampling method and theoretical saturation criteria; thus, the interviews progressed to the point where the researcher became theoretically saturated and did not provide further information. Therefore, due to

Table 1 Distribution of the research sample, according to the independent variables

| | Variables | Frequency |
|-------------------------|--|-----------|
| Specialization | Computer science, Information technology | 6 |
| | Sciences of education, psychology, sociology, philosophy | 9 |
| Professional experience | 5–10 years | 3 |
| | 11–19 years | 8 |
| | more than 20 years | 4 |
| gender | Female | 6 |
| | Male | 9 |
| Interview duration | 10–20 min | 2 |
| | 20–50 min | 10 |
| | More than 50 min | 3 |

theoretical saturation, 15 faculty members of Iranian public universities participated in this study.

3.2 Interview and Analysis Process

The semi-structured interview was used as a research method to explore the perceptions of teachers regarding the ethical issues of IT used in the academic environment. This type of interview is based on the use of a combination of short and open-ended questions that are often accompanied by subsequent questions such as why or how (Adam, 2015). To ensure the data, the interviews were conducted digitally using a voice recorder device. The average interview time was 40 min. In this regard, to conduct the interview, the researcher first sent the interview form to each of the experts and obtained the consent of the interviewee. This was done so that the interviewees would realize the importance of the topic and be prepared to answer the questions. The time and place of the interviews were determined by the interviewees. The Researchers encourage participants to discuss about issues related to the research question or by asking open-ended questions, usually in one-to-one interviews. In this case, the interviewer might re-word, re-order or clarify the questions to further investigate topics introduced by the respondent (Tong et al., 2007). The interview questions were identified based on a comparison of the findings of previous studies and a review of areas that have not yet been sufficiently explored in the field of ethics in virtual education and identified as research gaps. These questions were in the form of a set of general and specific questions in which, the specific questions were in line with the general questions and achieving the research objectives. Based on this, in the first part of the interview, introductory questions were asked to explain to faculty members about ethics in virtual education. After which questions were asked regarding the general context of the issue of ethical IT use in the academic environment. Then, the ethical standards for solving the ethical issues of the faculty members in virtual education were discussed based on the views of the faculty members.

3.3 Data Analysis

The data obtained during the semi-structured interviews were analyzed using thematic content analysis method. To analyze the data using thematic content analysis, the researcher first tried to get a thorough overview of all the data collected, which involve transcribing audio, reading through the text, and taking initial notes. In the next step, the obtained data were studied and coded line by line. Next, we looked over the generated code, identifying the patterns among them and presenting related themes. Then, we returned to the data set and compared our themes against it to make sure that our themes are useful and accurate representations of the data. Next, it's time to name and define each one. Naming themes involves coming up with a succinct and easily understandable name for each theme. Finally, our analysis of the data is presented.

Also, to control the reliability, the method of reproducibility—coder reliability—was used. For this purpose, in addition to the researcher, another person who had experience in the field of research and coding and had previously coded data, was asked to do the coding process of a number of interviews. In fact, the criterion for selecting the second researcher to confirm the reliability was that the researcher already has experience in the field of research and also has a background and experience in coding. The results showed a high reliability between the two coders. In addition, in order to obtain valid results, the

process of conducting interviews and how to codify them was reviewed by professors and experts in this field and the necessary guidelines were presented by them.

3.4 Research Ethics

The correct behavioral requirements for the realization of research ethics were observed. In the first stage, the participants were satisfied with the interview, then the participants were informed about the objectives of the research and their right to withdraw from the research at any time. The confidentiality of the information collected, management and reporting of the data was also ensured.

3.5 Findings

In this section, the research results are discussed in connection with explaining faculty members' views on ethics in virtual education. For this purpose, the first question was "what is the perception and explanation of faculty members about ethics in virtual education"; moving on with the research, this question will be discussed that "what are the ethical issues in virtual education" and finally, the ethical standards for solving the ethical issues of the faculty members in virtual education were discussed.

1. What is faculty members' perception of ethics in virtual education?

The perception of ethics in virtual education by faculty members has little to do with the realities of the world. But the perception about such an environment can provide insights for teachers and students to internalize the ethical values and beliefs of virtual space. In fact, although virtual education has revolutionized education, its nature is in such a way that leads to new issues in the field of ethics. This has exposed ethics in virtual education to a set of ethical and legal risks which on the one hand, represent a person's behavioral status and, on the other hand, represent the values, beliefs and attitudes that should be observed by faculty members (Mata & Boghian, 2019). Also, the spread of the Corona virus has caused a fundamental revolution in the use of new technologies. This, not being a gradual issue, limited the field of research in relation to ethics in virtual education. To understand this, first, the concept of ethics was asked in an electronic learning environment of faculty members, then the question "When the ethics is discussed in virtual education, what kind of view is formed in your minds." was asked. Accordingly, among the interviewees in relation to their understanding of ethics in virtual education, the following views are formed:

3.6 Ethical Character Approach

Interviewees state that they may talk to children or their own friends informally, and these conversations can be written or verbal (10, 11, and 6). On the other hand, while working in professional activities, students may need to use the official language and be cautious in presenting political views to others. In this regard, the interviewees state that in formal and administrative conversations, firstly, we should refrain from providing personal opinions, and secondly, the satisfaction of both parties should be considered and it should be determined how the person should formally answer the other person's questions (4, 12, and 3). Actually, the factor that shapes such a state differs from situation to situation and

person to person (Barsky, 2019). Other interviewees (8, 12) state that the knowledge of how to determine social etiquette with other people and devices in terms of the use of different technologies is inevitable and therefore, informed consent from how to communicate appropriately with faculty members can be one of the reasons that needs to be reconsidered in determining the ethical character in virtual space. As Mukherjee and Clark (2012) state, many students are unaware of the importance of maintaining behavior in the online space. Hence, it is necessary to provide students with the necessary training. One of the faculty members states that when students enter the higher education system, it is necessary to hold initial meetings and workshops in order to teach them the way to behave socially in order for them to become familiar with the etiquette of behavior in such an environment (8). On this basis, it can be said that the ethical character approach that focuses on the traditions of teaching and learning ethics, reflects how people socialize, their temperament and nature in such an atmosphere. When people use email, messaging and social media and other communication technologies for personal purposes, they may use informal language and humor or political discourse.

3.7 Ethical Security Approach

One of the interviewee's states that we should also consider the matter of ethics in the online space in terms of security. From the ethical security perspective, students who use such an environment should ensure that their activities do not violate the privacy of others and that they do not share information with others (5). Interviewees also state that students need to understand that businesses, companies, and organizations may use their information to develop their marketing (5, 9, 7, and 13). In this regard, Kelly and Seppälä (2016) state that institutions and other centers may use personal data for profit and this is not a trivial matter. Also, in a similar study by Necasova (2018) one of the challenges of using technology is to create a safe environment to share and reflect on experiences.

A faculty member states that the way we keep information confidential when using various forms of technology is important. In this regard, the method of encryption which is to ensure the confidentiality of student information is very important (4, 7, and 6). In addition, it is important to know the protocols to ensure the security and confidentiality of your information. When using technology, students should be aware of the potential dangers of the confidentiality of information and data. Despite these measures, students and professionals can not be sure that their system or computer will not be hacked. Of course, we must note that in case of a violation against personal information, it is necessary to inform individuals (NASW, 2018). Given that many students' use online social media, faculty members must ensure that these programs have their own policies and that these policies have been declared to students (NASW et al., 2017). To this end, faculty members should have such discussions with students at the beginning of their virtual space activities.

In addition, faculty members state that online technologies and social media can enable the continuity of services anywhere and anytime. These technologies can allow faculty members to connect with their family members who live in different places. It also allows them to connect with other professionals from different places in different meetings. Although the potential to work in different places has many benefits, it also comes with specific ethical issues. When working in another country, faculty members should be aware of the applicable labor laws in that country (4, 2). Hence it can be said that ethical security is one of the most important aspects of security and the first and most important condition for a healthy education in virtual space. Issues such as false sense of security,

cybercrime, jurisdictional matters and disregard for privacy are among the most important components of the ethical security approach and one of the biggest concerns of technology professionals.

2. In the view of faculty members, what are the ethical issues in virtual education?

Understanding the issues raised in the field of ethics in virtual education may identify only a small part of the issues that ICT brings with it in teaching and learning. A very large part of such issues remain unknown and it becomes apparent over time, and only the power and flexibility of this new technology, creates new issues. Therefore, this study, using the opinions of experts in various fields, has tried to identify and analyze the nature of such issues. In this regard, first, the question “How have you experienced the issues of virtual education.” was asked. Next, “What problems might you encounter in technologically capable learning environments.” Was asked. Finally, “During the two years that the Corona virus has dominated the Iranian higher education system, what issues have you encountered in teaching and evaluating students.” was asked. Accordingly, the following views have emerged among the interviewees regarding ethical issues in virtual education:

3.8 Learning Environment Health Dimension

The Learning environment health dimension, according to the issues raised, can be in the form of the second approach of the present study, namely the approach of ethical security. This approach refers to concepts such as plagiarism, copyright infringement, and others on the Internet and is usually not properly understood by students. Students should learn that print and electronic resources are no different (9, 7). They need to learn to respect copyright in cyberspace and treat with virtual data just like physical content (2, 5). In this regard, one of the faculty members states that undoubtedly, explaining the reason for the ban on copying by faculty members to students leads to their attention and desire to protect copyright and intellectual property resources of online data (7).

Interviewees also state that the students’ use of data available on the Internet is not always based on acquiring knowledge and useful information. In the meantime, there are websites that misled users and divert them from the main path (10, 2, 1, and 13). According to the ethical teachings of many faculty members, the proper use of the internet should lead the student to academic centers. Hence, it can be said that faculty members have an ethical duty to study the research literature and become acquainted with emerging ethical standards (Reamer, 2013). In this regard, most experts in the field of educational sciences and philosophy, as participants in the research process, focused more on issues related to the teaching and learning environment.

3.9 Cultural Dimension

One of the interviewees states that given the fact that the main source of computer and virtual sciences is foreign, with the arrival of these technologies, their special culture also enters the country. A culture that, in most cases, is in contrast with the local cultural roots. Therefore, we should look for solutions that can have more interaction between imported virtual space and cultural issues (10). Interviewees’ state that one of the issues related to online technologies is the discussion of cultural competencies that faculty members should be aware of in order to be able to work with students from diverse cultures (8, 3, 6, and 4).

One of the interviewees states that if they are not aware, faculty members can learn about different cultures and work and teach with the help of other people. Interviewees also state that although the cultural dimension of ethical issues has been less studied in virtual education, ethnic, racial and color issues are always raised among members of a community (8, 3).

It is very important for faculty members to pay attention to cultural differences and the impact of cultural factors on virtual education courses by universities. Faculty members should consider that ethnic and racial culture refers to the social and psychological aspects of individuals that affect their behavior and may conflict with the cultural structure of faculty members (Milani, 2008). In this regard, most specialists in the field of social sciences, focused on the cultural and communication dimensions of the issue of ethics in virtual education.

3.10 Identity Dimension

Interviewees also state that interactivity of the Internet and its capabilities has made it possible for humans to communicate with each other through it and create a variety of virtual identities in the virtual space (11, 4, and 6). In this regard, one of the faculty member states that online relationships and interactions, which are one of the important components of the formation of a person's virtual identity, arise from behaviors and relationships between events (3).

Interviewees consider that given that in the online space, users can not see the reaction of others and provide immediate feedback, there is a kind of confusion about how to receive information or predict the outcome of a particular point of view (14, 4) that may lead to a new identity. On the other hand, these interactions may lead to a dual interaction in the discussion of identities and affect the development of relationships with faculty members (13, 2). Therefore, one of the social and psychological aspects is the issue of identity in the virtual space.

Also, faculty members state that the virtual learning environment is one of the tools that makes people express themselves from different ways; because when people are in virtual space, they are looking for ways to manage their behavioral aspects. Hence the issue of identity, which is one of the complex aspects, is affected (4, 6, and 11). Therefore, it can be said that if one is in constant contact with virtual space, he/she goes so far as to consider patterns derived from cyberspace as positive and tries to use them in his behaviors. If culture and ethics in cyberspace can be properly institutionalized, when a student encounters inappropriate behaviors in virtual space, they will be able to behave and react correctly and appropriately. Virtual space communication between faculty members and students may lead to confusion (Reamer, 2013) which can result in more confusion and vulnerability of students.

3.11 Security Dimension

Student safety issues may be influenced by a variety of factors. Issues such as bullying, ideology, suicide or child abuse, sexual content and video communication are some of the issues that may endanger students' safety. In this regard, the interviewees believe that it is necessary to provide specific guidance on how to assess virtual space and intervene when such risks occur (13, 9). In this regard, a faculty member states that using technology is not inherently more dangerous than face-to-face services and in fact, assisting through

technology may be an essential part of providing security for students rather than face-to-face activities (7, 4, 3, and 10). Many people better express thoughts such as suicidal tendencies through telephone or online conversations rather than face-to-face meetings (Michaels et al., 2015).

When faculty members teach, they should encourage students to assess the psycho—social aspects. Students must learn to evaluate the risks and benefits of the technologies used. In terms of safety issues, students should look at risks such as cyberbullying, online addiction, identity theft and cybercrime, and faculty members can help students respond to these issues in a timely manner. In this regard, among the interviewees in various fields of science, most of the experts in the field of computer science and ICT raised the security dimension of the issue of ethics in virtual education.

3. What can be included in the ethical standards in order to solve the issues of virtual education among faculty members?

In recent years, the discussion of ethical standards has been a common topic in many professional fields, including virtual education. Ethical standards are used to express attitudes and behaviors in the face of virtual education and are considered as behavioral expectations in virtual education (Campbell, 2001). Ethical standards are to increase protection and minimize complaints and inconveniences from people interactions or information. Ethical analysis, decision-making protocols, and ethical standards have flourished in the recent years (Reamer, 2017). These standards enable the individual to be accountable to themselves, people, and society. This research is the newest frontier in faculty member efforts to keep pace with the times and develop ethically informed innovations to meet the needs of people and communities. According to the issues raised by the interviewees, the existing discussions about ethical standards related to virtual education in teaching can be divided into the following areas:

4 Ethical Standard 1: Civil Liability to Students

The responsibility (commitment) can be defined as practical satisfaction and commitment to the assigned tasks provided that without a monitoring system, the person performs his duties in the best possible way (Moradi et al., 2013). In this regard, the interviewees state that teaching in any environment requires more than just providing content to students. Teaching requires the guidance of the student to analyze, combine, and apply value judgments and achieving these skills requires high levels of faculty member responsibility to students (10,14,9). Also, Faculty members should consider evaluating students and assigning grades based on students' competencies and performance (5, 3).

In this regard, professional commitment means that professors pay attention to their conscience in doing their work, without any external obligation or if they are punished legally in case of violation. In this regard, interviewees emphasized on faculty members adhering to requirements such as respect for students, creating a safe and peaceful environment, encouraging students to be fair and equitable, establishing appropriate relationships and refraining from anything that may affect their decisions and actions (7, 13, and 2). Interviewees, believe that in the educational programs that are based on virtual education, Faculty members are expected to show respect, compassion, responding to students' needs and putting students' interests ahead of their own, taking responsibility for students, and a

commitment to enhancing their academic abilities and skills in their behavior (12, 5). On the other hand, the interviewees emphasize that Maintain a good relationship with students and avoiding getting involved in a romantic or sexual relationship or psychologically damaging students (10, 14) and this can indicate the responsibility of faculty members towards students.

5 Ethical Standard 2: Civil Liability as a Professional Faculty Member

Ethical principles and the criteria of professional behavior indicate the fundamental values and requirements of the profession, and the purpose of its development is to determine the criteria that the faculty member, by observing and committing to them, will be lead to the health and excellence of the profession. These principles and criteria in universities are a model for describing healthy behavior and evaluating the professional behavior of individuals. If faculty members deviate from these principles and criteria, there will be restrictions for them (Ahanchian & Soleimani, 2017). From the point of view of many interviewees, when speaking of the professional faculty members, the issue of ethical adherence to academic principles in the virtual education environment should be considered (7, 9). Also, discussing non- interference in legal activities and political and citizenship responsibilities of students and colleagues on social media (4,6,11) and not using related groups, channels or media for political interests or party-political activities is another responsibility of faculty members in this field (2, 6, 11).

Also, Interviewees state that the faculty members must be professionals (15, 6). Faculty members are not only responsible for helping students and colleagues to create knowledge in a technological environment, but also, they have a duty to help students and their colleagues create insights and attitudes in the framework the goals of the higher education (4, 3, and 10). According to Keller (2001) faculty members are able to overshadow the circumstances of other factors in such an environment by emphasizing their professional commitment and ability.

6 Ethical Standard 3: Civil Liability to the Virtual Education System

If university faculty members, as one of the important components of implementing a virtual education program, want to use these methods, in addition to having knowledge and skills, they must have a commitment and responsibility to such a system (Omoiee Milan, Mehdihezad and Yaghoubi, 2012). In this regard, from the point of view of many interviewees, the commitment of faculty members to the virtual education system means that faculty members should act in accordance with appropriate procedures, statutes and regulations set in cyberspace, as well as based on educational goals, policies and decisions – making (3, 6, and 2). Also, faculty members can turn objects into an incentive or motive to teach and learn by validating the virtual education system by valuing objects (6). In fact, sometimes people's behavior is influenced by other stimuli, such as systems or objects. In this regard, it is important to know how the object becomes a stimulus or motivation. Furthermore, the confirmation of the diverse perspectives of students and colleagues as they work together to shape educational goals, policies, and decisions in virtual space is very important in this area (4, 11, 3).

7 Discussion

Ethics and ethical values must be institutionalized in the individual from their childhood to become part of the individual's behaviors and reintroduced in higher education (Watson, 2006) and virtual education. In fact, the result of the interaction of behavior, perception and emotion is the emergence of moral temperament or traits that together ensure the development and consolidation of beliefs, unity of procedures and stability of traits (Alamolhoda, 2019). Accordingly, after four decades of testing and using e-learning systems around the world, it is necessary to develop a behavioral guideline for teachers in e-learning in order to carry out their activities in teaching, changing attitudes and values, etiquette with Students and colleagues and in relation to their jobs (Farahani, 2012). Creative and effective innovation in an activity requires faculty members to implement a constructive and coordinated program to use new and efficient online methods that transcend traditional boundaries. The constant challenge in online and virtual activities is to be able to draw a proper line between the desired innovation and the associated advantages and disadvantages. It is the job of faculty members to thoughtfully evaluate the acceptability of online and electronic tools (Reamer, 2013).

Today, the context of activities is different in many professions, including virtual education. This difference in context also entails different ethical responsibilities. Since the issue of education in virtual education can be associated with changing the beliefs and values and scientific knowledge of individuals, it is necessary for faculty members to act ethically on the issue of education in virtual space. It is becoming increasingly clear that while massive data collection and data-mining inferences can add to the science of learning, the same advances can be used to track students' behaviors, identify them, and characterize their behaviors (Kelly, & Seppälä, 2016); therefore, it can be concluded that faculty members should be aware that students' information is very sensitive. In this regard, in the present study, three questions have been raised that complement each other. In this way, we first tried to explain the extent of faculty members' understanding of the issue of ethics in virtual education in order to determine the general principles that appear in ethical codes as the basis of normative performance in virtual education. For example, honesty, fidelity, and confidentiality, which are value principles, appear in ethical codes in the form of fidelity to students or confidentiality to students. In other words, there is a kind of generalization in moral values, while moral codes are applicable and measurable. This practice and the design of the present three research questions allow policy makers and implementers of virtual education to identify any type of activity and ethical guidelines based on the circumstances appropriate to the situation, which can help to dispel any ambiguities in this area.

The purpose of this qualitative study was to investigate faculty members' perceptions of ethics in virtual education. One related contribution to this research is the fact that it examines faculty members' perceptions of ethical issues in the academic environment, which have been less studied so far. Also, the present study leads to increasing the awareness of students and faculty members on these issues, which is a valuable model for creating the right ethical behavior. The results of the present study once again, show the ethical problems of using information technology. Accordingly, some interviewees believed that faculty members should be familiar with ethical issues in cyberspace and consider ethical issues and challenges. In this regard, some faculty members, especially experts in the field of ICT, placed more emphasis on the ethical security approach in cyberspace. In this regard, issues related to personal data and intellectual property, selling data to other institutions,

and related legal issues are one of the major ethical issues in the field of virtual education, which was also emphasized by Kelly and Seppälä (2016). However, ideas about the ethical security approach, which is related to ensuring the safety and confidentiality of information in the virtual education space also differed among the interviewees. Some of the interviewees emphasized the formation of an environment in which one can confidently share one's data with others. As Necasova (2018) states, creating a safe and supportive environment for students that enables to easily access their information during their training is very important for, while others have emphasized the security of users' access, hacking of users and students' information, and especially users' intellectual property rights, which is not given much attention in the Iranian scientific community. The results of Martin (2016) research show that respect for privacy and intellectual property rights requires an understanding of confidential norms that are reflected in the form of a social contract and these privacy expectations change the responsibility of individuals and organizations to maintain a useful and sustainable solution. In this regard, the results of the present study confirm the results of studies (Barsky, 2017, 2019) that emphasize the confidentiality and confidence of private behavior among students. Also, ideas differed about the ethical character approach, which are related to how people socialize, temperament, beliefs and insights of people. Some interviewees' state that faculty members need to be trained in social etiquette and topics related to sexual perversions, as well as how to communicate with other students and colleagues. In this regard, Reamer (2013) states that inappropriate relationships faculty member with students may lead to confusion in etiquette and relationships between faculty and students and may lead to vulnerability of student. Such approaches help us to design a model that reflects the technical and mechanical perspective along with value and attitude strategies, and this not only helps us to understand our intellectual blind spots, but can also create new spaces in design and research.

The results in answer to the second question show that the majority of the interviewees (experts in the field of social sciences and experts in the field of educational sciences and philosophy) agree that when it comes to ethics in virtual education, views move towards a security approach, while an ethical character approach is also very important. In this regard, some of the interviewees, especially experts in the field of social sciences, emphasize the cultural, identity and ethnic dimensions and race in the field of ethics in virtual education. From an ethical characteristics point of view, the results of this study reinforce the views of other authors (Barsky, 2019; Martin et al, 2012; Milani, 2008) on the fact that the scientific view to cultural differences and the impact of cultural factors on virtual education courses by universities is very important and that ethnicity and color issues are very prominent in virtual education and are widely abused by racists. In addition, the results of research by Reamer (2013) show that the interactivity of the Internet and its capabilities has led to the creation of virtual identities, and in this way, the internet space becomes a space of interaction between virtual identities. Interviewees (mostly computer science and ICT specialists) also emphasize the ethical security approach as another influential approach to the field of ethics in virtual education. The research results show that the main issues related to this area are shown in the form of the two dimensions of learning environment health, and security; and these issues are mainly related to academic abuse and other ethical deviations, which confirms and reinforces the results of research by Obeid & Hill (2017) and Michaels et al (2015), that there are issues such as coercion, ideology, suicide, or moral deviance in the discussion of ethics in virtual education, and many people better express thoughts such as suicide through telephone or online conversations rather than face-to-face meetings. Of course, this kind of interactions between faculty members and students in virtual space may lead to confusion and loss of identity in such a space. This has gone so far

that academic dishonesty in higher education has justified the increase in recommendations to reduce academic dishonesty and other ethical deviations (Ives & Nehr Korn, 2019) and has increasingly highlighted the need to pay more attention to this issue.

In response to the third research question, it can be said that in recent years, the issue of communication between faculty and students, the etiquette that exists between them, privacy in such environments, identity and ethnicity issues has led to a debate called ethics in e-learning. All of these factors have led to the debate over the ethical standards that a faculty member must adhere to during virtual education. Ethical standards express the type of attitude and behavior of faculty members in dealing with students in virtual education and are considered as faculty member expectations of behavior in virtual education (Campbell, 2001). These standards enable faculty members to be accountable to themselves, others, and the community, and to have the necessary standards to communicate with students in virtual space. The results of Reamer (2017) research show that ethical standards can help manage ethical challenges in the digital age.

Although education may increase performance, effectiveness and improve productivity, virtual education changes not only the face of education, but all aspects of life. This means that virtual education can be effective not only for students in education but for almost all human endeavors for life. In fact, despite the fact that the necessary context in higher education in the post-corona era has been formed for the implementation of virtual education, but issues related to ethics in virtual education have created a kind of frustration and lack of optimism about the use of this type of education in the post-corona era. For example, most interviewees acknowledged that virtual education can enhance the learning process, but it can also help to spread immorality among students.

However, this factor can not deter us from engaging in virtual education among higher education institutions. But this is especially important given the general need for such a space in the learning environment. These factors are some of the comments made about the idea of where ethics in virtual education should go. This phenomenon can and should force other researchers to study the basis of ethics in virtual education in the Iranian educational system. In fact, this orientation is one of the main distinguishing factors of this article from other articles that provides a comprehensive approach to researchers and scholars in addition to the ethical security approach that has been examined in several articles (Regan, & Jesse, 2019; Garza Mitchell, 2009; Martin, 2016; Necasova, 2018; Barsky, 2017), also, pay attention to the ethical character approach (attitudes and values) in research. Also, in the present study, specific standards for faculty members in order to face virtual education and accountability is expressed in the form of three levels, while in other studies, ethical standards (behavioral indicators) are not defined for faculty members, and if a standard is specified (such as the standard defined in the GDPR) it addresses ethics in cyberspace more generally.

8 Conclusion

The purpose of this qualitative study was to investigate the explanation of faculty members in higher education about the issues and ethical challenges in virtual education among faculty members and to identify appropriate ethical standards to solve these issues. One of the facts related to this research was that in connection with the lived experience of faculty members of ethical issues in the virtual space of higher education, so far very little research has examined this issue. More importantly, there has been very little research that can be

said to examine the ethical standards of virtual education in relation to faculty members. In addition, the results of the present study increase the awareness of university faculty members about ethical issues, which is a valuable model for creating the ethical behavior of faculty members.

The results obtained in the present study show that faculty members' perceptions of the issue of ethics in virtual education stems from two approaches of ethical character and the approach of ethical security. In this regard, the results showed that most of the interviewees in the socio-human domains referred to the approach of ethical character, while experts in the field of ICT emphasized more on the approach of ethical security in virtual space.

Ethical issues about the use of virtual education in higher education by faculty members shows that in terms of learning environment health dimension, ethical issues were mainly related to plagiarism, copyright and patents. In relation to the cultural dimension, research results show that ethnic issues in virtual education are major issues related to the cultural dimension. In the security dimension, which covers issues such as coercion, suicide, or moral deviance, the results indicate that faculty members need to help students respond to these issues in a timely manner. In the identity dimension, the results also reflect the fact that due to the generational difference or generation gap between Y-generation students or digital natives (2004–1982) with different educational needs and the teachers and professors who are sometimes of X generation (1981–1961), virtual teaching in universities has led to the technological capabilities of Generation Y beyond their predecessors, and therefore teachers and faculty members experience ethically different challenges than traditional teaching. Therefore, teaching virtually leads to the identification and disappearance or immersion of people in this environment, and due to the educational goals in cyberspace, the educational aspects of students may be neglected. In other words, ethically, equal opportunities should be provided for students. Instructors should rely more on formative assessment than final assessment. Strategies for a variety of teaching methods, especially flipped classroom learning, should be used. In order to provide educational activities, we can use the existing capacities in social networks or various tasks and self-evaluation and peer evaluation to promote education and observe justice and access to equal learning opportunities in line with the act of ethical behavior.

The results of the present study show that ethical standards can be placed in three levels of civil liability to students, civil liability as a professional faculty member, and civil liability to the virtual education system. These ethical standards can include ethical issues and try to solve them.

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