RANKING DISTANCE LEARNING RELATED RISKS IN HIGH EDUCATION

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Abstract- Taking the increasing importance of risk-based thinking and importance of improving ways of getting education, this paper aims at boosting knowledge about risks in high education. In line with this, the rank of specific risks in online education according to their importance from the student's point of view is pointed out. Since teaching process was observed as the main process of online education in High Education Institutions (HEI), we conducted the questionnaire to establish the rank of risks related to this process. The research also aims at identifying best methods for avoiding these risks. This can help HEI to identify possible risks in order to improve their teaching processes by using the best methods. Based on received 71 responses to the questionnaire, using t-test and SPSS software, three the most important risks are pointed out: lack of self-regulation and self-motivation in online environment, sense of isolation by students and low quality of communication with teachers. Also, it is considered in the paper if there are differences in ranking risks' importance between different groups of students.

Keywords- Risks, Importance, E-learning, Distance learning, Teaching process.

I. INTRODUCTION

There is no unique definition of terms such as online learning, distance learning, web-based learning, web-based training, and such terms can be used as synonymous to E-learning (Dringus & Cohen, 2005; Khan, 2001; Triacca et al., 2004; Wagner, 2001). The term distance learning was used to focus on limitations with distance, i.e. time and place (Guilar & Loring, 2008; Newby et al., 2000). E-learning can be considered as anything that can provide learning for example applications, programs, objects, websites, etc. (Moor et al., 2011). Online learning is identified as a more recent version of distance learning which improves access to educational opportunities for learners (Benson, 2002; Conrad, 2002). Like a classical teaching process (Glogovac et al., 2017), there are a number of risks associated with E-learning which need to be managed so that process of learning could be improved. In line with this, a risk is seen as a joint function of two risk variables, likelihood and impact (Nicholas, 2004).

Based on ISO 31000:2009, risk is defined as the "effect of uncertainty on objectives":

- An effect is a deviation from the expected — positive and/or negative;
- Objectives can have different aspects and can apply at different levels;
- Risk is often characterized by reference to potential events and consequences, or a combination of them;
- Risk is often expressed in terms of a combination of the consequences of an event and the associated likelihood of occurrence.

According to ISO 9001:2015, „Risk-based thinking enables an organization to determine the factors that could cause its processes and its quality management system to deviate from the planned results, to put in place preventive controls to minimize negative effects and to make maximum use of opportunities as they arise". „Risk management is the identification, assessment, and prioritization of risks followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities" (Hubbard & Douglas, 2009). The concept of risk management is still undeveloped in higher education, comparing to other sectors (King III Report, 2009, Barnes, 2006).
When it comes to the students' perception, they see risks as (Drago et al., 2002): a cold learning environment lacking

interaction with faculty and peers; increased time commitments compared to regular classroom instruction; and a learning environment subject to the whims of temperamental technology. According to Smith (2001), there are a number of risks that students in high school have to face with, including: difficulty communicating with team members; less spontaneity in discussion; a lack of experience with oral presentations; the temptation for less motivated students to disappear for extended periods of time, etc. While receiving online education, participants gained both positive and negative experiences, although their experiences tended to be more positive (Yang & Linda, 2004). According to the same authors, what make positive students' experiences are: flexibility of class participation time and self-paced study, cost-effectiveness of online class, electronic research availability, well-designed course layout, easy connection with the Internet, an easy navigation of the online class interface, etc. on the other hand, factors that contribute to student' negative experiences are: delayed feedback from teachers; unavailable technical support from instructor, lack of self-regulation and self motivation, sense of isolation, monotonous instructional methods, and poorly-designed course content (Yang & Linda, 2004).

It is obvious that there is a need for improvement but, the future of distance learning seems bright. The number of students who are enrolling in distance learning classes is increasing which underscores the need for "comprehensive and thoughtful evolution of distance education if it is to become the educational model of the future" (Harnar et al., 2000). Despite the cost, coordination, and training that must be put into a program, it has "great potential to deliver and receive educational programs to and from remote sites" (Weber, 1996). Keegan (1995) points out that "the challenge is to design cost-effective and educationally-effective systems for use in the new millennium of the new technologies that permit for the first time in history (electronic) teaching of students face-to-face at a distance".

II. RESEARCH METHODOLOGY

1.1. Aim of the Research

The aim of this research is to rank risks in online education according to their importance from the student's point of view. According to the relevant literature, we pointed out the most common problems and risks in E-learning processes. In line with this, the research aims at identifying best methods for avoiding these risks. This research can help to identify risks in order to improve teaching process by using best methods.

1.2. Research Questions and Hypotheses

As suggested by some authors (e.g. Beldarrain, 2006; Moore, 1993), an important predictor of course effectiveness and learners' satisfaction is the interaction/communication among e-learners. Effective communication allows learners to evaluate their course progress and instructional needs. There is significant evidence to suggest that meaningful interaction with other students and the instructor is integral to the development of thriving learning environments (Brown, 2001; Garrison & Cleveland-Innes, 2005; Greene, 2005; Lee et al., 2006; Swan, 2002). According to such conclusions, we defined the first hypothesis of the research:

Hypothesis H1 - Low quality of communication/interaction with teachers during online courses is the most important risk.

There is not enough research about the importance of different risks in the available literature. Some considerations are related to risks in face-to-face education (e.g. Glogovac et al., 2017). In addition to that, we found useful to define the following research question and hypotheses:

Research question Q1- Which are the most important risks in online learning?

H2: There is no significant problem, from the students' point of view, with security of personal information during E-learning processes.

H3: There is a high risk of students' sense of isolation while learning online.

H4: There is no statistically difference in risk importance ranking between participants that get education online and those who get it in combination with face-to-face education.

H5: There is statistically significant difference in risks importance ranking between participants from developing countries and participants from developed countries.

H6: There is no statistically significant difference between male and female students in ranking risks importance.

Research question Q2- How to avoid risks and overcome problems in online learning?

1.3. Population and Sample Characteristics

The population of this research consists of students that get high education via combination of online and face-to-face models, or just participate online courses. The sample consists of male and female students (approximately equal number of them). They are from both developing and developed countries. Students are chosen as participants because they are directly involved in the teaching process realization and they are customers of such service.

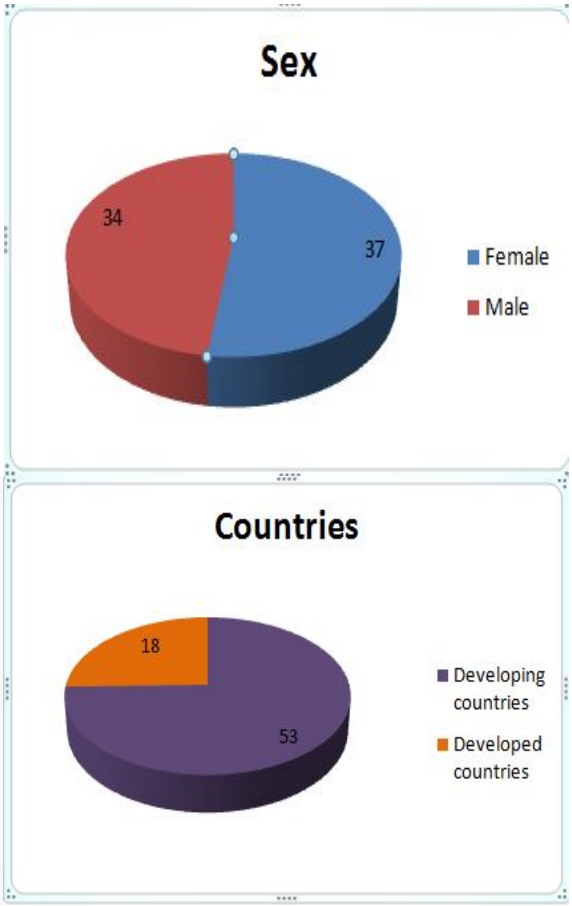


Figure1. Sample characteristics

1.4. Research Instrument

We used the questionnaire that consists of two parts in order to perform the research. The first part is related to working experience, sex and the way of getting education. Second part is related to ranking defined risks according to their importance on a scale from 1 (extremely unimportant) to 5(extremely important). Those risks are related to online teaching process. The questionnaire was shared on social networks in which students are active. We received 71 responses and all of them were usable for this research.

1.5. Data Analysis Methods

In order to test the hypotheses of the research, we used two statistical methods:

- One-Sample t-test, for establishing the rank of risks in online teaching process;
- Independent Sample t tests, for finding out statistical differences in giving importance to risks by different groups of students. If the value p is less than 0.05 then there is statistical difference between testing groups.

III. RESULTS

As the results of first analysis show, three the most important risks are lack of self-regulation and self-motivation in online environment, students' sense of isolation and low quality of communication with teachers (Table 1). All the risks are ranked according to mean values. We proven hypothesis H1 as false since Low quality of communication with teachers (Mean=2.99) is shown to be ranked as third.

Table1. The rank of risks in online education according to their importance

One-Sample Statistics		
Risks	Mean	Std. Deviation
Lack of self-regulation and self-motivation in online environment	3.21	1.133
Sense of isolation by students	3.17	1.320
Low quality of communication with teachers	2.99	1.021
Monotony of teaching methods	2.76	1.189
Design of courses content	2.64	1.130
Security of students personal data	2.46	1.119

When it comes to differences between observed groups of students, Table 2 shows that there is no statistically significant differences in risks ranking between them.

Table2. Differences in risk importance ranking between different groups of students

	Difference in risk importance ranking between male and female students					Difference in risk importance ranking between students from developing and developed countries					Difference in risk importance ranking between students with different ways of getting education				
	Male		p	Female		Developing		p	Developed		Online		p	Combination	
	M	SD		M	SD	M	SD		M	SD	M	SD		M	SD
Low quality of communication with teachers	2.97	1.087	0.536	3.00	0.972	2.96	1.037	0.383	3.06	0.998	2.50	0.756	0.487	3.05	1.038
Security of students personal data	2.18	0.999	0.068	2.73	0.192	2.45	1.170	0.194	2.50	0.985	1.62	0.744	0.074	2.57	1.118
Monotony of teaching methods	2.65	1.203	0.629	2.86	0.194	2.72	1.183	0.805	2.89	1.231	1.88	1.126	0.939	2.87	1.157
Design of courses content	2.45	0.190	0.867	2.81	0.184	2.58	1.177	0.165	2.83	0.985	2.12	0.991	0.329	2.71	1.136
Lack of self-regulation and self-motivation in online environment	2.97	0.196	0.615	3.43	0.180	3.26	1.146	0.460	3.06	1.110	2.25	0.886	0.596	3.33	1.107
Sense of isolation by students	2.85	0.228	0.786	3.46	0.207	3.11	1.396	0.120	3.33	1.085	2.88	1.458	0.863	3.21	1.310

CONCLUSION AND DISCUSSIONS

Taking into consideration new standard ISO 9001:2015 that focus a lot on risk based thinking and ISO 31000:2009 that is about risk management, we conducted a research on a subject that is not well elaborated. The risks are something that every organization needs to manage in order to optimize processes, so as every institution that provide online education services. We defined specific risks in E-learning in accordance with the available literature background in this field, in order to point out the most important risks, making it easier for other researchers to find adequate solutions.

Students, as one of the most important interested parties in E-learning, are used as participants in the research (sample of 71 students), since they are directly involved in the teaching processes. In this research, students recognized three the most important risks which can lower the quality of teaching process. They can cause many psychological problems such as anxiety, depression and anti-social behavior, so as skipping classes and abandoning courses. Managing those risks by institutions will inevitably improve E-learning experience that students get.

When it comes to the research question Q1, we concluded that the most important risks in E-learning are: lack of self-regulation and self-motivation in online environment, sense of isolation by students and low quality of communication with teachers. The most important risk of teaching process is shown to be lack of self-regulation and self-motivation in online environment. That is probably because students are used to have some sort of supervision for class attendance and homework. That is in opposite to our hypothesis H1, as our research of available literature suggested.

In the era of social networks where the most students are active online and share personal data publicly, we wanted to check if they are concerned with security in online education. Our hypothesis H2 is confirmed since that risk came last on list of observed risks, that mean it is estimated with the lowest grade by students. In hypothesis H3 we observed risk of sense of isolation in online environment, as very common described risk in available literature. So, with the preposition that it must be present to a very large extent in

online education, we concluded it is highly rated, but not to extent that our criteria suggested. When it comes to hypothesis H4, where we test statistical difference in ranking risks between students that get education online and students that get education through combination of online and faculty, because there was suspicion that formal education could change perception of students when it comes to influences risks have on them, we came to the conclusion that there is no statistical difference in ranking risks between observed groups of students. Because there are technological and cultural differences between developed and developing countries, we also tested if these factors influence the risks ranking by students from those countries. In line with this observation, we got results with no statistically significant differences. We assumed that there are no differences in risk ranking between male and female students, since online environment have the same influence on people and it is neutral when it comes to such characteristics of students. The results proved that there is no significant difference in risks ranking between them.

It is of great importance for online education institutions to identify all real and possible risks, so that the processes of online learning can get planed results. So, this paper made base for further research, such as risk prevention and avoidance measures.

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