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STUDY REGARDING THE USE OF INFORMATION AND COMMUNICATIONS TECHNOLOGY

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Abstract

The technology of information and communication is a constant of contemporary education. The efficiency of the learning process in its entirety depends nowadays, according to the studies, on the use of digital resources. The internet and the digital technology favour both the process of teaching-learning-assessing and the process of self-teaching / self-formation. The progress of digital technologies has generated a series of positive aspects which can be observed in society in general, such as : the accessibility of informational resources and the prompt it use of correct information, the possibility of identifying and using the new acquisitions and technical discoveries from various areas as solutions to existing problems, integrating new information in structures of inter and trans disciplinary curriculum, decreasing the costs of formation and information for school communities and society in general. The informatized society of the future needs the development of the digital competences at all levels in the educational communities, which means responsibility and self - responsibility for the educational institutions and for the educators. Our study attempts to observe the level of the differences between the way in which the technology of information and communication is used by the full-time students and by the distance-learning students, from various perspectives, such as: the frequency of using digital resources for bibliography, their real utility as well as the negative effects of the phenomenon of mass converting of bibliography into digital form.

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Keywords: Information and communication technology, efficiency of learning, digitalized information.



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1. Introduction

Information and communications technology has fundamentally and completely changes the means in which the young generation reads, writes and communicates (Melor, & Norazah, 2014). In its own turn, contemporary higher education is more and more based on the resources provided by ICT (information and communications technology). Nowadays society is one based on competition, and educational systems worldwide are preoccupied by giving their graduates, through ICT, the necessary knowledge and abilities required to obtain success in this competitive context (Janáková, 2012). Most of the studies in the field indicate the fact that there is a proportional basis between the level of socio-economic development of a country and the means in which it makes use of the ICT resources in the educational domain (Kimberly & Yemish, 2003).

The ICT impact upon the educational phenomenon is a major one, as it decisively emphasizes the means of drafting the curriculum, teaching, learning and not lastly, upon didactic evaluation (Kaffash, Kargiban & Ramezani, 2010). Consequently, by using ICT, students not only gain access more easily to various sources of learning, but, at the same time, they become accustomed to using the computer and the Internet, gaining thus a set of transversal skills without which their insertion on the workforce market would be hard to accomplish (Jameson, Squires, 2013). Moreover, this impact makes its presence felt starting with the provision of the material basis necessary to implement ICT in the area of the educational phenomenon and ending with the development of digital skills of current and future teachers (Gonzalo, Suárez, Belloch & Rosa, 2011). As a result, teacher training programmes give a higher importance to the building of skills that are necessary to successfully integrate ICT in the structure of the educational process. (Ndongfack, 2015). Nonetheless, the transfer of successfully using ICT from the level of teaching to that of earning is not easy nor is it automatically accomplished. The drafting of a curriculum based on the opportunities provided by ICT and the design of adequate educational software systems represent actions that should be doubled both by stimulating the students' motivation to use them, as well as by the development of their digital skills (Yadin, 2012). Ongoing pedagogical attempts to determine the most adequate and effective means of developing training processes have emphasized the need to incorporate in the training context not only ICT but also the social and group component meant to favor interaction among the users of learning platforms (Lăculeanu, 2006).

2. Problem Statement

Beyond the aspects mentioned above, we must accept the fact that the wide use of ICT in higher education is currently a real thing. Stemming from this premise, our study aims to capture the measure in which there are differences regarding the use of ICT by full-time undergraduates and distance learning undergraduates from various perspectives, among which we name the following: the frequency of using digital bibliographical resources, the effective use of these resources as well as potential negative effects of the phenomenon of massification of digitalized information.

3. Research Questions

Are there any differences between the way in which the technology of information and communication is used by the full-time students and by the distance-learning students, from various perspectives, such as: the frequency of using digital resources for bibliography, their real utility as well as the negative effects of the phenomenon of mass converting of bibliography into digital form?

4. Purpose of the Study

The purpose of our study is to prove that there are significant statistical differences from the perspective of using ICT resources by full-time students and distance learning ones in favour of the latter category.

5. Research Methods

The main investigation method was the questionnaire-based survey. The subject sample consisted of 121 full-time undergraduates and 113 distance learning undergraduates majoring in Pedagogy of Primary and Preschool Education.

6. Findings

The first item of the questionnaire aimed to capture the means in which subjects use the resources provided by ICT. The results are indicated in the table below:

Table 01. Frequency of general use of ICT resources

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
Very often	46	38,0%	32	28,3%
Often	59	48,8%	63	55,8%
Little	16	13,2%	18	15,9%
Not at all	0	0%	0	0%
TOTAL	121	100%	113	100%

One may notice, more than 80% of the subjects in both categories claim they use the ICT resources very often and respectively often, while only less than 16% of them answered that they use ICT little or not at all. Even though the percentage of this latter category of respondents is not very high, it still poses some questions in the context of speaking of the XXI century education. We reckon, however, that it is a good thing that there were no respondents who had never used ICT and there were no significant statistical differences between the two sets of students.

The second item had the purpose to identify the means in which undergraduates use of ICT as useful when preparing for exams. The recorded results are indicated in Table 02.

Table 02. The usefulness of ICT resources for exam preparation

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
Very useful	52	43,0%	50	44,2%
Useful	59	48,8%	43	38,1%
Little useful	8	6,6%	20	17,7%
Not useful at all	2	1,7%	0	0%
TOTAL	121	100%	113	100%

The data in the table above indicates that both full-time-91.8% and distance learning students-82.3% consider that ICT resources are useful and very useful in the exam preparation activity. Surprisingly, however, we notice that the percentage of distance learning students considering that ICT resources are little or not useful at all is 17.7%, double the percentage of full-time students who expressed this viewpoint in a significantly lower percentage-only 8.3%. There were no significant statistical differences between the two sets of subjects.

The third item of the questionnaire aimed to show the degree of importance that ICT resources hold in the context of exam preparation for the two categories of subjects. The results are shown in Table 03.

Table 03. The degree of importance that ICT resources hold in the context of exam preparation

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
100%	4	3,3%	10	8,8%
75%	60	49,6%	36	31,9%
50%	40	33,1%	45	39,8%
25%	15	12,4%	22	19,5%
0%	2	1,7%	0	0%
TOTAL	121	100%	113	100%

The data in the table above indicate the fact that only a small part of the subjects-3.3% of full-time undergraduates and 8.8% of distance learning undergraduates base their learning efforts on ICT resources. The great majority, 82.7% of full-time undergraduates and 71.7% of distance learning students claim that the degree of using ICT resources is situated between 50% and 75%. A 25% degree is allocated by 12.4% of full-time students and 19.5% of distance learning students, while only 1.7% of the full-time students claim never to use the ICT resources when preparing for exams. There were no significant statistical differences between the two sets of subjects. The data regarding the inconveniences in using ICT resources are presented in Table 04.

Table 04. Inconveniences in using ICT resources

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
Reduced quality of information	31	25,6%	22	19,5%
Time necessary to look for information	27	22,3%	43	38,1%
The overload of information	50	41,3%	31	27,4%

Linguistic difficulties	9	7,4%	17	15,0%
Other	4	3,3%	0	0%
TOTAL	121	100%	113	100%

The purpose of this item was to make an inventory of the main difficulties that students face when using ICT resources. As seen from the table above, for full-time students, the main inconvenience is the overload of information, which makes it difficult to identify the study materials that are genuinely useful and valuable. Second and third come the reduced quality of much of the information found and the time invested in searching it. The last position is occupied by the linguistic difficulties posed by materials written in a foreign language. As to what regards distance learning undergraduates, the most important difficulty is the time necessary to look for information, followed by the informational overload, reduced quality of data and linguistic difficulties. No statistical differences were recorded between the two sets. The following item regarded the criteria that, in the context of information overload, students use when choosing the most adequate ICT resources. The results are synthetically presented in Table 05.

Table 05. Choosing criteria for ICT resources

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
Publishing year	4	3,3	15	13,3
The author's notoriety	22	18,2	6	5,3
Title attractivity	13	10,7	22	19,5
Summary of the study	79	65,3	70	61,9
Others	3	2,5	0	0%
TOTAL	121	100%	113	100%

The results indicate the fact that, both in the case of full-time students (65.3%) and in the case of distance learning students (61.9%) the main criterion in the decision to study a certain material is represented by its summary. Ranked secondly by full-time undergraduates (18.2%) is the criterion referring to the notoriety of the author, while for distance learning undergraduates (19.5%) this position is held by the criterion referring to the title attractivity. This last criterion was chosen on the third position by full-time students (10.7%), whereas distance learning students (13.3%) made the choice here in favour of the publishing year of the respective material, a criterion considered less relevant by the other set of subjects. No significant statistical differences were found between these two sets of subjects. The following item of the questionnaire aimed to identify the average number of ICT resources that were consulted by the two categories of subjects in view of preparing for an examination. The results are displayed in Table 06.

Table 06. Average number of ICT resources used in view of preparing for an examination

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
1-4 informational resources	62	51,2	60	53,1
5-8 informational resources	44	36,4	28	24,8

9-12 informational resources	9	7,4	15	13,3
More than 13 informational resources	6	5,0	10	8,8
TOTAL	121	100%	113	100%

Based on the date indicate din the table above we may observe that the great majority of subjects in the two categories, 51.2% of full-time students and 53.1% of distance learning students usually claim that they read an average of 1-4 ICT resources when preparing for an examination. An average of 5-8 resources are used by 36.4% of full-time students and 24.8% of distance learning students, whereas more than 9 resources are generally consulted by 12.4% of full-time students and 22.1% in the case of the other set of subjects. . No significant statistical differences were found between these two sets of subjects. The final item of the questionnaire observed the students' opinion regarding the frequency of using ICT resources. The results are shown in Table 07.

Table 07. Frequency of using ICT resources

	Full-time undergraduates		Distance learning undergraduates	
	N	%	N	%
Full-time undergraduates	55	45,5	17	15,0
Distance learning undergraduates	66	54,5	96	85,0
TOTAL	121	100%	113	100%

The data in the table above indicate the fact that both categories of subjects believe that distance learning students use ICT resources the most, even though the results in Tables 02 and 03 don't necessarily confirm this fact, for which reason we should rather consider that this final item stands as an opinion regarding what should be the expression of an effective educational reality.

7. Conclusion

Even if the implicit hypothesis that our study was based on- namely the premise that there are significant statistical differences from the perspective of using ICT resources by full-time students and distance learning ones in favour of the latter category did not confirm, we still estimate it is a positive signal that both sets of subjects widely make use of the instructive and formative potential offered by ICT.

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