Students' preferences for learning materials in technology-enhanced higher education

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Abstract

Current trend of using ICT in different areas of modern life is also reflected in the educational process. At present higher education is run in different forms of instruction which range from traditional classes through blended ones to pure online classes. Many research studies also confirm that students like being provided online courses because they appreciate having study materials within their easy reach and being able to see and read once again the lecture texts or other materials from their face-to-face classes. In addition, they can easily access them independently on their location. Designers of these materials try to tailor these study materials to the learners' needs. Therefore the purpose of this article is to discuss what form of instruction students prefer; and on the basis of a questionnaire survey to explore whether students really welcome the online learning materials and their likes and dislikes about these study materials which are offered to them.

Keywords: students' preferences; learning materials; forms of instruction; online learning; survey

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1. Introduction

Most of the tertiary institutions nowadays have adopted virtual learning environments as the primary platform in delivering learning materials to their students (cf. Dang, Pan, & Wang, 2011; Weller, 2007; or Frydrychova Klimova & Poulova, 2014). Studies (Bekele, 2010 or Lim, Morris, & Kupritz, 2007) also show that students are satisfied with this type of e-Learning environment. The e-Learning courses created in this environment are used either as a support of students' traditional, face-to-face, classes or they are exploited purely online (Frydrychova Klimova, 2009). Since the designers of these materials want to satisfy their students' needs as much as possible, the courseware for e-Learning should be more than just a set of online study materials (cf. Dang, Pan, & Wang, 2011). Therefore the designers should consider the nature of the learning activity, students' preferences, and the environment and media within which the learning community is formed and learning activities are held. In this process adaptive learning can contribute to the tailoring of learning materials to individual needs (Thalmann, 2014). Chen, Lee, & Chen, (2005) and Gkatzidou & Pearson (2009) also add that the personalisation of learning materials in the form of a content adaptation tailored to the needs of the learner can increase the acceptance and efficiency of e-Learning. Vinuesa & Formos (2007) also established the conceptual principles for designing and delivering online study materials, which are as follows:

- All resources should be integrated within a single learning environment;
- The study materials should cover the needs of all students on the course, therefore the materials must be flexible;
- The materials should meet the twofold objective: it must be specific for a course, but also referential, which can be used at any time;
- The format of the study materials should be created in pdf. files so that they are of high quality and suitable for printing;
- All the components of the study material should comprise a unit that is clearly recognized by the students; and
- The study materials should be universal and easily modified.

All the above mentioned characteristics are also reflected in the online courses which are run at the Faculty of Informatics and Management (FIM) of the University of Hradec Kralove, Czech Republic. The aim of this article is thus to discuss what form of instruction students prefer; and on the basis of a questionnaire survey to explore whether students really welcome the online learning materials and their likes and dislikes about these study materials which are offered to them.

2. Material and methods

In January of 2015, 45 FIM students were given a questionnaire in order to discover their attitude towards forms of instruction used at the faculty; their preferences for study materials and their likes or dislikes about them. The research tools used were as follows:

- Pen and paper questionnaires consisting of nine questions out of which five were multiple choice questions and four were open-ended questions;
- Descriptive statistical methods of processing the results of the survey; and
- A comparison method of descriptive measures in analyzing the results of the survey.

All students submitted the questionnaires. 29 (64%) of them were females and 16 (36%) were males. 19 (42%) respondents studied part-time while 26 (58%) of them were full-time students. The biggest group of the students were between 20-24 years old (44%). Then it was quite even; seven respondents (16%) were between 25-29 years old, the same number was true for 35-39 years old and under 20 years old. Most of the respondents were enrolled in studying Management of Tourism (30/66%), followed by the students of Information Management (8/18%), Financial Management (4/9%) and Applied Informatics (3/7%).

3. Findings

As it has been already mentioned, students were asked nine questions. The first four questions below were designed in order to discover whether students are well equipped for ble[(/)6h7irst four que7 2M-121

Figure 2. Types of mobile devices students own.

Most of the students (40 respondents/89%) use the mobile device for their studies, while only 5 (11%) do not (Fig. 3).

Figure 3. Use of the mobile device for students’ studies.

Fig. 4 then illustrates that the respondents use it quite frequently.

Figure 4. Frequency of the use of the mobile device for students' studies.

The rest of the questions below were then the core survey questions.

Fig. 5 indicates that 27 students (60%) prefer the blended form of instruction; 18 students (40%) the traditional one; and none of the students would like to have just the online classes.

Figure 5. Form of instruction.

Surprisingly, almost all students (40 respondents/89%) would still study from the printed materials; 16 students (36%) would also use the e-Learning materials; and only three students (7%) would prefer m-learning materials (Fig. 6).

Figure 6. Preferences in the types of learning materials.

As far as this question is concerned, it is clear that the majority of students prefer printed materials (89%), followed by e-Learning materials (36%) and m-learning materials (7%).

The survey also showed that 60% of the students preferred the blended form of instruction, which is now becoming prevalent at the institutions of higher education and it is a well-established methodology, particularly in higher education (cf. Allen, Seaman, & Garret, 2007; Norberg, Dziuban, & Hartman, 2003; or Porter, Graham, Spring, & Welch, 2013) since this form of instruction is considered to be the most suitable one to meet students' needs in the most effective way (cf. Garrison & Kanuka, 2004 or Graham, 2013). Moreover, the blended learning methodology enhances both teaching and learning by using more interactive strategies (Jusoff & Khodabandelou, 2004). Also other surveys which were conducted at FIM confirmed that students most frequently welcomed the blended form of instruction (cf. Hubackova & Semradova, 2013 or Frydrychova Klimova & Poulova, 2013a).

In addition, institutions of higher learning have recently started to show an intense interest in blended learning (Yamagata-Lynch, 2014) because in this way they can have greater access to student population (Porter, Graham, Spring, & Welch, 2013). The improved cost effectiveness is particularly true for the corporate systems where people are permanently busy and hardly ever can afford to attend face-to-face full-time classes. However, blended learning enables them after finishing their work, family and other social commitments to start learning. Also universities are all the time looking for an increase of cost savings. For example, blended learning is an advantage for their distance learning courses or investment learning projects. In this way universities can be more economical as far as the use of faculty space, time and staff are concerned (cf. Dziuban, Hartman, Judge, Moskal, & Steven, 2006).

As far as the choice of the learning materials is concerned, the majority of students (89%) still prefer the printed materials. The reason might be that they like highlighting the main points in order to remember the key points for an exam and/or be able to carry these learning materials anywhere they go and travel. But this and other reasons would definitely need further investigation. Although only 36% of the respondents prefer the e-Learning materials, 96% of them consider the e-Learning materials in online courses useful. As Gerlich (2002) says, the majority of page views by university students are for the course materials. Students particularly appreciate their easy accessibility, clear arrangement and concise structure. They also like having additional materials for their learning and being able to print them out. On the contrary, they sometimes find the e-Learning materials impersonal. This can be solved by using less formal language and implementing more multimedia elements. As Jung, Choi, Lim, & Leem (2002) claim, interactivity is especially important in overcoming one of the shortcomings of fully distance education, which is a lack of interpersonal interaction. Mayer (1999; 2003) also adds that multimedia instructional materials promote deeper learning. Furthermore, podcasts implemented into these study materials can be a solution to the lack of listening exercises. Finally, the blended form of instruction can partially substitute the so much needed personal contact with the teacher, particularly in language classes.

4. Conclusion

Thus, as the survey indicates, mobile devices prevail among the university students and their use is as natural for them as breathing. Despite this fact, students still prefer the printed materials, which they also print out from their e-Learning courses. Therefore, as Frydrychova Klimova & Poulova (2013b) suggest, any learning materials should possess the following characteristics:

- They should have a clear, concise, logical and simple structure (information in bullets is preferred).
- They should be well-balanced (i.e. there should be an adequate amount of relevant teaching matter
Including learning objectives and exercises/assignments/self-tests).
- The materials should be comprehensible and up-to-date.

- They should be easily navigated.
- They should be interactive with appropriate multimedia components.
- They should be linked to other suitable materials and relevant websites.

Eventually, these learning materials should be ideally used in the blended form.

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