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# The use of technology in the learning environment for business communication: applied linguistics of business communication from the positive psychology perspective

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## Abstract

The paper deals with implementation of a smart learning environment, namely Blackboard, into the course of business communication. The new approach was implemented into the course and the research was conducted into the subjective satisfaction of the users of the environment. The first research was conducted in 2018 into the users' satisfaction with the course which was taught using traditional methods, and the second research was conducted in 2019 into the users' satisfaction with the new online course. The idea of the creator of the online course was to keep the contents and the scope of the subject as much similar as possible to create two groups of users, i.e. the first, using the traditional approaches, and the second with the modern technology-enabled class. With this intention, the Blackboard class was created, and the users were taught by using blended learning methodology. The research focused merely on personal satisfaction with the course within the intention of positive psychology, i.e. focusing on potential issues regarding personal satisfaction. It did not focus on the differences in the performance of the students as there is a lot of research into this aspect. However, it focused on the individual satisfaction and personal feelings of the users while using blended learning platforms in the context of ubiquitous computing. The findings are that the users expressed their satisfaction regarding easily accessible materials and varied learning environment; however, the dissatisfaction was created by increased screen time and reduces social contacts. The findings are very important for educators who use various mobile platforms and eLearning environments as they should be aware of the reservations of the users of these tools.

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## 1. Introduction

### 1.1. Ubiquitous eLearning and blended learning

eLearning and blended learning as teaching methodologies and practices have become ubiquitous in our higher education environment that nowadays it is almost impossible to imagine any educational process without the utilization of these modern trends [1-5]. It is visible in all areas of education, such as learning languages, science, humanities, medical science, teaching students with special needs, etc. [6-11]. This ubiquitous eLearning environment has brought many advantages which have already been well described in the current research into the topic [12-17]. However, it can be claimed that after this very optimistic initial phase, we should be careful and also see the dark side of this new trend, or at least, test if there is any. This is also the aim of the paper, i.e. to identify potential risks that are connected to the utilization of technology in the learning environment.

The research has proved that the beneficial effects of the use of technology in the learning process are vast and the results of the students' performance can be increased if used properly and adequately [18-21]. The question is what the adequate and proper use of technology is. The use of technology in the educational process should not be intuitive based on our experience but it should rather be a very intentional process that needs our undivided attention if we want to create eLearning courses that will be successful and useful [22,23].

The learning process with the use of technology must be well defined because in the long tradition of learning psychology we don't have much experience because the utilization of eLearning is a relatively new methodology and the development from eLearning 1.0 through 2.0, 3.0 to 4.0 indicated that the process of learning is not simple and very straight forward [24-26].

### 1.2. Positive psychology in education

The positive psychology approaches have been promoted recently in various aspects of human activities focusing mainly on the positive feelings and satisfaction from those activities [27-30]. In education, the aspect of positive psychology has not been researched sufficiently yet, however, there is some limited research into the area, and it provides us with optimistic findings.

The research summarizes the importance of satisfaction not only for the subjective feelings and satisfaction but mostly for the intrinsic motivation and improved results. It is a well-known fact that when the students are interested in the topic and have positive feelings with the learning process and results, it will necessarily lead to improved performance. This aspect is rather neglected in the current research into the use of technology in the learning process and therefore this paper attempts to supply the practitioners in this area with a solid foundation and further motivation which will lead to an improved learning environment.

### 1.3. Digitalization of education

The trend of digitalization of education has been visible in the past few decades, however, the trend of the past few years is unprecedented [31]. Nowadays, basically all educational institutions have to implement some kind of eLearning, mLearning, blended learning or hybrid learning into their curricula and official authorities support this trend towards digitalization very much for the various pragmatic reasons [32-34]. We can expect that the trend will be even stronger also due to the current situation with the global epidemic of the Coronavirus which has led to a massive utilization of eLearning throughout educational institutions globally. No other tool is these days as important as any kind of eLearning and this trend will continue even in the future when we will want to be ready for repeated occurrence of similar situations of social crises.

Another very important aspect that is connected to digitalization is interconnectedness [35]. The social media and various kinds of communication tools utilized in education can be very beneficial and a lot of research proves that these tools can bring advantages to the educational process.

To sum it up, these are the aspects of current trends in education as follows:

- Ubiquitous computing

- Interconnectedness
- Digitalization of education

## 2. Research design

The research was conducted in two steps. The research I in 2018 with the students of the Faculty of Informatics and Management at the University of Hradec Kralove, Czech Republic. The students were the students of both informatics and financial management and all of them were well equipped with technological skills, knowledge and devices. The class taught is called Business Communication. The contents of the class is not relevant to the research.

Online questionnaire testing their course satisfaction and general opinion about the utilization of online classes was distributed at the end of the semester.

### 2.1. Research I

The research I was conducted in 2018 during the winter semester of the academic year. The questions of the online questionnaire focused on their satisfaction with the course but also about their general feelings and opinions connected to the traditional methods used in the class.

The number of respondents was 34, both male and female, the age of the respondents ranged from 20 to 25. They were all students of the Faculty of Informatics and Management of the University of Hradec Kralove, Czech Republic. They were not only Czech students (7) but the group also contained a large group of students (27) from Asian countries (Taiwan, China, Japan, Korea).

The most important parameter of the questionnaire was – from a positive psychology perspective – to focus on their satisfaction with the course. As already described, this parameter is very important for the tutor also to yield important findings that could be used in the future online course.

### 2.2. Research II

The research II was conducted in 2019. The questions of the in-lie questionnaire focused on their general satisfaction with the class but also on their satisfaction with the blended learning methodology. The questionnaire also asked about their opinions about the use of virtual learning environments. The questionnaire focused mostly on the concept of satisfaction, i.e. personal satisfaction and positive feelings while using the Blackboard platform.

The number of respondents was 37, both male and female, the age of the respondents ranged from 20 to 25. They were all students of the Faculty of Informatics and Management of the University of Hradec Kralove, Czech Republic. They were not only Czech students (7) but the group also contained a large group of students (30) from Asian countries (Taiwan, China, Japan, Korea).

The questionnaire focused, again, on their satisfaction with the implemented course design, i.e. the use of Blackboard for the course. The use of the Blackboard platform was based on standard eLearning strategies that are implemented throughout European universities, i.e. publishing online lectures, tests, additional material and tests so that the students can easily access those materials throughout the semester.

### 2.3. Research questions

Following the intention of a positive psychology perspective, the questionnaire focused on these items which were considered crucial to find out what the most important aspects of eLearning are for the users regarding their satisfaction with the course.

The research questions in Research I were as follows:

1. How will the students be satisfied with the course structure, i.e without any eLearning support?
2. Will the implementation of eLearning increase their satisfaction with the course (this will be based on their experience with other courses that already use eLearning)?

The research questions in Research II were as follows:

1. How much will the use of eLearning be perceived positively in comparison with traditional approaches such as lectures and discussion with the tutor?
2. What are the possible sources of subjective dissatisfaction with the on-line course?
3. What are the possible sources of subjective dissatisfaction with the on-line course?

#### 2.4. Research limitations

Despite a relatively small research sample, the research yielded important findings that can be generalized, with a certain caution, and are transferrable into other areas of research to be analyzed and supported by a more detailed research endeavor.

On the other hand, the fact that this is comparative diachronic research could be beneficial to find out the development of the situation and compare the results. Therefore, despite the relatively small group of respondents, the results can be considered relevant and just need to be verified on a larger scale.

### 3. Research results

#### 3.1. Research I

The results clearly showed that the satisfaction of the individual students reached a very high level, nearing 80%, which is generally a very satisfactory result. The positive feelings associated with the course reached almost 90%, which is also a very good result.

The students expressed their interest in the subject and they liked the methods used in the course, despite the fact that these methods were rather obsolete, i.e. a traditional oral lecture of the teaches followed by a seminar in smaller groups of the students where there was a lot of space for discussion and teamwork.

The negative feelings associated with the course were at a very low level, reaching only 13%, which is considered an excellent result and the students will not connect this subject with any negative feelings.

#### 3.2. Research II

The results of the research show very similar numbers in the overall individual satisfaction with the course. 71% of the students proved to be satisfied with the way the course was conducted. Their positive feelings associated with the course also reached a very high level, accounting for 73%

On the other hand, the negative feelings of the students reached 45%, which is a dramatic increase compared to the previous year. The questionnaire was also looking for the reasons for this negative result. The students expressed their dissatisfaction with the online course because they lacked more social interaction with the tutor despite the fact that they could discuss the issues online (email) they still expressed their interest in the personal meetings every other week with the other students in a classroom where they could discuss interesting topics in person. They also expressed their interest in the lectures (also every other week) because the lecture could bring more personal experience and insight.

#### 3.3. Research I and II comparative results

The results of the research are as follows in Table 1. The results show that individual satisfaction with the course is more or less the same, however, negative feelings were dramatically different.

Table 1. Comparative research results

	Research I	Research II
Individual satisfaction with the course	78%	71%

Positive feelings with the course	87%	73%
Negative feelings with the course	13%	45%

Despite the positive feelings in both Research I and Research II, the questionnaires clearly indicated several aspects worth mentioning and analyzing.

The overall satisfaction, i.e. with both the traditional course and the online one, can be caused by the simple interest in the subject and the learning environment, regardless of the traditional or electronic approaches used for education. The differences in the results clearly show that after the implementation of online learning into the course the individual satisfaction remained more or less the same, the difference is statistically negligible, however, positive feelings connected to the use of the course have dropped. The drop, again, is not significant, however, this difference is not negligible and must be analyzed.

On the other hand, the negative feelings associated with the use of online course methodology have increased dramatically. In Research I, the negative feelings were as low as 13%, the tutor received a very positive score regarding his performance. In Research II, the negative feelings increased significantly to almost 50%, which indicates a dramatic increase in dissatisfaction. Naturally, the reason could be not a well-prepared online course, however, the tutor claims that the course follows a well-established methodology and basically copies other online courses used at the university. Therefore, a badly prepared course could play some role in the evaluation, but on the other hand, the majority of the courses are prepared in a very similar fashion.

To sum it up, these are the accumulated results:

- The students generally do not like using online materials when there is a change of sharing personal experience
- The students usually do not like increasing their screen time when there is no need for that
- The screen time they have with other activities (entertainment, social networking, etc.) is large enough and there is no need to increase it
- The students lacked more social contacts with their peers and the tutor
- The time spent in seminars while discussing the issues in person was considered to be more quality time compared to using the Blackboard platform while studying online
- Social isolation caused by online tools must be taken into consideration and its dosage must be done properly

## 4. Discussion and recommendation

### 4.1. Research implications

This research proves that the use of eLearning and blended learning is not straightforwardly positive as we can find in numerous resources. We have to take into consideration potential problems that could arise.

Obviously, eLearning brings very positive outcomes and can speed the process of education dramatically, however, we have to consider these results very carefully so as to optimize the educational process using mobile devices and eLearning. These tools and their use are in a massive increase, which is a very positive, trend, but the educators should be aware of the fact that this rise must be somehow more systematic and pragmatic so that we optimize the learning process.

### 4.2. Research recommendations

The research and its comparative results clearly show that the trend of somehow unsystematic development of eLearning and the use of digital tools in the learning process must be made more systematic.

These are the recommendation which could be followed to make the trend of the use of electronic tools in education smoother and more impactful:

- Try not to increase the screen time by using the functions which limit the social aspects of the learning environment
- Reduce the screen time by more personal contacts with the course participants
- The online tool should only be used in the areas which are not substitutable, e.g. videos, audio recordings, data analysis, big data, data mining, in other cases, such as lectures and seminars, the tutor and their personal presence should not be substituted
- Increase the time of social contacts with the tutor and the online course should be used only in cases when it is necessary and the tutor cannot be substituted (illness or injury time, global infection, distant students, work duties, etc.)
- Testing should be done through online tools as it is more objective and brings comparable results
- Online tools can use big data, various algorithms for processing information, and other tools of data mining that will be extremely useful in modern eLearning platforms, however, nowadays, they are still not used efficiently, if at all
- The implementation of artificial intelligence into the learning platforms will be probably the most important improvement because artificial intelligence can surpass the human brain in the volume of data processes and therefore will increase the efficiency the learning and testing process dramatically

#### 4.3. Further research possibilities

Further research should replicate the results yielded by our research. It should focus further on user satisfaction as it plays a major role in eLearning. If the users are subjectively satisfied with the learning environment, they will more likely use it in their free time and this positive motivation will also enhance their performance and study results.

Further research should focus more on limitations rather than benefits of eLearning and blended learning as the benefits have already been highlighted by numerous research activities globally and there is no need to further justify these teaching methods. It is more important to highlight potential problems that could arise, and which could be potentially eliminated or at least reduced. By realizing these pitfalls of eLearning and blended learning, the whole system of education can become more sustainable and competitive in the global learning environment [36,37,38,39,40].

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