

## Blended learning in tertiary accounting education in the CEE region – A Polish perspective

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**Abstract:** Nowadays, universities increasingly exploit the potential of the internet implementing blended learning as a key feature of modern education. The paper focuses on the quality, benefits and drawbacks of online academic accounting courses. On the basis of literature review and previously performed empirical studies we have developed four research hypotheses. In order to verify them, we have conducted a survey among students at Cracow University of Economics in Poland. The sample consists of 713 students who participated in blended learning courses in International Accounting, Bank Accounting and Controlling and Accounting Computer Systems. The results of the survey have shown that blended learning is positively perceived by students. Over half of them stated that e-classes did not differ from the traditional ones in terms of difficulty. The most important benefits of e-classes were: the possibility of learning at any place and time, saving time and lower costs of education. The most serious drawbacks included the impossibility to ask questions on a regular basis, the lack of direct contact with the teacher and the need for independent education organization. The regression analysis has provided evidence that students' attitude towards e-classes is the most important determinant of their satisfaction with the course after its completion.

**Key words:** online courses, e-learning, blended learning, accounting education

**JEL codes:** M49

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## **1. Introduction**

An analysis carried out in 2008 among students participating in traditional courses showed that they forget 70% of the course's content within a week of its completion, and 87% within a month (Emelo, 2014). According to the research results, a traditional course, which is based on physical presence in a classroom and face-to-face contact between students and the teacher, is not an effective form of teaching. With the rise of the internet technology, new opportunities and teaching tools have emerged, such as e-learning, online learning, distance learning and blended learning, sometimes also referred to as hybrid or mixed teaching.

Dziuban *et al.* (2005) note that the contemporary generation of students, who very often make use of modern technologies, could not even imagine being taught without the implementation of information technology. This generation appreciates online classes as it increasingly values "self-study" and believes that learning individually is more interesting than doing it in the classroom. Concannon *et al.* (2005) point out that e-learning is a new approach aimed at improving the effectiveness of education. Although traditional lectures and classes still dominate in academic teaching, universities are investing heavily in the latest information technologies with a view to upgrading the quality of the teaching process through effective re-use and distribution of teaching materials and assessment of knowledge acquisition.

The term blended learning is used both in academic teaching and in business. According to Picciano *et al.* (2013), it is difficult to conclusively determine if blended learning is a unique learning environment or only a combination of traditional classroom teaching and online classes. Bliuc *et al.* (2007) find the definition of blended learning in the literature on the subject to be somewhat controversial. However, this does not prevent blended learning from gaining popularity both in the world of academia and professional business training. The term appeared for the first time on March 5, 1999, when a company in Atlanta advertised courses in the press and referred to them as blended learning courses (Catalano, 2014). The blended learning approach assumes the use of new teaching techniques which utilize the internet technology while maintaining the traditional approach, which is a direct (face to face) contact between students and the teacher. Yigit *et al.* (2014: 808) define blended learning as a coherent combination of e-learning and traditional teaching in order to achieve the intended educational aims. According to Bonk and Graham (2012) blended learning refers to a combination of classes conducted in the traditional way with on-line classes.

The American Society for Training and Development recognized blended learning as one of the ten most important trends in the broadly understood business knowledge transfer. In the academic world, the blended learning approach is more and more often discussed during a variety of conferences and in scientific journals

(Graham *et al.* 2005). A large number of universities point out the numerous advantages of teaching with the use of this method. Blended learning can be considered a leading trend in university education whose potential has not been fully exploited yet. According to the forecasts of *The Journal of Asynchronous Learning Networks*, in the nearest future, 80-90% of all ongoing courses will be organized as a combination of traditional and e-learning classes.

This paper is focused on accounting courses which are perceived as difficult academic subjects demanding systematic work. Assuming that, in the nearest future, graduates of blended learning accounting courses will be recruited by many corporations as accounting staff, a profile or at least several desirable qualities of an “accounting” graduate can be denoted such as conscientiousness, independence and creativity. Moreover, a graduate will be required to continue education and self-education in order to maintain competence at a sufficiently high level (Kasperowicz, 2011).

The aim of the paper is to present blended learning as a form of academic accounting courses and students’ perception of the matter. More precisely, we focus on investigating the determinants of students’ overall evaluation of blended learning. Because the specificity of the subject being taught has to be taken into account while analyzing the effectiveness of blended learning, we concentrated on accounting classes. In order to achieve the above presented goal we have conducted a literature review and a survey among students participating in the accounting courses at Cracow University of Economics. Furthermore, we have analyzed the results from the perspective of different students’ characteristics.

The remainder of the paper is organized as follows. The second section provides literature review on blended learning in academic accounting courses. The third section presents the research aim, followed by the development of the research hypotheses, description of sample selection process, empirical design, including dependent and independent variables. The last section presents the conclusions and limitations of the study together with indications for possible future research.

## **2. Literature review on e-learning in academic accounting courses**

The primary task in empirical research referring to blended learning is to examine the effectiveness of teaching by means of this method, compared with the traditional forms of education. Only a small number of studies in this area concern the teaching of economic subjects. Literature and experience reveal that the specificity of the subject being taught has a significant impact on the effectiveness of distance learning.

Teaching solely in a traditional way and teaching solely online are two completely opposite teaching methods. Each of them has some advantages and disadvantages. Blended learning, which is a mixture of the two, combines most advantages of traditional teaching and distant learning and few drawbacks. Therefore it seems to be the optimum form of instruction suited to universities. An additional advantage of this approach is the ability to personalize the teaching process so that it would meet the needs of different audiences with varied preparation for particular subjects. It remains questionable what percentage of e-learning classes is necessary for a course to be considered blended learning. According to the Sloan Consortium, it is 30-79% of the teaching hours (Suda *et al.*, 2014).

Comparative studies are a popular approach to investigating the problem of teaching with the use of blended learning. Classes carried out entirely in the traditional manner are treated as a reference point and are then compared with the distant learning classes. The latter can be conducted entirely via the internet (online learning) or partially so (blended learning). Chen and Jones (2007) conducted a study concerning the level of effectiveness of the accounting course and students' satisfaction with it among MBA students. The authors divided the students into two groups. The first one comprised students participating in the classes conducted in the traditional form. The second group of students attended a blended- learning course where the extent of traditional classes was limited. Both forms of teaching were appreciated by the students who pointed out their advantages and disadvantages. Blended learning approach was very positively assessed by the students. Most of them expressed their willingness to participate in other courses conducted with the use of this method. However, the students found instructions given during traditional classes easier to follow. Blended learning classes allowed the students to gain an appreciation of the concepts in the field. They also noted that their analytical skills had significantly improved.

In another study, Jones and Chen (2008) examined students' opinions on the teaching of accounting. The students were asked to evaluate the differences between traditional classes and those which applied blended learning. According to the research results, blended learning should be regarded as an attractive combination of the traditional and on-line teaching methods. Blended learning reduces some of the disadvantages of the classes conducted solely on-line. The students positively assessed the team work and the fact that teachers could answer their questions more promptly. It seems, however, that the blended approach does not offer instant communication and steady interaction between teachers and students. According to the students, it is also important to split classes into the traditional and e-learning ones in appropriate proportions.

Abraham (2007) divided students of accounting into two groups: one group participated in traditional classes and the other in a blended learning course. The

average grades of the students taking part in the blended learning course proved to be significantly higher. According to the author, it was due to the fact that they took responsibility for their own learning to a larger extent. This form of teaching made students more active. They asked questions more often, although this was not mandatory. They were also observed to get more involved in the teaching process and to take greater responsibility for the learning results. The study does not take into account variables such as students' intelligence or other factors like gender, etc. The blended learning approach was not only more flexible in terms of the time and space, but it also created a habit of ongoing self-learning process which is useful for the entire working life period of an individual.

Harker and Koutsantoni (2005) analysed blended learning and distance learning as two methods of teaching taking into account the students' retention rate<sup>1</sup>, satisfaction and their achievements. Blended learning proved to be much more efficient in terms of student retention, while students' achievements were generally similar in both forms of teaching. The level of satisfaction was relatively high for blended learning and distance learning: most students were satisfied with the way the courses were conducted.

Vamosi *et al.* (2004) carried out a study among financial accounting students. They proposed to employ a new, dual approach to the delivery of course material to assess students' satisfaction with distance learning and their perception of its effectiveness. Students were able to shift between traditional, live lectures and live lectures viewed over the Internet. The results showed that the students reported a relatively lower level of satisfaction with the distance-learning component, as well as diminished effectiveness in mastering the distance-learning course material.

The mainstream of empirical research concerning blended learning focuses on the costs and benefits of this form of teaching. The benefits include: flexible time of learning, better teaching results, more intensive interaction between the students and the teacher, greater students involvement, positive impact on the university's reputation due to the enhancement of the educational offer and reduction of the education costs (classrooms costs, faculty and students' time and travel costs). It is not without significance that this form of teaching also provides a new, more active, educational "experience", as compared to the traditional teaching and allows the acquisition of knowledge in a new information environment which offers many different forms of activity.

According to Nazarenko (2014) the application of e-learning tools forces students to become self-reliant in the search for information, selection of important information, its processing, and eventually its critical evaluation and formulation of their own opinions. Guzer and Caner (2014) indicate the following as representing added value of e-learning classes: higher level of cooperation between students in solving the group assignments, as well as participating in discussion forums, which

increases the sense of social involvement and raises the level of satisfaction with the course attendance. Stronger social ties between members of the group are created during this type of classes. They are often long-lasting and continue outside the classroom (Owston *et al.*, 2013). The above mentioned benefits for students on an emotional level and stronger social ties result in a smaller number of drop-out students (Muscovite *et al.*, 2012), which also means financial benefits for the university.

Graham (2006) distinguishes three main benefits resulting from the use of blended learning approach: greater teaching efficiency, improved accessibility and convenience of studying for students and reduction of costs for universities. Cottrell and Robison (2003) draw attention to a number of potential benefits of the use of blended learning in the teaching of accounting: the reduction of working time for lecturers at university, more efficient use of working time for students. An increased range of courses conducted with the use of e-learning is an important argument for students while choosing the academic program and making decisions about studying in a particular university.

López-Pérez *et al.* (2011) carried out a study concerning the teaching process with the use of blended learning at the University of Granada. The research was conducted among 1,400 students. The results confirmed the contention that blended learning contributed to the reduction in dropout rates and improved the final examination results. The students' perception of blended learning is associated with their final grades depending on the blended learning activities, the age, previous experience and the frequency of class attendance.

Orhan (2008) states that combining traditional classes and classes conducted with the use of e-learning is a desired teaching method. A study carried out at the Yildiz Technical University in Istanbul confirmed that this form of teaching is of great interest. It increases students' motivation and their responsibility for the learning process. However, according to students' opinions, the way in which teaching materials are distributed and some methods of conducting classes need improvement. An appropriate proportion of traditional and e-classes also seemed to be important. Students indicated the 50%-50% approach as a good solution.

In 2008 and 2009, the University of Winchester successfully introduced many courses using blended learning techniques in financial management and accounting (Osgerby, 2013). The university also conducted research on the perception of this type of classes by the students. The students' attitude toward this teaching approach was positive, which is in line with the results of other studies. An increase in the involvement of students in the educational process was observed. Resources and institutional practices were considered to be the essential factors of success in this process at university level.

The results of empirical studies indicate that the initial negative evaluation of distance learning, compared to traditional methods has disappeared over the last years (Olitsky & Cosgrove, 2014). Positive changes in the e-learning accounting courses over the years were confirmed by the study conducted by Concannon *et al.* (2005). They referred to the design of the course, its content or interactivity. Arbaugh *et al.* (2009) made a review of empirical studies which proved that courses using the blended learning approach were not worse at achieving teaching aims than the traditional ones. Currently, blended learning can be evaluated as a more efficient method, provided that students are responsible for managing their time, they are able to deal with the technical problems which can occur during e-classes, teachers have experience and devote sufficient time to the development of e-courses and contact with students, the university strives to support the educational process with advice on e-courses methodological content and infrastructure. The university's organizational culture, openness to change and willingness to help faculty and students are important in order to achieve success in blended learning.

A survey is another research approach in studies concerning e-learning as an educational tool. Surveys make it possible to measure the quality of the educational process and its benefits and drawbacks according to the students' opinions. The results of a series of surveys (Chen & Jones, 2007; Akkoyunlu & Soylu, 2008; Chandra & Fisher, 2009) carried out in different environments suggest that students still prefer direct contact with the teacher, the commands delivered in the classroom are answered in more explicit terms, and students can ask questions directly, rather than via email or discussion forums. These are arguments against the form of teaching that consists only of e-classes, which seems a worse solution than blended learning. However, it should be noted that the above mentioned studies were conducted 6-8 years ago and reluctance to use Web tools seems to have considerably decreased since then.

Current research conducted by Wai and Seng (2014) among 120 students of economics indicate that, at present, students do not have problems with the application of the internet technologies and are willing to participate in courses which use the blended learning approach. Some of the most popular tools used during blended learning classes included videos, PowerPoint presentations, texting, email, discussion forums and online activities. Research on determining the opinions of students in terms of quality and overall satisfaction with the e-classes was conducted by So and Brush (2008). The research was carried out among a group of 48 students of medicine with the use of a questionnaire and interviews. The analysis of empirical data showed that students who appreciate learning together (in a group) are generally more satisfied with the e-learning than other



students. The level of students' satisfaction was also affected by the structure of the course, the emotional support they got from the teacher and the implemented communication tools.

The perception and evaluation of blended learning courses by students is heavily associated with the effects of education. Owston *et al.* (2013) conducted extensive surveys among 577 students in a large academic center. The final assessment of the course was assumed as a dependent variable while independent variables included the level of satisfaction with the course, the facilities offered by the course and the level of engagement and the evaluation of the results by the students. Research results indicate that all of the above independent variables are positively correlated with students' assessment and the level of satisfaction is the most important. Survey results also indicate that students less familiar with computer techniques also receive worse grades upon the completion of the course.

The blended learning approach is not free from drawbacks. Despite the fact that the idea of blended learning has been known for a long time, still many organizations continue to have a problem with its effective implementation. There is an objective need for training people who are using the platforms which enable the use of distance learning techniques (Kim *et al.*, 2008). Issues related to the choice of technology and software should be treated with utmost importance in the decision-making process while creating an e-learning platform. The choice of the platform itself may be crucial in terms of the effectiveness of online education.

Flynn *et al.* (2005) believe that the methods of conducting academic classes in the form of e-learning are developing very dynamically. However, they are often used for the sake of technology itself rather than for teaching purposes. For e-learning courses to be successful, many requirements have to be met. An important one is the appropriate experience of the teacher. It is essential to coordinate the need for incurring expenditure on information technology. Prinsloo and Van Rooyen (2007) stress the significance of modern technology in an effective online learning process and the availability of tools such as video conferences. Immediate response within the framework of the educational process is important but it can also be automatic without teacher participation.

Arbaugh *et al.* (2010) believe that modern teaching techniques such as blended learning are very important. They are still being developed conceptually, methodologically and analytically. However, their practical implementation is not uniform for many subjects and academic disciplines. Difficulties can also arise when deciding on the proportion of traditional and e-classes. The decision should be made taking into account students' expectations and the requirements they have to fulfill (Stacey & Gerbic, 2006; Wong & Tatnall, 2009).



### 3. Empirical findings

#### 3.1 The purpose, hypotheses development and method of research

In view of the above considerations, the authors have decided to investigate the implementation of blended learning in the teaching of accounting at Cracow University of Economics. The main purpose of the survey was to confront the students' expectations of the e-courses with the reality and to find out about their views on the benefits and shortcomings associated with the e-classes in order to assess the level of students' satisfaction after the completion of a blended learning course and to identify main determinants of this satisfaction. The primary source of data was a questionnaire conducted among the students attending blended learning courses at Cracow University of Economics. Hence, all the variables are derived from this survey and are related to personal characteristics of the students such as the attitude towards new educational techniques, the year of studies, the experience with blended learning courses, gender, age, type of studies, perception of drawbacks and benefits of the e-classes etc.

The students who participated in the survey attended the following blended learning courses: International Accounting and Bank Accounting, Controlling and Accounting Computer Systems. International Accounting (IA) was the course designed for full-time students majoring in International Economic Relations and was conducted during the first year of their study. Bank Accounting (BA) was a course included in the curriculum of external students, majoring in Finance and Accounting, specializing in Financial Audit, in their third year of study. Controlling and Accounting Computer Systems was designed for full-time and part-time students in the third year of the study majoring in Finance and Accounting. This subject is conducted in the computer lab, which makes it especially suitable for the blended learning process.

All three subjects were taught during the summer semester in blended learning system using Moodle platform. The courses comprised different proportions of traditional and e-classes (40% or 60% of the total hours assigned to the subject were realized online). All three courses included e-lectures and e-classes. Participation involved: getting familiar with specially developed teaching materials for self-study (e-notes) and doing tasks of different types (match the answer, enter result, upload file) and preparing case-study tasks. Those activities were obligatory. Apart from them, students also had the opportunity to consolidate their knowledge by taking tests. They could also take part in discussion forums or start new discussions by themselves. By doing those non-obligatory tasks they were able to obtain extra points which improved their final grades. Communication with students was facilitated by the announcements forum (specific forum with only one direction of communication – from teacher to students) and e-tutoring.

The practical experience gained during the three years of conducting e-classes allowed the following research hypotheses to be formulated:

- H1 Students' attitude towards e-classes is positive*
- H2 Students in later years of studies perceive blended learning more positively than those in first years*
- H3 Male students perceive blended learning more positively than female students*
- H4 Students with previous experience of e-classes perceive blended learning more positively than students who take part in them for the first time*

The survey was conducted in two stages – in the summer semester of the academic year 2012/2013 and a year later – in 2013/2014. The questionnaire consisted of two different types of questions: closed and open ones. In the closed questions the respondents could choose one or maximum three answers. Open questions required rating on a scale of 1 (very bad) to 5 (very good). In total, 713 questionnaires were analyzed. 573 of the respondents were females and 140 were males. 594 students had already participated in the e-classes, for 119 it was a completely new form of teaching.

### 3.2 Confronting students' expectations with reality

At the start of the semester, it was visible from the students' schedule that the classes would be taught using the blended learning system and the students were provided with detailed information on this at the beginning of the first lecture.

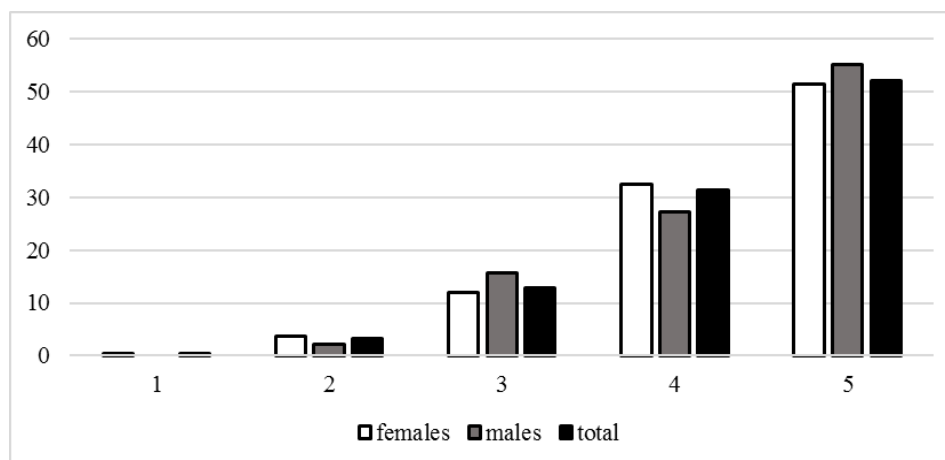


Figure 1. The students' reaction to the information that the course would be web-based by gender (on a scale of 1 (very bad) to 5 (very well)) (%)

83% of students reacted positively and very positively to the information that the course would be web-based. Female students reacted slightly less positively than male students (Figure 1). 4% of females indicated the answer very bad and bad, and so did only 2% of males. At the same time, 84% of females and 82% of males reacted well and very well.

### 3.3 The degree of difficulty

55% of the respondents assessed the degree of difficulty of e-classes compared to the traditional ones (Figure. 2) was the same. 13% perceived it as much smaller and 2% found it much greater. Female students indicated the level of difficulty as much greater more often than male students. The indication rates for females and males were 3% and 1% respectively.

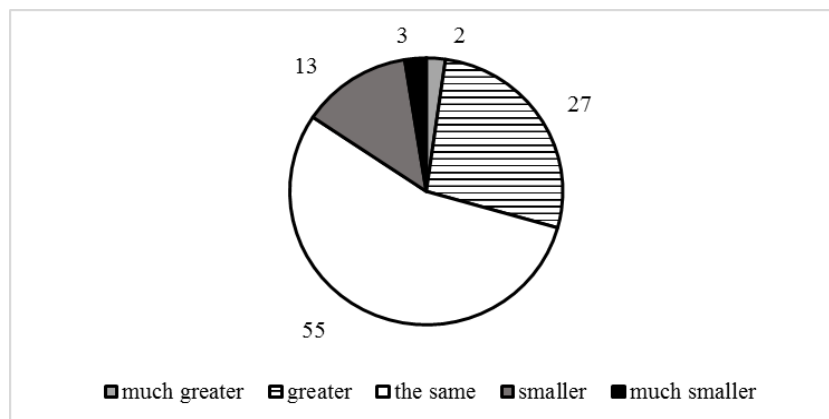


Figure 2. The assessment of the degree of difficulty of e-courses compared to traditional methods (%)

### 3.4 The benefits and drawbacks

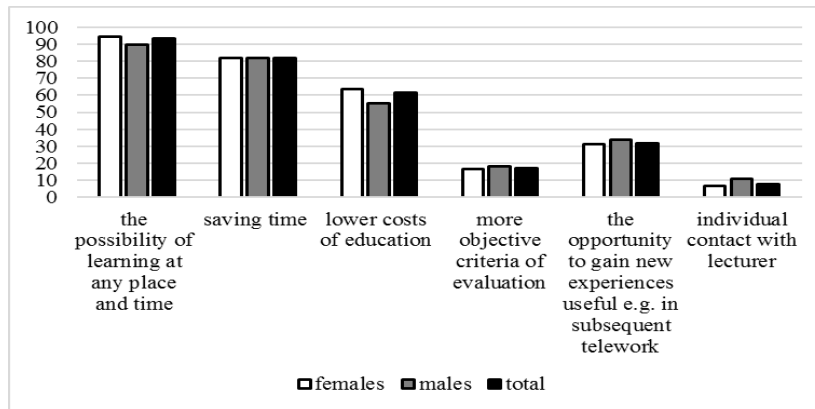
Students indicated the following items as the most important benefits of the blended learning accounting course (Figure 3):

- the possibility of learning at any place and time (convenient for me),
- saving time (no need to commute to classes, more effective management of the time devoted to learning, easier access to teaching materials, better communication with the lecturer),
- lower costs of education (commuting, copying notes, etc.).

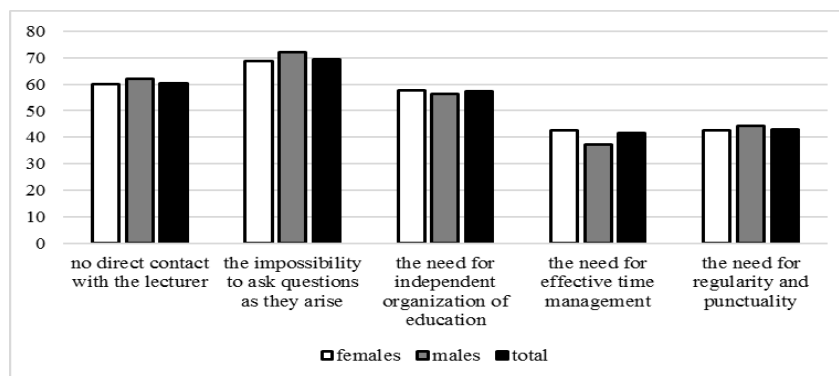
The benefit hierarchy presented itself in a similar way regardless of the gender, except that male students more often than female students were found to appreciate

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the individual contact with the lecturer, more objective criteria of evaluation and the opportunity to gain new experiences useful e.g. in subsequent telework while female students more often than male students valued the possibility of learning at any place and time and lower costs of education.



**Figure 3. Benefits associated with participation in blended learning course (total and by gender)**



**Figure 4. Drawbacks of blended learning course (total and by gender)**

The respondents indicated the following as the most serious drawbacks of a blended learning course (Figure 4):

- the impossibility to ask questions as they arise,
- no direct contact with the lecturer,
- the need for independent organization of education.

The last drawback - independent organization of education refers to the situation, where the student himself must organize the educational process: schedule,

workload etc. This situation imposes on students' self-reliance, responsibility for their education and requires strong motivation, determination and effective organization of time. The drawback hierarchy presented itself in a similar way regardless of the gender. Male students indicated more often than female students that the important drawbacks related to blended learning classes were: the impossibility to ask questions as they arise, no direct contact with the lecturer and the need of punctuality and regularity. For female students the need for effective time management and for independent organization of education were more important difficulties associated with e-course than for male students.

### 3.5 Regression analysis results

In order to perform a more thorough estimation of the relationship between the overall evaluation of blended learning course and other determinants we carried out a regression analysis. We assumed an overall assessment of the blended learning course as the dependent variable. It is important to note that the survey was implemented before students' grading, so students did not know their final grades while completing the questionnaire. Independent variables are presented below. We use the following model:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \dots + \beta_{16} * X_{16}$$

where:

Y-overall assessment of the course after it has been completed by students

X<sub>1</sub>-year of the survey (2013, 2014)

X<sub>2</sub>-whether the student had previously taken part in other blended learning courses (0-No 1-Yes)

X<sub>3</sub>- student's reaction to the information that the course would be web-based (1 – bad, 5-very good)

X<sub>4</sub>- assessment of the degree of difficulty of e-classes compared to traditional methods (1-much greater, 5-much smaller)

A group of variables relating to the perceived benefits of blended learning course (0-No 1-Yes)

X<sub>5</sub>-saving time

X<sub>6</sub>-lower costs of education

X<sub>7</sub>-more objective criteria of evaluation

X<sub>8</sub>-opportunity to gain new experiences useful e.g. in subsequent telework

A group of variables relating to the perceived drawbacks of blended learning course (0-No 1-Yes):

X<sub>9</sub> - no direct contact with the lecturer

X<sub>10</sub> - impossibility to ask questions as they arise

X<sub>11</sub> - need for independent organization of education

X<sub>12</sub> - need for effective time management

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X<sub>13</sub> - need for regularity and punctuality  
 Variables relating to the status of a student:  
 X<sub>14</sub>- gender (female = 1, male = 0)  
 X<sub>15</sub> - type of studies (full-time = 1, part-time = 0)  
 X<sub>16</sub> -year of studies

We obtained the following results of the regression analysis (see Table1).

**Table 1. Regression analysis results**

| Coefficients    | Estimate   | Std.Error  | t value | Pr(> t ) | Sign. |
|-----------------|------------|------------|---------|----------|-------|
| (Intercept)     | 197,516884 | 120,011306 | 1,646   | 0,1003   |       |
| X <sub>1</sub>  | -0,097271  | 0,059619   | -1,632  | 0,1032   |       |
| X <sub>2</sub>  | -0,022162  | 0,083429   | -0,266  | 0,7906   |       |
| X <sub>3</sub>  | 0,561263   | 0,032374   | 17,337  | <2e-16   | ***   |
| X <sub>4</sub>  | 0,060304   | 0,031483   | 1,915   | 0,0558   | .     |
| X <sub>5</sub>  | -0,036336  | 0,083326   | -0,436  | 0,6629   |       |
| X <sub>6</sub>  | -0,020684  | 0,073447   | -0,282  | 0,7783   |       |
| X <sub>7</sub>  | -0,085173  | 0,086315   | -0,987  | 0,3241   |       |
| X <sub>8</sub>  | -0,017225  | 0,074291   | -0,232  | 0,8167   |       |
| X <sub>9</sub>  | -0,073461  | 0,066432   | -1,106  | 0,2692   |       |
| X <sub>10</sub> | 0,017849   | 0,067622   | 0,264   | 0,7919   |       |
| X <sub>11</sub> | -0,048135  | 0,059841   | -0,804  | 0,4215   |       |
| X <sub>12</sub> | 0,05073    | 0,064001   | 0,793   | 0,4283   |       |
| X <sub>13</sub> | -0,007569  | 0,060763   | -0,125  | 0,9009   |       |
| X <sub>14</sub> | -0,107971  | 0,069437   | -1,555  | 0,1204   |       |
| X <sub>15</sub> | 0,071954   | 0,07076    | 1,017   | 0,3096   |       |
| X <sub>16</sub> | 0,0110766  | 0,042162   | 2,627   | 0,0088   | **    |

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7115 on 691 degrees of freedom  
 (8 observations deleted due to missing data)

Multiple R-squared: 0.3551, Adjusted R-squared: 0.3402

F-statistic: 23.78 on 16 and 691 DF, p-value: < 2.2e-16

Our analysis has revealed that students' attitude to blended learning prior to the course has the greatest impact on its assessment. Another variable which has a significant impact is the year of studies – the higher the year of studies, the better the score. It is worth noting that the variable “whether the course is the first blended learning course for the student or not” is not statistically significant. The last statistically significant variable— although at the least level - is “the evaluation

of the e-learning course difficulty compared to the traditional course". Students who evaluate e-classes as easier than traditional ones, also rate them higher. This situation can be interpreted in two ways:

- blended learning courses facilitate assimilation of knowledge and therefore they are more positively evaluated compared to traditional classes,
- blended learning courses are less demanding than traditional classes and because there is no direct supervision from the lecturer, they can invite cheating when it comes to getting a pass grade.

We have not found any impact of other variables on the level of satisfaction. This is especially interesting in the case of gender, which is contrary to the results of other studies. Also perception of cost and benefits by students does not have significant influence on the assessment of the blended learning course. We expected that in the later year more students would be satisfied due to the progressive process of society's computerization. However, also in the case of this variable - year of the survey -, we did not find a significant association with the dependent variable. Perhaps when considering a longer time horizon for the study - like ten years - this variable would be significant in our model.

#### 4. Conclusions

The obtained results are optimistic for academics interested in exploiting the potential of blended learning in accounting courses. Generally, there is no significant difference in the perception level between the traditional form of learning and the new one based on internet technologies. The results of the study refer to students in Poland learning accounting subjects. It can be expected that in the nearest future the existing gap will continue to narrow gradually as new generations of students, more accustomed to technical innovations, start their education in universities. In summary, the results of the survey revealed that:

- blended learning was positively perceived by students,
- over half of students found no difference in the degree of difficulty of e-classes compared to the traditional ones,
- the most important benefits of e-classes were: the possibility of learning at any place and time, saving time and lower costs of education,
- the most serious drawbacks included: the impossibility to ask questions on a regular basis, the lack of direct contact with the teacher and the need for independent education organization.

Thus, the first hypothesis, stating that students' attitude towards e-classes is positive, was supported. 83% of students reacted well and very well to the information that the course would be web-based. What is more, the regression analysis provides evidence that this is the most important determinant of students'



satisfaction after completion of the course. The second hypothesis, predicting that students in the higher year of studies perceive blended learning more positively than those in the lower year was also supported by the regression analysis and it can be concluded that the year of studies was significantly related to the assessment of blended learning course by students. The third hypothesis, stating that male students perceive blended learning more positively than female students, was not supported. In contrast to previous studies, students' gender was found to be insignificant with regard to blended learning course evaluation by students. The fourth hypothesis arguing that students with previous experience of e-classes perceive blended learning more positively than students who take part in them for the first time was not supported, either. The variable "whether this is the first blended learning course for the student or not" was not statistically significant.

Our study has some limitations and our conclusions must be regarded with caution. Firstly, the blended learning courses were conducted by experienced tutors, who for many years have received the highest scores in anonymous surveys of students' opinions. Secondly, the survey was conducted in one of the best public economic universities in Poland, which can attract the best students, who are usually young, well-educated and at ease with new technologies. Someone may claim the sample is not representative enough and the results are hardly generalizable. In order to overcome this problem a bigger and more diverse sample is required.

Despite the above limitations, the findings of the research are an incentive for further development of e-learning in the teaching of accounting as well as for some improvements in the offered courses and the way they are conducted. What could be done? Improving students' perception of blended learning accounting courses requires to facilitate the process of asking questions and contacting the teacher for example by encouraging the students to use e-consultations forums and increasing the number of office hours, as well as reminding them about the important deadlines.

The results of the study are important for lecturers and academic institutions. For lecturers, noticing and understanding the risks of the blended learning education process can be helpful in avoiding possible errors and obstacles. For academic institutions blended learning can be an important element of their strategy and development but it needs some organizational preparation and investments.

Further and more detailed analyses could shed even more light on the e-learning as an educational tool. In this context, it seems interesting to get answers to the following questions: how does students' attitude towards blended learning vary depending on their Grade Point Average during studies or the final grade for the subject taught in the form of a blended learning course? How do the final exam grades of students participating in blended classes differ from the grades of

students attending offline classes in the same subject? Is there any relation between students' attitude and outcomes depending on age or nationality? And finally, is the growing interest in blended learning a potential threat to the development of social skills among young people?

Given the growing interest in blended learning issues both from the perspective of students and lecturers and its dynamic development, also in Poland, the possibilities for additional research in this field seem to be endless. The current use of blended learning within CEE countries seems to have been limited. The application of that methodology is encumbered with numerous problems and limitations attributable to administrative shortcomings, insufficient software or the indiscriminate approach of teachers of accountancy who are used only to the traditional methods of course delivery. It seems that the importance of the subject matter and technicalities in the delivery of courses in accountancy also have a role here. Within CEE countries, accountancy courses presented by blended learning have garnered a much greater support of teachers than those delivered merely as e-learning courses.

Nevertheless, the number of blended learning courses has been growing year over year. The scope of application of that method of teaching has been most extensive within large universities and major academic centres. All the same, smaller universities have been more and more eager to apply that technology. Hence, it seems advisable to continue further research within CEE countries and confront its results with the effects and experience gained by the countries more advanced in the application of blended learning such as the US, Canada or Great Britain.

## Acknowledgements

This paper has been inspired and supported by International Association for Accounting Education & Research. The authors would like to thank the Journal's reviewer, as well as Nadia Albu and Catalin Albu for their comments on the paper.

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<sup>1</sup> Retention rate is defined as the percentage of students who re-enroll at a higher education institution in a given year, as a proportion of the students who were enrolled in the previous year less those who completed their course (van Stolk *et al.*, 2008, p.8).

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