Development of Future English Language Teachers' Self-Efficacy Levels: Blended Learning versus Face-to-Face Instruction

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Abstract: In the era of digitalization and informatization of the world community blended learning is becoming more and more prominent in improving professional training of students in various specialties as it enables to provide efficient learning, achieve learning goals and, what is more, to build their confidence. The aim of the research is to investigate the influence of blended learning incorporated into the professional training of students doing a BA degree in Teaching English as a Second Language on the increase of their general self-efficacy. To establish the relationship between the students' general self-efficacy and blended learning we used a questionnaire. 133 students were selected to take part in a quantitative study which was conducted at three Ukrainian universities in 2019/2020 academic year. A non-random sampling technique basing on the fact that all 133 respondents studied the same disciplines was used to select the research sample. All the respondents were divided into experimental and control groups. The experimental group was represented by 65 undergraduate students and the control group was represented by 68 undergraduate students. The disciplines selected for training all the respondents in the experimental and control groups were "Contrastive Grammar of the English and Ukrainian languages", "Practical Grammar of the English Language", "The Practical Course of the English Language". The experimental group was to be taught through incorporating blended learning courses on the selected disciplines using the Moodle platform and the control group was to be taught through providing a face-to-face instruction on the selected disciplines. To draw firm conclusions we used methods of mathematical statistics and computer data processing. Obtained results revealed a positive and significant relationship between the incorporation of blended learning into the professional training of students doing a BA degree in Teaching English as a Second language and the increase in their levels of general self-efficacy.

Keywords: *blended learning; face-to-face instruction; Moodle platform; self-efficacy; students doing a BA degree in Teaching English as a Second language; higher educational institution.*

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1. Introduction

The rapid advance of the Internet and communicative technologies has found their way into almost all spheres of human life and has resulted in the appearance of a new generation regarded as “Digital natives” (Prensky, 2001, p.1). As Prensky (2001) claims representatives of this generation have been surrounded by different devices of the digital age since early childhood and therefore they do not experience any difficulties using them. As a result, they consider the Internet, on the one hand, a leading source for acquiring knowledge, skills and aptitudes and, on the other hand, an effective means of communicating and information-sharing. It means that conventional face-to-face instruction is unable to fully ensure efficient training of present-day students who are the bright representatives of this new generation (Prensky, 2001). In most cases they simply do not understand the need to apply outdated means of instruction, for instance, paper printouts, chalk and blackboards, and even hard-copy books. Instead they prefer and find cell-phones, tablets, notebooks, multi-touch, interactive whiteboards, e-books and various on-line technologies more convenient and effective to work in and outside the classroom. In this respect blended learning as a means of instruction is considered to be the most appropriate solution as it enables to fully involve present-day students into the training process and enhance their self-efficacy. In the opinion of the majority of researchers the use of blended learning in any classroom has potential benefits for both teachers and students. Giving wide opportunities for mainstreaming students' individual styles of learning, individual paces of learning and aptitudes, blended learning makes them more efficient, autonomous, responsible and organized. As for teachers, blended learning enables to deliver training materials in more efficient ways and to cover more of these materials in shorter periods of time, to keep track of students' progress and, what is more, to provide personalized assistance on any problems arising in the classroom and outside the classroom.

But although the clear benefits of blended learning make it an effective innovation strategy for training highly professional specialists for various kinds of industries, it is of particular importance in language education and training students doing the degrees in Teaching English as a Second language. The training of future English language teachers based on a blended learning format enables to combine online and off-line forms, techniques and methods of instruction considering their individual typological characteristics. Such a combination of online and off-line forms, techniques and methods of teaching and learning English enhances students'

academic performance, improves cognitive interest and motivation through the increase in their self-efficacy.

A review of research papers indicates that more and more foreign and Ukrainian scientists focus their attention on the effectiveness of blended learning. Thus, for instance, Afacan (2018), Alammery, Sheard, and Carbone (2014), Benson, Anderson, and Ooms (2011), Garrison and Kanuka (2004), Graham (2013), López-Pérez, Pérez-López, and Rodríguez-Ariza (2011), Ma'arop and Embi (2016), Nor and Kasim (2015), Tshabalala, Ndeya-Ndereya, and Van der Merwe (2014), Poon (2013) investigated the potential of blended learning implemented for enhancing learning experiences among students of different profession; Malykhin and Aristova (2018), John (2015), Zhao et al. (2005), Malykhin et al. (2019a), Malykhin et al. (2019b) studied the influence of information technologies on the development of students' and teachers' professional and personal qualities, knowledge, skills and self-efficacy beliefs. At the same time, we should note that although the scientific literature reveals some theoretical and empirical studies on implementing blended learning into the educational process of higher educational institutions, issues concerning the influence of blended learning on the increase of self-efficacy of students doing a BA degree in Teaching English as a Second language' self-efficacy are under-researched and require further examination.

Thus, taking into consideration mentioned above we deeply believe that the investigation into the influence of blended learning on the increase of self-efficacy of students doing a BA degree in Teaching English as a Second language' self-efficacy is relevant and timely. The aim of the research is to investigate the influence of blended learning courses incorporated into the professional training of students doing a BA degree in Teaching English as a Second language on the increase of their general self-efficacy.

2. Theoretical backgrounds

The theoretical analysis of scientific literature makes it possible to claim that there is no single definition of the notion "blended learning". Garrison and Kanuka (2004) think that *blended learning is the thoughtful integration of classroom face-to-face learning experiences with on-line learning experiences* (p. 96). Such a combination of face-to-face and online learning experiences, on the one hand, improves the availability and accessibility to educational materials and, on the other hand, students' engagement and participation. Supporting the view expressed by Garrison and Kanuka (2004), we strongly believe that blended learning enables to spark students' cognitive interest, motivates them to achieve

targets and guides the instruction to higher levels of engagement through the increase in their self-efficacy. In our research we take the view by Bandura (2006), according to which self-efficacy is regarded as *people's beliefs in their capabilities to produce given attainments* (p. 307).

It has been found out that incorporating blended learning courses into the educational process enables university teachers to take into consideration students' individual learning styles and personality types which in its turn increases students' participation in learning activities, reduces their drop-out rates and improves their motivation. What is more, the availability and accessibility of online resources which the use of blended learning implies give wider opportunities for students' learning outcomes, contribute greatly to their satisfaction and development of their self-efficacy beliefs. Studies conducted by Bandura (1977; 2006), Gist (1986), Aristova (2018), Malykhin and Aristova (2018), Malykhin et al. (2019a; 2019b), Schwarzer and Jerusalem (1995), Tsang, Hui, and Law (2012) prove that different levels of self-efficacy affect the choice of challenges people set for themselves, their commitment to the posed challenges and the outcomes they produce to various degrees.

3. Research methods

To collect empirical data on evaluating the levels of respondents' self-efficacy we applied a questionnaire on general self-efficacy developed by Schwarzer and Jerusalem (1995). All the respondents in the experimental and control groups were asked to rate ten statements given in the questionnaire before and after experimental work. To get a sum score, each individual respondent's responses were added up according to a 4-point scale (not at all true – 1 point, hardly true – 2 points, moderately true – 3 points and exactly true – 4 points). Taking into consideration the instruction, the sum score ranging from 10 to 26 points showed that the level of respondent's general self-efficacy was low, from 27 to 35 points – medium and from 36 and higher – high. Experimental work was carried out at three Ukrainian universities in the 5th and 6th semesters in 2019/2020 academic year. These universities were Kamyanets-Podilsky Ivan Ohienko National University (Kamyanets-Podilsky), Ternopil Volodymyr Hnatiuk National Pedagogical University (Ternopil) and H. S. Skovoroda Kharkiv National Pedagogical University (Kharkiv). Before the experimental work 133 students doing a BA degree in Teaching English as a Second language at the selected universities were divided into experimental and control groups. 65 undergraduate students represented the experimental group whereas 68

undergraduate students represented the control group. For training the experimental group respondents we developed blended learning courses on such disciplines as “Contrastive Grammar of the English and Ukrainian languages”, “Practical Grammar of the English Language” and “The Practical Course of the English Language” using the Moodle platform. The experimental group was to be taught through incorporating blended learning courses on the selected disciplines and the control group was to be taught through providing a face-to-face instruction on the selected disciplines.

Two hypotheses were formulated for achieving the main aim of the research:

H 1: The incorporation of blended learning courses into the professional training of students doing a BA degree in Teaching English as a Second language positively influences the increase in their general self-efficacy.

H 2: Professional training of students doing a BA degree in Teaching English as a Second language based on the face-to-face instruction positively influences the increase in their general self-efficacy.

4. Results and Discussion

The results of data analysis related to finding out the levels of respondents’ general self-efficacy according to the list of statements by Schwarzer and Jerusalem (1995) by the experimental and control groups at the beginning of the experiment are presented in Table 1.

Table 1. Experimental and control groups respondents’ responses on evaluating the levels of perceived self-efficacy according to the list of statements by Schwarzer and Jerusalem (1995) at the beginning of the experiment

Statements for evaluating the levels of perceived self-efficacy	Distribution of respondents by group (N)	Respondents’ responses (%)			
		Not at all true (1 point)	Barely true (2 points)	Moderately true (3 points)	Exactly true (4 points)

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I can always manage to solve difficult problems if I try hard enough	Experimental group (65)	4.62%	30.77%	38.46%	26.15%
	Control group (68)	5.88%	30.88%	39.71%	23.53%
If someone opposes me, I can find means and ways to get what I want	Experimental group (65)	1.54%	35.38%	41.54%	21.54%
	Control group (68)	0.00%	45.59%	48.53%	5.88%
It is easy for me to stick to my aims and to accomplish my goals	Experimental group (65)	9.24%	56.92%	27.69%	6.15%
	Control group (68)	7.65%	47.06%	25.00%	10.29%
I am confident that I could deal efficiently with unexpected events	Experimental group (65)	10.77%	49.23%	27.69%	12.31%
	Control group (68)	5.88%	52.94%	29.41%	11.77%
Thanks to my resourcefulness, I know how to handle unforeseen situations	Experimental group (65)	1.54%	40.00%	36.92%	21.54%
	Control group (68)	5.88%	45.59%	32.35%	16.18%
I can solve most problems if I invest the necessary effort	Experimental group (65)	1.54%	26.15%	41.54%	30.77%
	Control group (68)	1.47%	25.00%	52.94%	20.59%
I can remain calm when facing difficulties because I can rely on my	Experimental group (65)	4.62%	35.38%	46.15%	13.85%
	Control group (68)	2.94%	30.88%	45.59%	20.59%

coping abilities					
When I am confronted with a problem, I can usually find several solutions	Experimental group (65)	4.62%	35.38%	43.08%	16.92%
	Control group (68)	2.94%	39.71%	44.11%	13.24%
If I am in a bind, I can usually think of something to do	Experimental group (65)	3.08%	40.00%	49.23%	7.69%
	Control group (68)	1.47%	55.88%	30.88%	11.77%
No matter what comes my way, I am usually able to handle it	Experimental group (65)	3.08%	36.92%	47.69%	12,31%
	Control group (68)	0.00%	30.88%	45.59%	23.53%

Source: Authors' own conception

$n=133$

The results of data analysis concerning general self-efficacy levels by the experimental and control groups at the beginning of the experiment are presented in Table 2.

Table 2 General self-efficacy levels by the experimental and control groups at the beginning of the experiment

Distribution of respondents (N)	Respondents' levels of general self-efficacy					
	Low		Medium		High	
	N	(%)	N	(%)	N	(%)
Experimental group (65)	26	0.00%	34	52.31%	5	7.69%
Control group (68)	28	1.18%	34	50.00%	6	8.82%

Source: Authors' own conception

$n=133$

The results of data analysis show that at the beginning of the experiment the levels of self-efficacy among the experimental and control group respondents were approximately the same. Thus, 40.00% of the

experimental group respondents and 41.18% of the control group respondents had a low level of self-efficacy, 52.31% of the experimental group respondents and 50.00% of the control group respondents – medium, 7.69% the experimental group respondents and 8.82% of the control group respondents – high.

The comparison of general self-efficacy levels by the experimental and control groups at the beginning of the experiment is demonstrated in Figure 1.

Figure 1. The comparison of general self-efficacy levels by the experimental and control groups at the beginning of the experiment

Source: Authors' own conception

The findings of data analysis demonstrating the general self-efficacy levels according to the list of statements by Schwarzer and Jerusalem (1995) by the experimental and control groups at the end of the experiment are given in Table 3.

Table 3. Experimental and control groups respondents' responses on evaluating the levels of perceived self-efficacy according to the list of statements by Schwarzer and Jerusalem (1995) at the end of the experiment

Statements for evaluating the levels of perceived self-efficacy	Distribution of respondents by group (N)	Respondents' responses (%)			
		Not at all true (1 point)	Barely true (2 points)	Moderately true (3 points)	Exactly true (4 points)
I can always manage to	Experimental group (65)	0.00%	4.62%	36.92%	58.46%

solve difficult problems if I try hard enough	Control group (68)	0.00%	16.18%	54.41%	29.41%
If someone opposes me, I can find means and ways to get what I want	Experimental group (65)	0.00%	3.08%	63.08%	33.84%
	Control group (68)	0.00%	29.41%	60.71%	5.88%
It is easy for me to stick to my aims and to accomplish my goals	Experimental group (65)	1.54%	1.54%	75.38%	21.54%
	Control group (68)	0.00%	32.35%	47.06%	20.59%
I am confident that I could deal efficiently with unexpected events	Experimental group (65)	0.00%	0.00%	60.00%	40.00%
	Control group (68)	1.47%	29.41%	57.35%	11.77%
Thanks to my resourcefulness, I know how to handle unforeseen situations	Experimental group (65)	0.00%	4.62%	49.23%	46.15%
	Control group (68)	0.00%	25.00%	54.41%	20.59%
I can solve most problems if I invest the necessary effort	Experimental group (65)	0.00%	4.62%	49.23%	46.15%
	Control group (68)	0.00%	16.18%	57.35%	26.47%
I can remain calm when facing difficulties because I can rely on my coping abilities	Experimental group (65)	1.54%	3.08%	61.54%	33.84%
	Control group (68)	0.00%	25.00%	57.35%	17.65%

When I am confronted with a problem, I can usually find several solutions	Experimental group (65)	0.00%	3.08%	58.46%	8.46%
	Control group (68)	1.47%	25.00%	57.35%	16.18%
If I am in a bind, I can usually think of something to do	Experimental group (65)	0.00%	1.54%	76.92%	21.54%
	Control group (68)	1.47%	30.88%	50.00%	17.65%
No matter what comes my way, I am usually able to handle it	Experimental group (65)	0.00%	1.54%	67.69%	30.77%
	Control group (68)	0.00%	23.53%	58.82%	17.65%

Source: Authors' own conception

n=133

The results of data analysis concerning general self-efficacy levels by the experimental and control groups at the end of the experiment are presented in Table 4.

Table 4 General self-efficacy levels by the experimental and control groups at the end of the experiment

Distribution of respondents (N)	Respondents' levels of general self-efficacy		
	Low N (%)	Medium N (%)	High N (%)
Experimental group (65)	3 (4.62%)	51 (78.46%)	11 (16.92%)
Control group (68)	17 (25.00%)	45 (66.18%)	6 (8.82%)

Source: Authors' own conception

n=133

The results of data analysis demonstrate that at the end of the experiment the levels of self-efficacy shown by the experimental and control group respondents differed significantly. Thus, 4.62% of the experimental group respondents showed a low level of self-efficacy whereas a low level of

self-efficacy was shown by 25.00% of the control group respondents. 78.46% of the experimental group respondents and 66.18% of the control group respondents had a medium level of self-efficacy. 16.92% of the experimental group respondents showed a high level of self-efficacy, in the control group such a result was shown only by 8.82% of respondents.

The comparison of general self-efficacy levels by the experimental and control groups at the end of the experiment is demonstrated in Figure 2.

Figure 2. The comparison of general self-efficacy levels by the experimental and control groups at the end of the experiment

Source: Authors' own conception

The findings of comparative analysis regarding general self-efficacy levels by the experimental and the control groups at the beginning and the end of the experiment are given in Table 5.

Table 5 The comparison of general self-efficacy levels by the experimental and control groups at the beginning and the end of the experiment

Distribution of respondents (N)	Respondents' levels of general self-efficacy					
	The beginning of the experiment			The end of the experiment		
	Low (N)	Medium N	High (N)	Low (N)	Medium (N)	High (N)
Experimental group (65)	26	34	5	3	51	11
Control group (68)	28	34	6	17	45	6

Source: Authors' own conception

n=133

Taking into account the obtained results (Table 5), it is possible to state that significant changes have occurred after blended learning courses of the following disciplines, namely “Contrastive Grammar of the English and Ukrainian languages”, “Practical Grammar of the English Language” and “The Practical Course of the English Language” were incorporated into the experimental group respondents’ training. At the beginning of the experiment the low level of self-efficacy was demonstrated by 40.00% of the experimental group respondents whereas at the end of the experiment it was shown by 4.62% of experimental group respondents. 52.31% of experimental group respondents had a medium level of self-efficacy at the beginning of the experiment but at the end of the experiment it was shown by 78.46% of experimental group respondents. 7.69% of experimental group respondents had a high level of self-efficacy at the beginning of the experiment whilst at the end of the experiment the high level of self-efficacy was demonstrated by 16.92% experimental group respondents. The comparison of general self-efficacy levels by the experimental group at the beginning and the end of the experiment is given in Figure 3.

Thus, the first hypothesis concerning the positive influence of incorporating blended learning courses into the professional training of students doing a BA degree in Teaching English as a Second language on the increase in their general self-efficacy was confirmed.

Figure 3. The comparison of general self-efficacy levels by the experimental group at the beginning and the end of the experiment

Source: Authors' own conception

At the same time we can state that in the control group where students were taught using face-to-face instruction there was not relevant

dynamics in evaluating self-efficacy levels by the control group respondents. At the beginning of the experiment the low level of self-efficacy was shown by 41.18% of the control group respondents whilst at the end of the experiment it was demonstrated by 25.00%. 50.00% of the control group respondents had a medium level of self-efficacy at the beginning of the experiment, at the end of the experiment the medium level of self-efficacy was shown by 66.18%. At the beginning and at the end of the experiment the high level of self-efficacy was demonstrated by 8.82% of the control group respondents. Figure 4 demonstrates the comparison of general self-efficacy levels by the control group at the beginning and the end of the experiment.

Figure 4. The comparison of general self-efficacy levels by the control group at the beginning and the end of the experiment

Source: Authors' own conception

Thus, the second hypothesis assuming that professional training of students doing a BA degree in Teaching English as a Second language based on the face-to-face instruction positively influences the increase in their general self-efficacy was declined.

5. Conclusions and prospects for further research

The main aim of the research conducted in 2019/2020 academic year was to investigate the influence of blended learning incorporated into the professional training of students doing a BA degree in Teaching English as a Second language on the increase of their general self-efficacy. The obtained results clearly indicated that experimental group representatives taught through incorporating blended learning courses of "Contrastive Grammar of

the English and Ukrainian languages”, “Practical Grammar of the English Language”, “The Practical Course of the English Language” showed a higher level of general self-efficacy than control group representatives taught through providing a face-to-face instruction on the same disciplines. Based on the research it is concluded that there is a positive and significant relationship between the incorporation of blended learning into the professional training of students doing a BA degree in Teaching English as a Second language and the increase in their levels of general self-efficacy. Thus, taking into consideration the obtained results we can assume that holding great promise blended learning becomes an adequate response to the challenges of the digital era and the appropriate means of instruction in the professional training of students doing a BA degree in Teaching English as a Second language.

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