

**A PSYCHOLINGUISTICS CASE STUDY: A TOOL FOR
MEASURING SELF-EFFICACY IN EFL AT TERTIARY LEVEL IN
BALKANS***

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Abstract:

The aim of this study is to examine psychometrical properties of the Self-efficacy in English language learning and using scale (SEELUS). The second aim is to investigate differences in self-efficacy due to gender, level of education (international high school's last grade students and university attendance), and nationality (Bosnian and Turks). This research was conducted with 129 students in Europe. The results revealed a two-factor latent structure of the SEELUS. Hence, there are two types of self-efficacy: positive and negative ones. The reliability of the SEELUS is very good as are the reliabilities of its subscales. The distribution of participants' scores on the Positive self-efficacy subscale is left-skewed while the distribution of their scores on the Negative self-efficacy subscale is right-skewed. Similarly, Turkish and Bosnian students did not differ significantly in their levels of self-efficacy despite the fact that p-value in this case was close to threshold of $p = .05$.

Key words: Positive Self-efficacy, Negative Self-efficacy, Validity, Reliability.

INTRODUCTION

Self-efficacy is one of the most important hypothetical constructs for personality and educational psychology. It is also one of the most widely studied variables in management as well as in industrial and social psychology.

The most prominent scientist who studied self-efficacy in a detail was Albert Bandura. He stated that every human is a result of his genetics, environment and activity (Bandura 1977). The third factor (i.e. our own activity, or so-called *human agency*) has a strong relationship with self-efficacy. According to Bandura (1999), our intentions and behavior taken together have four functions (dimensions): proactivity, self-organization, self-reflexion and self-regulation. That is, people act in order to achieve

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and get something, they organize their activity, reflect on it and regulate it in order to meet their needs and successfully finish their daily duties.

This approach is called the *Social - cognitive theory* (Bandura, 1986, 1989). It stresses two domains of person's life – the *cognitive* and the *social* one. The cognitive domain comprises our thoughts, mental representations, the process of making decisions, logical intelligence, attitudes, the frameworks of mind and our beliefs. The social domain consists of social interactions, public behavior, group belongingness, working with others, etc. Self-regulation is the function of self-efficacy and it can be understood by being aware of the following three mental processes: self-monitoring, making judgements of different things, persons and phenomena and the function of reactions to our own behavior (Bandura, 1991). In fact, Bandura (1996) claimed that self-efficacy is the exercise of self-control.

To define self-efficacy, the following psychological concepts have to be used: self-esteem, persistence, self-confidence and seeking for success. In other words, self-efficacy is one's ability to monitor his/her actions and behavior, to direct it and to reach anticipated positive outcomes. It can also be defined in the next manner (Repišti, 2015): self-efficacy is a perception of our own effectiveness, especially of the ability to fulfill what we expect of ourselves while doing various tasks and activities.

One's level of self-efficacy can be estimated by the *General self-efficacy scale* (GSE, Schwarzer & Jerusalem, 1995). This scale consists of ten items, given in the format of Likert's four-point scale. According to the aforementioned researchers, it has good reliability and validity.

Self-efficacy is a strong predictor for different variables (Juarez & Contreras, 2008): emotional stability, social dominance, self-confidence, sociability, leadership, mental control and anxiety (there is a negative correlation between self-efficacy and anxiety levels among participants).

Academic self-efficacy is an important theoretical concept which should be investigated in the context of educational context. It is linked to the activities such as: task performance, doing homework, succeeding in exams, having self-confidence while learning, developing academic self-concept, etc. (Schunk, 1991, Bong & Skaalvik, 2003). Lent, Brown, and Larkin (1984, 1986) highlighted the fact that academic self-esteem is a precursor of academic success.

A review of some studies conducted in education and considering academic self-efficacy is provided. Chemers, Hu and Garcia (2001) examined the relationship between academic self-efficacy and first-year college students' performance and adjustment. Their research shed light to the association between high levels of academic self-efficacy and high levels of academic performance as well as students' adjustment to higher

educational environment. Pajares and Johnson (1994, 1996) found positive and significant association between academic self-efficacy and English language writing skills. They stated that confidence and competence in writing are in the relationship with this type of self-efficacy. The results of the study conducted by Shell, Murphy and Bruning (1989) were in accordance with the previously mentioned findings. Pajares and Miller (1994) investigated to which extent self-efficacy contributed to maths performance and achievements and concluded that there is a positive correlation between these variables. That is, the higher academic self-efficacy, the higher students' grades in mathematics. These authors replicated their research procedure and the direction of their findings remained the same (Pajares & Miller, 1995).

Chen (2007) examined the relationship between EFL learners' self-efficacy and English performance. His results suggested the following: English listening self-efficacy beliefs were stronger predictors of English listening performance than English listening anxiety was. In addition, English listening self-efficacy was more important predictor than the perceived value of English language and culture. There were two factors which influence students' self-efficacy of learning and using English and their academic performance – mastery experience and social persuasion from their teachers (Chen, 2007).

Huang (2013) conducted a meta-analysis in order to investigate gender differences in academic self-esteem. He found a statistically significant difference favoring males. He also claimed that these differences vary across content domains. In other words, they differ regarding to school subjects (mathematics, language, sciences, arts...). The suitability of our self-efficacy scale in English language learning environment with regard to some socio-demographic factors is examined which can influence levels of students' academic self-efficacy.

1. RESEARCH QUESTIONS

Because believing in our own competences and skills for learning and using foreign language is very important issue in educational context, the following questions are examined:

- 1) What is the latent structure of the scale which we proposed for measuring self-efficacy in learning and using English?
- 2) Are there any gender differences in this kind of self-efficacy?
- 3) What are the differences between high school and university students in self-efficacy in learning and using English?
- 4) What are the differences in self-efficacy regarding to nationality?

5) What is the shape of distribution of total participants' scores on this scale?

2. RESEARCH HYPOTHESES

Regarding to our research questions, these hypotheses are proposed:

1) *Self-efficacy in English language learning and using scale* (SEELUS) has a single-factor latent structure or two-factor latent structure. In other words, it is a unidimensional construct or two-dimensional construct (for example, it can be extracted for two factors, one of them is negative form of self-efficacy and the other one is positive side of self-efficacy).

2) There are not any statistically significant gender differences in self-efficacy.

3) There are not any statistically significant differences in self-efficacy between high school and university students.

4) Differences in self-efficacy between Turkish and Bosnian students are not statistically significant.

5) There are more participants whose self-efficacy is higher than those whose self-efficacy is low. That is, the difference between our distribution(s) and the normal curve is statistically significant.

3. METHOD

3.1. Participants

The sample of the present study consisted of 129 adolescents. Mean age of participants was $M = 18.53$ and standard deviation was $SD = 2.99$. Age ranged from 12 to 26.

The data for gender and educational institution/level are presented in the figure below (Fig. 1).

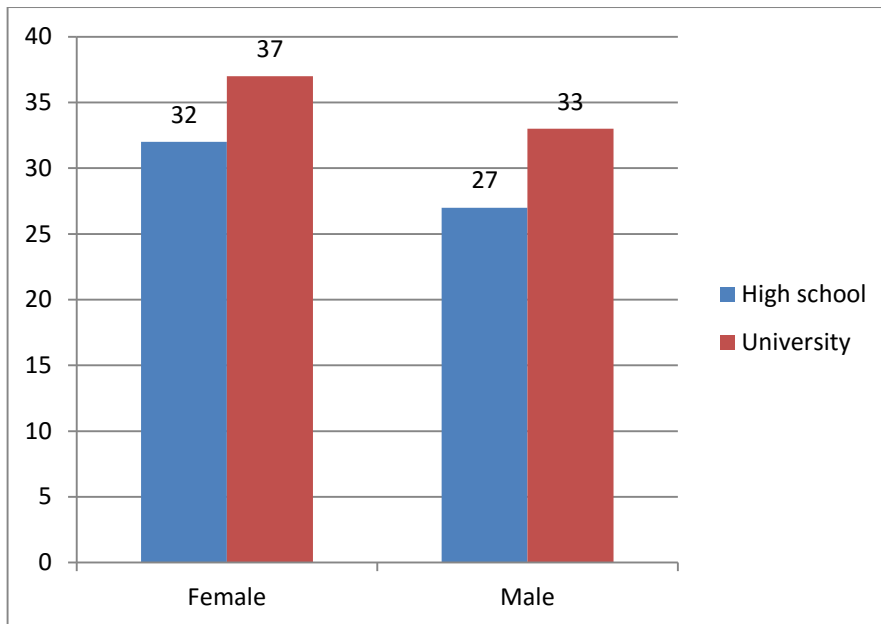


Figure 1: Gender and educational institution of the participants

Based on Figure 1 and additional calculations, the total number of females in our sample was 69 (53.5% of all respondents) and on the other hand, there were 60 males (or 46.5% of the total sample). The number of participants who were in some of the international college was 59 (45.7% of all respondents) and there were also 70 international university students (54.3% of the total sample). The English level of the last grade college students were meant to be the same of those university students. More specifically, in the subsample of females, there were 32 high school students (which is 46.4% of the females) and 37 university students (53.6% of the female subsample). In the male subsample, there were 27 high school students (45% of the males) and 33 university students (i.e. 55% of the male subsample).

Next figure (Fig. 2) displays structure of the sample by participants' nationality. For this purpose, this variable was divided into three categories: Turks, Bosnians and others.

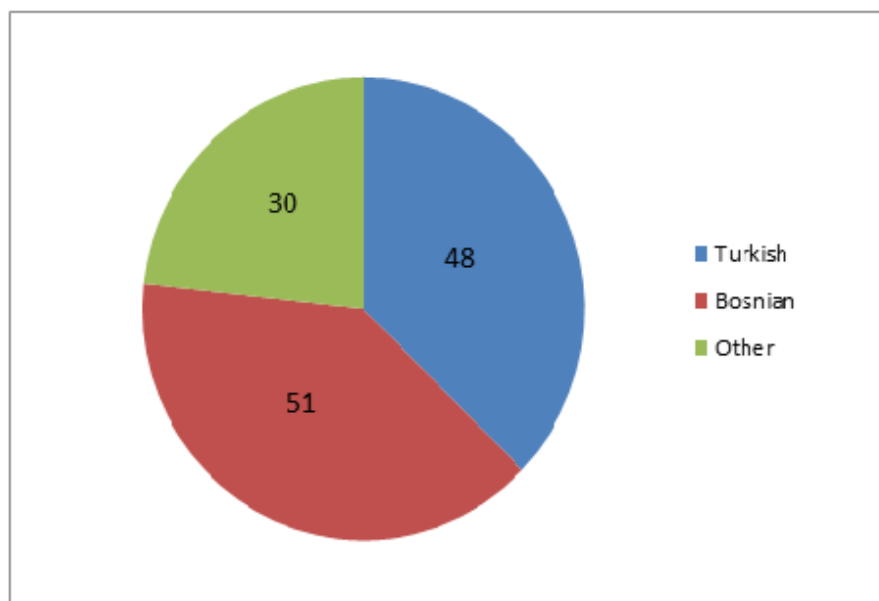


Figure 2: Sample distribution by nationality of respondents

The number of Bosnian students and Turkish students studying at a private college and university in Europe is almost equal and other nationalities from European countries were less covered by our sample (Figure 2). There were 51 Bosnians (39.5% of all respondents), 48 Turks (37.2% of the total sample) and 30 students which belong to the other nations (23.3% of all participants).

3.2. Instruments/Measures

First, our participants were asked to provide some sociodemographical information on themselves: their age, gender and nationality.

Second, *Self-efficacy in English language learning and using scale* (SEELUS; Aydoğan & Repišti, 2014) was applied. This scale consisted of 12 items (in the form of five-point Likert scale) which were made for measuring self-efficacy in learning and using English language. It was made to estimate one's beliefs and attitudes towards his/her abilities, competencies, knowledge and skills linked to English language. Therefore, this kind of self-efficacy is particular or specific variable relevant in the educational context and in learning foreign language such as English. Six items are positively defined (items: 2, 5, 9, 10, 11, & 12) and other six are reversely-coded (1, 3, 4, 6, 7, & 8). The typical item for positive self-efficacy is: "I consider myself as a competent English speaker." The representative item for negative self-efficacy is: " While learning English,

my self-esteem decreases." Thus, the first ones measure positive side of self-efficacy and the others measure negative self-efficacy. This variable (self-efficacy) is very important in learning and using foreign language because students who really believe in their abilities and are self-confident during learning process of foreign language will use it more frequently and will present themselves to others as very-skilled and competent. Metric properties (construct validity and reliability) of SEELUS are examined and discussed in *Results and discussion*.

3.3. Procedure

The scale (SEELUS with some sociodemographical questions) was made based on the theoretical background for self-efficacy and regarding to the previous research findings in this field. Then, our instrument was distributed electronically (via internet) among the participants. One of the servers available on the internet was used for creating online forms of questionnaires. The link for filling out our scale is distributed within high school and university students. Our sample was taken from international high schools and universities in Sarajevo, Bosnia and Herzegovina. It takes approximately 10 minutes to fill out the scale and provide answers. It can be added that the current research was conducted in May 2014. After the data were collected, database was made in MS Excel and transferred into SPSS for Win 16.0 in order to perform statistical analysis.

4. RESULTS

First, principal component analysis (PCA) was conducted, the method which is a version of exploratory factor analysis (EFA). Before that, fulfillment of some prerequisites for this analysis was checked: Kaiser-Meyer-Olkin measure of sampling adequacy was appropriate (KMO = .898) and Bartlett's test of sphericity was statistically significant ($\chi^2 = 951.599$, $df = 66$, $p < .001$). Hence, the items were entered from SEELUS in factor-analytic procedure. By Kaiser-Guttman's criterion (eigenvalue over one), two factors (dimensions) were extracted. Also the scree plot was made, which helped us to decide how many factors to retain regarding to Cattell's criterion (Fig. 3).

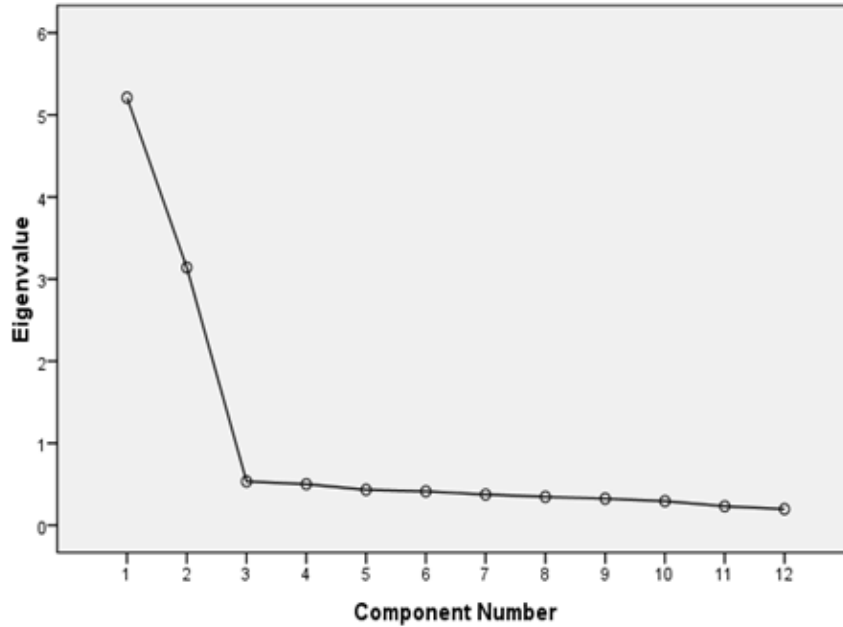


Figure 3: Scree plot for SEELUS

As can be seen in Figure 4, the first two factors explain most of the variance of manifest variables and other factors explain very small amount of it. Therefore, the two-factor solution of *Self-efficacy in English language learning and using scale* was accepted. That is, self-efficacy for English learning and its usage is not a unidimensional construct. It is rather two-dimensional concept. Based on this finding, it can be said that our first hypothesis was proved.

These factors (dimensions) explain 69.599% of variance of manifest variables (items). In order to obtain the most interpretable solution, these factors were rotated in Promax position (i.e. allowed them to correlate one with the other). After rotation, eigenvalue for the first factor was $\lambda_1 = 5.161$ (it explained 43.426% of total variance) and for the second $\lambda_2 = 3.287$ (it explained 26.173% of total variance). Correlation between these two factors was small ($r = -.113$). The pattern matrix, as one of the results of the rotation, is displayed in Table 1. These factors were named as Negative self-efficacy and Positive self-efficacy, respectively.

Table 1: Pattern matrix for SEELUS items

Items (Statements)	Negative self-efficacy	Positive self-efficacy	Communalities
8. I have low self-esteem while speaking English.	.854	.077	.720
7. I believe I have poor predispositions for learning English.	.852	-.015	.729
4. I do not believe in myself when I have to learn something new in English.	.846	-.018	.720
1. I am anxious while using English.	.840	.002	.706
3. While learning English, my self-esteem decreases.	.834	.029	.691
6. Compared with others, I am a bad English speaker.	.832	-.024	.697
5. I learn new things in English easily.	-.809	-.054	.648
10. I consider myself as a competent English speaker.	.107	.867	.743
11. My English learning strategies are efficient.	.154	.860	.734
12. I believe in my skills while using English.	.097	.822	.668
9. I have a natural gift for English language.	-.099	.768	.617
2. I am self-confident when using English.	-.396	.680	.680

In Table 1, it can be seen that items: 1, 3, 4, 5, 6, 7, & 8 were saturated by Negative self-efficacy and items: 9, 10, 11, & 12 were saturated by Positive self-efficacy. Item no. 2 is saturated by both factors (the cutoff value for factor loadings is .300), i.e. both of its loadings are above .300. Hence, this item is multifactorial variable and it was removed before our next analyses. The typical item for the first factor is: "I have low self-esteem while speaking English" and for the second is: " I consider myself as a competent English speaker."

Based on this two factors, the names (labels) were made for our subscales. Therefore, SEELUS scale consisted of Negative self-efficacy subscale and Positive self-efficacy subscale. Entering their items into reliability analysis, Cronbach's alpha coefficients as measures of internal consistency (reliability) were calculated. Cronbach's alpha coefficient for Negative self-efficacy was $\alpha = .929$ ($n = 7$) and for Positive self-efficacy α

= .851 (n = 4). The reliability of the total scale (SEELUS) was $\alpha = .831$ (n = 11). It can be concluded that our instrument is very reliable measure of negative and positive aspects of self-efficacy in English learning and its usage (all alphas' values were above .700).

To test next three hypotheses, t-tests for independent samples were conducted. The results are shown in Tables 2, 3, & 4. The labels mean: N – size of the particular subsample (males, females etc.), M – arithmetic mean, SD – standard deviation, SE_M – standard error of the arithmetic mean, M_{diff} – difference between arithmetic means, t – the value of t-test, df – degrees of freedom, p – significance.

Table 2: Results of t-test for gender differences

Self-efficacy	Gender	N	M	SD	SE_M	M_{diff}	t	Df	p
Positive	Males	60	4.42	0.42	0.05	0.33	2.495	127	.014
	Females	69	4.09	0.94	0.11				
Negative	Males	60	1.90	0.82	0.11	0.13	1.068	127	.287
	Females	69	1.77	0.52	0.06				

In Table 2, it can be seen that males have greater average results for Positive self-efficacy (M = 4.42) than females (M = 4.09) and this finding is statistically significant (t = 2.495, df = 127, p < .05). On the other hand, the difference between their arithmetic means on Negative self-efficacy subscale is not statistically significant (t = 1.068, df = 127, p > .05). Thus, our second hypothesis was partially proved and it was partially rejected.

Table 3: Results of t-test for educational institution/level differences

Self-efficacy	Educational institution/level	N	M	SD	SE_M	M_{diff}	t	Df	p
Positive	High school	59	4.23	0.82	0.11	-0.02	-0.156	127	.876
	University	70	4.25	0.71	0.09				
Negative	High school	59	1.76	0.61	0.08	0.13	1.067	127	.288
	University	70	1.89	0.73	0.09				

As can be concluded from the numbers in Table 3, the difference between average results of high school and university students for Positive self-efficacy is not statistically significant (t = -0.156, df = 127, p > .05), or for Negative self-efficacy (t = -1.067, df = 127, p > .05). Hence, high school and university students have similar level of self-efficacy in studying and using English language. According to the previous results, our third hypothesis was proved.

Because there were similar number of Bosnians and Turks in our sample and smaller number of students of other nationalities, we conducted t-test in order to compare Bosnian and Turkish students (Table 4).

Table 4: Results of t-test for nationality differences

Self-efficacy	Nationality	N	M	SD	SEM	M _{diff.}	T	Df	p
Positive	Bosnians	51	4.37	0.64	0.09	0.29	1.857	97	.066
	Turks	48	4.08	0.92	0.13				
Negative	Bosnians	51	1.85	0.70	0.10	-0.05	-0.313	97	.755
	Turks	48	1.90	0.80	0.11				

Table 4 shows that these groups of students do not differ statistically significant in positive self-efficacy ($t = 1.857$, $df = 97$, $p > .05$) or in negative self-efficacy ($t = -0.313$, $df = 97$, $p > .05$). Therefore, Turkish and Bosnian students have approximately equal level of self-efficacy in learning and using English language in our sample. In other words, our fourth hypothesis was proved.

Finally, the shape of distributions for the answers on Positive self-efficacy subscale and Negative self-efficacy subscale was examined (Fig. 4 & 5).

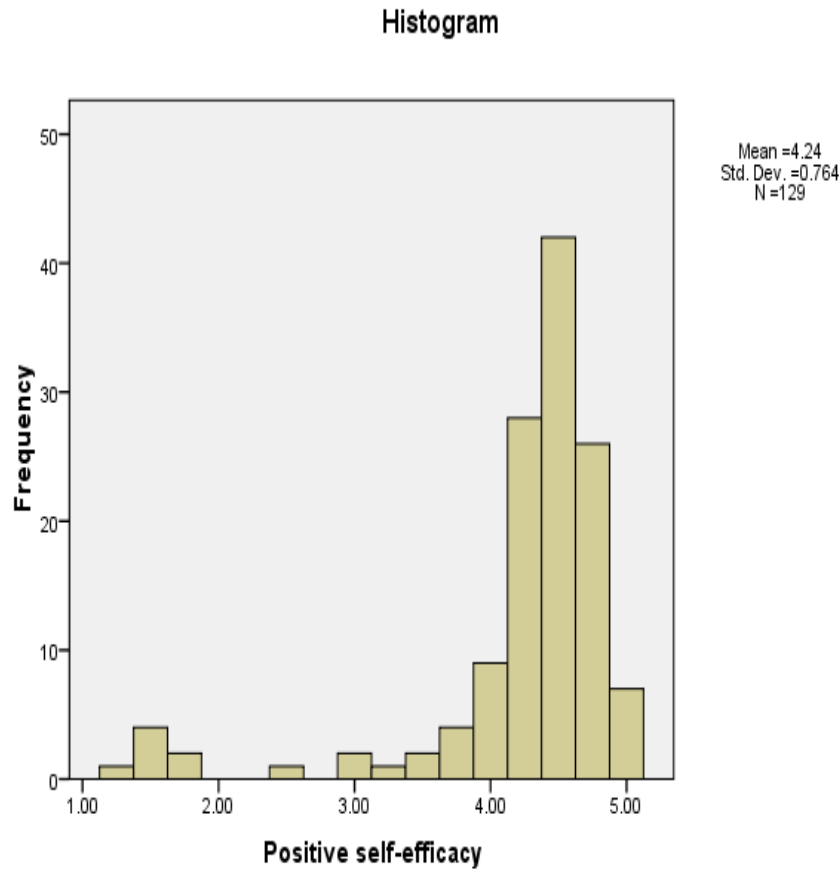
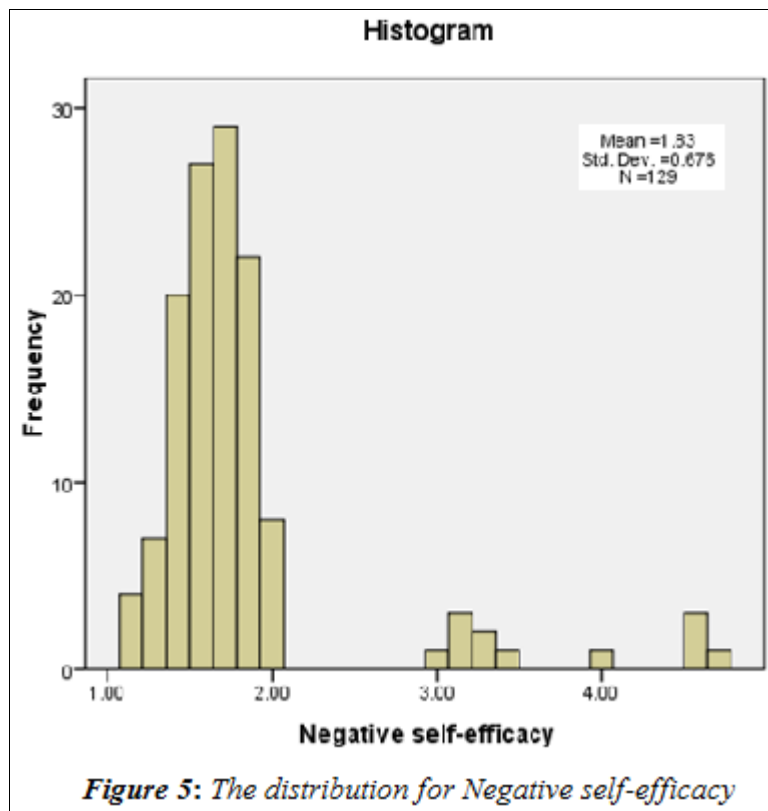


Figure 4: *The distribution for Positive self-efficacy*

As can be noticed, this distribution is left-asymmetrical i.e. there were lots of participants who have high self-efficacy than those who have low self-efficacy ($M = 4.24$; $SD = 0.76$). The difference between this distribution and the normal curve is statistically significant (Kolmogorov-Smornov $Z = 3.447$, $p < .001$). This finding is expected, because in the population, more people have high self-confidence and self-esteem and it is one of the indicators of good mental health. This kind of self-efficacy (in the context of education and linguistics) is partially influenced by general self-confidence, hence our results are interpretable from the corner of personality, social and educational psychology. By this finding, the first part of our last hypothesis was proved.



The distribution for answers on Negative self-efficacy subscale is right-asymmetrical (Fig. 5). This result is in accordance with the previous finding because there are more people who have low negative self-esteem than those who have high negative self-esteem ($M = 1.83$; $SD = 0.68$). The difference between this distribution and the normal curve is statistically significant (Kolmogorov-Smirnov $Z = 3.733$, $p < .001$). It can be noticed (Fig. 5) that there are some groups of participants who scored high on this subscale and, as teachers, they must be talked and they should be provided pedagogically and psychologically based support. They have problems in learning foreign language (in this example - English language) and it causes bad self-image and decreases their self-confidence. This finding supports the second part of our fifth hypothesis.

5. DISCUSSION

First, our research revealed a very good reliability of the *Self-efficacy in English language learning and using scale (SEELUS)*. Its latent structure consists of two dimensions (components) – positive self-efficacy and negative self-efficacy. The positive self-efficacy can be described as high self-confidence, positive beliefs on one's own abilities and positive

evaluation of one's own skills and performance. On the other hand, the negative self-efficacy is described as the lack of self-confidence while having negative self-evaluation and thinking of oneself as not able enough to learn and use English language. Therefore, the contents of the extracted factors are in accordance with Bandura's theoretical considerations on self-regulation, self-efficacy and academic success (e.g. Bandura, 1989, 1991).

It can be noticed that poor self-control and low levels of self-esteem lead to low estimates of self-efficacy for learning and using English language. The best proof for this ascertainment is the saturation of the item: "I learn new things in English easily". It was strongly and negatively saturated with the factor of negative self-efficacy (-.809). It means that high levels of negative self-esteem make English language learning and its usage very difficult. These findings are in line with the assumptions provided by Bandura (1977, 1996). They are also in accordance with the results of studies conducted by Chen (2007), Juarez and Contreras (2008), Lent et al. (1984, 1986), Pajares and Johnson (1994), and Pajares and Miller (1994, 1995).

The gender differences in positive self-esteem were found in favor of men, as did Huang (2013) in his meta-analysis. However, differences due to nationality or educational level/institution were not found. These are very interesting results because they can suggest that self-efficacy levels are almost the same among high school and university students. They also imply that self-efficacy levels can be pretty similar in different nations. Nevertheless, Turkish and Bosnian cultural environment, their traditions and customs do not differ significantly. Hence, other researchers might find differences in academic self-efficacy between some distinct nations such as French and Chinese.

Because people (and so are students) are motivated to maintain a positive image of themselves (so-called self-image), they often score higher on self-esteem, self-concept and self-efficacy measures. In contrast, they are used to diminishing negative self-evaluation. They usually give their estimates regarding to impression management. Furthermore, they present themselves in a positive light because they believe that other people will estimate themselves as good, skillful, efficient and successful. This explanation is in line with the considerations offered by Bong and Skaalvik (2003). This researcher provided a discussion about the tight relationship between self-concept, self-esteem and self-efficacy.

6. CONCLUSIONS

Answering the proposed hypotheses, the following conclusions are reached:

1) Self-efficacy for English learning and its usage is two-dimensional construct which can be measured by proposed instrument/scale (SEELUS) and its subscales (Negative self-efficacy and Positive self-efficacy).

2) Gender differences were found in the case of Positive self-efficacy where males scored higher than females. They scored almost equally on Negative self-efficacy subscale.

3) High school and university students have similar level of Positive self-efficacy and Negative self-efficacy.

4) Bosnian and Turkish students also have similar average scores for Positive self-efficacy and Negative self-efficacy.

5) Most of our participants have high Positive self-efficacy and low Negative self-efficacy.

As stated before, psychometric characteristics of the *Self-efficacy for English learning and using scale* are satisfactory and this finding allows us to recommend its usage in academic and educational context. It is a domain-specific measure unlike the *Generalized self-efficacy scale* made by Schwarzer and Jerusalem (1995). Additionally, our scale comprises almost all indicators of self-efficacy proposed by Bandura (1977, 1991, 1996).

Because males tend to be more assertive, dominant and self-confident than females, our findings related to gender differences are logical and justified. Besides, Huang (2013) found them in larger samples.

Further research where this scale can be applied can examine the relationship between positive and negative self-esteem and the real, objectively assessed performance in English language learning. It can be done by reviewing studies conducted by Lent et al. (1986), Shell et al. (1989), and Pajares and Johnson (1996).

REFERENCES

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, (84), 191-215.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, (44), 1175-1184.
- Bandura, A. (1991). Self-regulation of motivation through anticipatory and self-regulatory mechanisms. In R. A. Dienstbier, (Ed.), *Perspectives on motivation: Nebraska symposium on motivation* (Vol. 38, pp. 69-164). Lincoln: University of Nebraska Press.
- Bandura, A. (1996). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (1999). A social cognitive theory of personality. In L. Pervin & O. John (Eds.), *Handbook of personality* (2nd edition, pp. 154-196). New York: Guilford Publications.
- Bong, M., & Skaalvik, E. M. (2003). Academic self-concept and self-efficacy: How different are they really? *Educational Psychology Review*, 15 (1), 1-40.
- Chemers, M. M., Hu, L., & Garcia, B. F. (2001). Academic self-efficacy and first-year college student performance and adjustment. *Journal of Educational Psychology*, 93 (1), 55-64.
- Chen, H. Y. (2007). *The relationship between EFL learners' self-efficacy beliefs and English performance*. *Electronic Theses, Treatises and Dissertations*. Paper 3846. Retrieved June, 26, 2015 from <http://diginole.lib.fsu.edu/etd/3846>.
- Huang, Q. (2013). Gender differences in academic self-efficacy: a meta-analysis. *European Journal of Psychology of Education*, 28(1), 1-35.
- Juarez, F. & Contreras, F. (2008). Psychometric properties of the General self-efficacy scale in a Colombian sample. *International Journal of Psychological Research*, 1 (2), 6-12.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to academic achievement and persistence. *Journal of Counseling Psychology*, (31), 356-362.
- Lent, R. W., Brown, S. D., & Larkin, K. C. (1986). Self-efficacy in the prediction of academic performance and perceived career options. *Journal of Counseling Psychology*, (33), 265-269.
- Pajares, F., & Johnson, M. J. (1994). Confidence and competence in writing: The role of self-efficacy, outcome expectancy, and apprehension. *Research in the Teaching of English*, (28), 313-331.
- Pajares, F., & Miller, M. D. (1994). The role of self-efficacy and self-concept beliefs in mathematical problem-solving: A path analysis. *Journal of Educational Psychology*, (86), 193-203.
- Pajares, F., & Miller, M. D. (1995). Mathematics self-efficacy and mathematics outcomes: The need for specificity of assessment. *Journal of Counseling Psychology*, (42), 190-198.
- Pajares, F., & Johnson, M. J. (1996). Self-efficacy beliefs in the writing performance of entering high school students. *Psychology in the Schools*, (33), 163-175.

- Repišti, S. (2015). *Personality psychology: Theory and research [Psihologija ličnosti: Teorija i empirija]*. Podgorica: Author's edition.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26, 207-231.
- Schwarzer, R. & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston, (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor: NFER-NELSON.
- Shell, D. F., Murphy, C. C., & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology*, (81), 91-100.