

## Investigating the Relationship between EFL Learners' Sense of Self-Efficacy and Their Pedagogical Success: Different Proficiency Levels in Focus

Shahram Esfandiari<sup>1\*</sup>, & Abdolhossein Heydari<sup>1</sup>

\* Correspondence:

[sh.esfandiari2012@yahoo.com](mailto:sh.esfandiari2012@yahoo.com)

1. Department of English Language  
Teaching, Farhangian University,  
Tehran, Iran

Received: 23 July 2024

Revision: 29 October 2024

Accepted: 13 November 2024

Published online: 30 December 2024

### Abstract

The present study was an attempt to examine the relationship between EFL students' sense of self-efficacy and their pedagogical success. For this purpose, 150 female EFL students studying English in two institutes in Ardabil city were selected according to convenient sampling method. The selected learners were given a standard version of Oxford Quick Placement Test (OPT) which showed that the 150 participants were at the lower intermediate (n=47), upper intermediate (n=56), and advanced levels (n=47). The participants were also asked to complete the "Students' Sense of Efficacy Scale". Then, the collected data were analyzed through SPSS version 25 and Pearson correlations and linear regressions were run to answer the research questions. The results revealed significant relationships between sense of self-efficacy and pedagogical success of the EFL learners at lower intermediate, upper intermediate, and advanced levels. Likewise, the results indicated that sense of self-efficacy predicted a significant amount of pedagogical success at lower intermediate, upper intermediate, and advanced levels of L2 achievement. The findings can have implications for the EFL classroom and can pave the way for further studies focusing on the relationship between other personality traits and EFL learners' pedagogical success.

**Key words:** [EFL learners](#), [self-efficacy](#), [pedagogical success](#), [proficiency level](#)

## 1. Introduction

Self-efficacy represents a general construct that focuses on individuals' perceptions of their capabilities and competencies within a certain domain. Based to Bandura (1997), self-efficacy is an indication of individual beliefs in their competencies to arrange and implement the courses of practice required for achievement. It is further explained that self-efficacy beliefs affect various behavioral dimensions, such as selecting a course of action, the level and extent of attempts made, and the emotional reactions to the successful outcomes of individual efforts (Bandura, 1997). Drawing on the theory of self-efficacy, both thought and action are affected by individuals' beliefs in their competencies to influence the targeted outcomes. Individuals' belief in their self-efficacy has always been considered an important factor in successful adjustment and personal development potentially affecting cognitive, motivational, affective, and decisional procedures and encouraging learners to adopt positive and hopeful/negative and cynical thinking strategies and enhance or debilitate themselves (Moafian & Ghanizadeh, 2011). Besides, individual perceptions of environmental barriers and changes can also be influenced by self-efficacy (SE) beliefs, with higher efficacy perceived levels leading to ongoing efforts and more resistance against difficulties (Bandura, 2005)

Learners reflect such efficacy in their judgment of their abilities to change their engagement levels throughout classroom discussions and practices and move toward the required learning results (Bandura, 1977), including achievement (Ross, 1992), self-efficacy (Anderson et al., 1988), and motivation (Agricola et al., 2020; Rhew et al., 2018). According to Shi (2017), efficient learners represent lower levels of sensitivity to peer corrections, and openly accept feedback provided by their teachers. Another perspective reveals strong connections between learners' SE and their achievement in vocabulary learning techniques (Heidari et al., 2012).

Efficacy can be primarily characterized as future-focused judgments individuals make concerning their competencies instead of their real competency levels. This characteristic is of utmost importance since individuals usually tend to their actual capability overestimation or underestimation, with potential outcomes for the courses they select to follow and the attempt made by them in the process (Zhang & Ardasheva, 2019). For instance, Trautner and Schwinger (2020) showed better math problem-solving performance in children who possessed higher self-efficacy belief levels compared to their peers with lower efficacy belief levels, despite showing skill development capabilities in mathematics. According to Bandura (1986), students possessing higher self-efficacy make more attempts, show more perseverance in hardships, perform a more attentive selection for their course activities, and behave more realistically and flexibly. On the other hand, learners possessing lower self-efficacy degrees are less persistent and make fewer efforts for uncertain and challenging tasks while lacking intentionality and behaving unrealistically and in a maladaptive manner.

Bandura (1997) was the first to describe perceived self-efficacy as a construct reflecting individuals' ideas in their capabilities to arrange and use the courses of action needed to ensure certain achievements. These beliefs were referred to as the core mechanisms for personal agency. Bandura knew self-efficacy as confined by certain behaviors, comprising efficacy and outcome as its two main components, with respective connections to trust in individual capacities to influence behavior and believing that the desired behavior would have a specific consequence. As hypothesized by Bandura (2005), individuals' activity selections, efforts, and perseverance are influenced by self-efficacy. Those with lower levels of this component prefer to avoid task accomplishment, while individuals trusting in their capabilities prefer voluntary participation. Self-efficacious learners are supposed to be hard-working and show more persistence in the face of hardships compared to individuals who are doubtful regarding their competencies.

Even if self-efficacy beliefs have a significant role on learners' pedagogical success, there is little data about these variables in school and academic EFL context in Iran. Learners are different in their self-efficacy for learning as a function of their previous experiences, individual qualifications, and social helps. The latter contains the amount that teachers and parents energize them to learn, simplify their access to materials curtail for learning, and educate them self-regulatory approaches that improve skill learning and refinement. Parents' academic directions for their children affect their children's academic successes both directly and indirectly by affecting children's self-efficacy (Bandura et al., 1996). Self-efficacy refers to people's beliefs in their capacity to generate desired results (Wigfield et al., 2006) as well as to learn and act (Bandura, 1997). Bandura emphasizes in social cognitive theory the construct of self-efficacy and its effect on learning, as this idea in one's personal capacity affects selection of activities and effort (Schunk & Zimmerman, 2006), participation in the behaviors that are significant to attain aims (Williams & Rhodes, 2016), academic motivation and interest (Bandura, 1986, 1997), growth of cognitive abilities and accomplished

achievement (Pajares, 1996; Trautner & Schwinger, 2020). Although the recommendations provide good pedagogical instruction and reflect a humanistic strategy to language pedagogy and learning, it is not obvious to what extent, if any, they may have an impact on the student's opinions towards language acquisition.

Although research has sought to enhance EFL conditions in Iran, information on problems faced by Iranian EFL learners is still lacking (Fahim & Sa'eepour, 2011). Various reasons have been stated to highlight the source of such problems, but one of the main reasons has been the false disposition of the Iranian national educational system, which teaches learners 'what' instead of 'how' to think about certain issues. Even though several research has been conducted on the impact of self-efficacy and L2 development in Iran, focusing on concepts related to academic achievement (Bonyadi et al., 2012; Hashemi & Ghanizadeh, 2011; Moradkhani et al., 2017; Rahimi & Abedini, 2009), little is known about the connection of these two variables and their integrated impacts on students' language learning success. Thus, more research studies are required to examine the link between self-efficacy and successful English learning performance. The present study was an attempt to investigate the relationship between Iranian EFL learners' sense of self-efficacy and their pedagogical success. Likewise, the study intended to find how well EFL learners' sense of self-efficacy can predict their pedagogical success manifested through their EFL development. Considering the points stated above, this study tried to answer the following questions:

**Q1.** Is there any relationship between Iranian EFL learners' sense of self-efficacy and their pedagogical success regarding their proficiency levels?

**Q2.** How well can EFL learners' sense of self-efficacy predict their EFL pedagogical success?

## 2. Literature Review

The roots of self-efficacy go back to the Social Cognitive Theory (SCT) introduced by Bandura (1986), who regarded it as a critical construct of motivation. Social cognitive theory holds that in the face of specific tasks, individuals perform analyses, goal setting, and systematic planning of strategies to ensure the desired outcome attainment (Bandura, 2005; Cleary et al., 2006). Based on this theory, individual performance is influenced by the dynamic interaction of a) personal elements, comprising cognitive, affective, and biological factors, b) behaviors, and c) environment (Pajares, 2002a). The above-mentioned factors have reciprocal effects on one another, revealing that the way performance outcomes are explained by individuals can alter their surroundings and self-beliefs, which, in turn, inform and modify learners' future performance. As derived from Bandura's viewpoint, individuals do not exclusively react against their environmental impacts or internal forces as emphasized by behaviorists. On the other hand, Bandura (1977) argues that self-regulation, reflection, and organization, along with pro-activism for performance and growth, are used by people. Hence, the SCT was put forward by Bandura to highlight its distinguishing features from the principles of other social learning theories of that time. Bandura (1997) explained self-efficacy as individuals' beliefs in their abilities and competencies for learning or performing tasks at certain levels. Many authors have sought to provide a comprehensive and accurate definition of self-efficacy, but all have paraphrased and referred to the definition provided by Bandura. Based on Qiu and Lee (2020), self-efficacy is a construct in Bandura's theory of human functioning, known as 'beliefs in individual competencies in learning or performing behaviors at certain desired levels' (p. 126). A different dimension of Bandura's (1986) definition was rendered by Baanu et al. (2018), representing self-efficacy as individuals' judgments of people of their competencies in organizing and implementing courses of practice needed to achieve certain performance types.

In the face of novel academic tasks, the question may arise of whether the learners can perform it (self-efficacy) and why they are required to do the assigned task (task value). Based on what Keskin (2014) argues, a positive answer to the first question encourages learners to continue to the next question. Hence, self-efficacy can predict task value, but not vice versa. Previously conducted studies revealed a positive correlation between both constructs (Bong, 2001; Seo & Taherbhai, 2009) and emphasize the task of self-efficacy as a direct task value predictor (Keskin, 2014; Kozanitis et al., 2007).

Previous researchers have emphasized the important and fundamental direct impact of learners' self-efficacy on academic expectations (Chemers et al., 2001; Lent et al., 2008), revealing higher academic expectations and performance in students with higher degrees of self-efficacy than those possessing lower self-efficacy levels. The obtained results agree with Bandura's population (1997) arguing the causal precedence of self-efficacy to outcome expectancy, since individuals' judgments of their potential performance in certain situations primarily affect the

results, they anticipate (Bandura, 2005). Thus, self-efficacy (individual perceived capability to perform a certain behavior) is supposed to exert causal effects on behavioral consequences but not vice versa.

An examination of the relationship between EFL and ESL learners' self-efficacy, language anxiety, gender, and academic success was conducted by Shi (2017), revealing the critical role of this component in foreign or second language learning. Besides, it was shown that students with higher levels of self-efficacy might outperform others and adopt different learning techniques, address lower levels of language anxiety, and exhibit positive attitudes toward the subject matter. Another study by Betoret et al. (2017) revealed a considerable confirmation of the idea self-efficacy beliefs affect learners' performance, although there is a lack of research to highlight the motivational factor that mediates student success. Research focusing on the socio-cognitive dimension of motivation investigated 797 secondary school students in Spain to examine the correlation between academic self-efficacy, students' expectancy-value beliefs, teaching processes, satisfaction, and academic success, confirming the moderating role of student expectancy value-beliefs among academic self-efficacy and students' academic achievement.

In one study, Aydın (2019) examined the connection between writing and reading self-efficacy and success in four ESL learners from the highest levels of writing and reading. The results of interview guides, classroom observations, writing assignment, and two questionnaires revealed a significant dependence of learners' self-efficacy on their interest and support provided by the teachers. The connection between self- and collective efficacy and the English and mathematic performance of Taiwanese middle school learners was examined by Ho (2005), highlighting the role of self-efficacy for English and mathematics performance. In a study conducted by Safari (2021), he concluded that teachers' self-efficacy was a negative indicator of their burnout. The results of his study suggested the significance of conducting various programs for EFL teachers to improve their self-efficacy belief. Eghtesadi and Jeddi's (2019) results implied the importance of self-efficacy of teachers particularly for employing different instructional strategies. Thus, teachers should increase their self-efficacy beliefs if they want to be considered as more successful by their learners.

In a study, Alhadabi and Karpinski (2019) showed that self-efficacy might play protective and supportive roles by enhancing the positive impact of mastery and performance-approach purposes and declining the negative influence of avoidance purposes on academic performance, respectively. Hajovsky et al. (2020) in a study concluded that teachers who reported higher self-efficacy perceptions were more likely to show higher degree of intimacy and lower ratings of conflict with learners. In addition, their findings showed that higher self-efficacy beliefs establish the better relationship between teachers and students. Several research studies (Bozzato, 2024; Luo et al., 2023; Salvo-Garrido et al., 2023; Schunk & DiBenedetto, 2021) demonstrated that self-efficacy has a positive impact on learners' employing of deeper learning approaches and their capability to convey learning to new settings. As Code (2020) argued self-efficacy is one of various positively correlated potential procedures that are predictive of students' academic achievement. Basileo et al. (2024) demonstrated that self-efficacy had the significant correlation with learners' academic achievement and it mediated the impact of independent motivation while controlled motivation had a small and statistically negative correlation regardless of self-efficacy. Moreover, their findings indicated that self-efficacy plays a significant role in the correlations among students' basic psychological needs, motivation, and pedagogical achievement and highlighted the significance of supporting learners' self-efficacy in educational contexts.

### 3. Methodology

#### 3.1 Research Design

Ex post Facto correlational design was utilized in this study, since there was no intervention involved in the study, nor was the research concerned with the learning procedure the participants may have gone through as an important component. None of the variables of the research were collected to lead to changes, either. What was of essential significance then was the kind and strength of the relationship between variables under investigation; thus, an Ex Post Facto correlational design was the suitable design for conducting this research study (Field, 2018).

#### 3.2 Participants

The participants of the current study were 150 female EFL learners with lower intermediate ( $n=47$ ), upper intermediate ( $n=56$ ), and advanced ( $n=47$ ) language proficiency levels, with the age range of 18-25, who were selected based on convenient sampling method from among the learners in two language institutes located in Ardabil city in Iran. The

criterion behind such a selection was that the researchers had previously taught in the institutions and this cooperation helped the procedure of conducting the current research.

### 3.3 Instruments

To collect the data, the researchers used General Learner Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) and Oxford Quick Placement Test (OPT). The following section presents some information concerning the instruments used.

#### 3.3.1 Oxford Quick Placement Test (OPT)

To measure the language proficiency level of the participants, the OPT was utilized. This is a well-known test of English language proficiency developed by Oxford University Press and Cambridge TESOL that provides instructors an appropriate and time-saving way of checking a learner's level of English (Hill & Taylor, 2004) ([www.oxfordenglishtesting.com](http://www.oxfordenglishtesting.com)). It is simple to administer and is suitable for placement purpose and examination screening. OPT has two parallel forms, and takes about 35 minutes to administer.

Multiple-choice items are used in this test, answers are written on the answer sheet, and the answer sheets can be easily marked using the places provided. This test measures the knowledge of English grammar, and also is regarded as a global measure of capacity in a language or other subject matters. Those students whose scores are between 16 and 29 will be chosen as the elementary participants of the study (levels A1 and A2) and those whose scores fall between 30 and 39 will be selected as the lower intermediate participants (B1 level). The participants with the scores of 40-47 will be labeled as upper-intermediate learners (B2 level) and the ones with the scores between 48 and 54 will be labeled as the advanced participants. The scores above 55 up to 60 represent very advanced EFL learners. The test enjoys high reliability ( $\alpha = .91$ ) according to Cronbach's alpha (Berthold, 2011), and high construct validity (Motallebzadeh & Nematizadeh, 2011; Wistner et al., 2009). The construct validity of this test has been confirmed as it has been used in different countries of the world (Motallebzadeh & Nematizadeh, 2011).

#### 3.3.2 General Learner Self-Efficacy Scale

The General Learner Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) which is available with 10 items was utilized to collect the data concerning the self-efficacy belief of the participants. The questionnaire was used to test a general sense of self-efficacy with the thought to guess coping with daily issues as well as adaptation after experiencing different stressful life happenings.

The questionnaire is often self-administered, as kind of a more inclusive scale. Ideally, the 10 items are combined at random into a larger pool of questions that have the identical response form. It needs 5 minutes on average to respond. Answers are created on a 5-point scale. The answers to all 10 items are summed up to yield the final composite score with a variety from 10 to 50.

The scale enjoys high reliability indices as "in samples from 23 nationalities, Cronbach's alphas varied from .76 to .90, with the majority in the high .80. It is noteworthy to mention that the scale is unidimensional" (Schwarzer & Jerusalem, 1995) as it has been designed for the general adult participations.

In terms of validity, the scale enjoys high criterion-related validity as written in different correlation research studies where positive coefficients were shown with favorable emotions, work satisfaction, and dispositional optimism. Negative coefficients were found with anxiety, depression, burnout, stress, and health complaints.

### 3.4 Data Collection Procedure

In the first step 150 female EFL learners were selected based on convenient sampling method from the EFL learners studying English in two institutes in Ardabil city in Iran. Then, the selected learners were given a standard venison of Oxford Quick Placement Test (OPT) which showed that the 150 participants were at the lower intermediate ( $n=47$ ), upper intermediate ( $n=56$ ), and advanced ( $n=47$ ) levels. The participants were also asked to complete the "Students' Sense of Efficacy Scale". Finally, the collected data were analyzed through SPSS version 25 and Pearson correlations and linear regression were run to answer the questions of the study. The researchers explained to the participants that

their participation was voluntary, and that any information gathered from them in the study would be kept strictly confidential.

### 3.5 Data Analysis

Both descriptive and inferential statistics were employed in the present study. In the descriptive analysis the assumption of normality was checked via skewness and kurtosis indices and their ratios over the standard errors. Also, KR-21 reliability indices were calculated for the pedagogical success and sense of self-efficacy. In the inferential analysis, a linear regression was run to probe to what extent sense of self-efficacy can predict pedagogical success at three proficiency levels. Analysis of variances (ANOVA) was also used to check the significance of regression model.

## 4. Results

This study aimed at addressing the following two objectives; first, it investigated any significant relationships between self-efficacy and pedagogical success, as measured through the OPT test, at lower intermediate, upper intermediate and advanced levels; and second, it explored if self-efficacy can predict pedagogical success at three proficiency levels. The data collected through this study were analyzed employing Pearson correlations and a linear regression which assume normality of data.

The normality assumption was tested using skewness and kurtosis indices and their proportions over the standard errors (Table 1). The absolute value of ratios of skewness and kurtosis were less than 1.96 for all variables. Therefore, the above-mentioned questions were analyzed using Pearson parametric correlation and linear regression.

It should be noted that the skewness and kurtosis ratios of +/- 1.96 were suggested by Field (2018, p 345-46), "The resulting z-scores may be compared against values that the researcher would expect to obtain if skewness and kurtosis were not different from 0. Therefore, an absolute value larger than 1.96 is significant at  $p < 0.05$ , above 2.58 is significant at  $p < 0.01$  and above 3.29 is significant at  $p < 0.001$ ."

Table 1. Descriptive statistics; Testing normality of data

Group		N	Skewness			Kurtosis		
		Statistic	Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
Lower intermediate	OPT	47	-.331	.347	-0.95	.201	.681	0.30
	Self-efficacy	47	.497	.347	1.43	.275	.681	0.40
Upper intermediate	OPT	56	-.157	.319	-0.49	-.570	.628	-0.91
	Self-efficacy	56	-.540	.319	-1.69	1.155	.628	1.84
Advanced	OPT	47	-.590	.347	-1.70	-.519	.681	-0.76
	Self-efficacy	47	-.314	.347	-0.90	-.466	.681	-0.68

Table 2 displays the descriptive statistics and KR-21 reliability indices for the sense of pedagogical success and self-efficacy. The reliability indices for the two tests were .90 and .82 respectively.

Table 2. Descriptive statistics and KR-21 reliability indices for sense of self-efficacy and pedagogical success



	N	Minimum	Maximum	Mean	Std. Deviation	Variance	KR-21
Pedagogical Success	150	9	60	35.38	11.212	125.700	.90
Self-efficacy	150	4	50	28.94	9.059	82.070	.82

#### 4.1 Research Question One

*Is there any relationship between Iranian EFL learners' sense of self-efficacy and their pedagogical success regarding their proficiency levels?*

Table 3 shows the results of Pearson correlations computed to probe any significant relationships between pedagogical success and sense of self-efficacy for the lower and upper intermediate and advanced groups in order to explore the first research question. drawing on the results, it can be said that there were significant relationships between EFL learners' sense of self-efficacy and their pedagogical success at lower intermediate ( $r(47) = .394$ , representing a moderate effect size,  $p < .05$ ), upper intermediate ( $r(56) = .446$ , representing a moderate effect size,  $p < .05$ ), and advanced levels ( $r(47) = .602$ , representing a large effect size,  $p < .05$ ). Thus, the null-hypothesis as “there was not any significant relationship between Iranian EFL learners' self-efficacy sense and their pedagogical success regarding their proficiency levels” was rejected.

Table 3. Pearson correlation between sense of self-efficacy and pedagogical success

		Self-Efficacy		
		Lower Intermediate	Upper Intermediate	Advanced
Sense of Pedagogical Success	Pearson Correlation	.394**	.446**	.602**
	Sig. (2-tailed)	.006	.001	.000
	N	47	56	47

\*\*. Correlation is significant at the 0.01 level (2-tailed).

#### 4.2 Research Question Two

*How well can EFL learners' sense of self-efficacy predict their EFL pedagogical success?*

A linear regression was run to probe to what extent sense of self-efficacy can predict pedagogical success at three proficiency levels. As Table 4 displays, sense of self-efficacy predicted 15.5 percent of pedagogical success at a lower intermediate level ( $R = .394$ ,  $R^2 = .155$ ). The amount of prediction increased to 19.9 percent at upper intermediate level ( $R = .446$ ,  $R^2 = .199$ ); and finally, it got to 36.3 percent at advanced level ( $R = .602$ ,  $R^2 = .363$ ).

Table 4. Model summary <sup>b</sup>

Group	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Lower intermediate	1	.394 <sup>a</sup>	.155	.136	7.477
Upper intermediate	1	.446 <sup>a</sup>	.199	.185	8.960

Advanced	1	.602 <sup>a</sup>	.363	.349	9.564
----------	---	-------------------	------	------	-------

a. Predictors: (Constant), Self-efficacy

b. Dependent Variable: OPT

Table 5 shows the results of the ANOVA test of significance of regression model. The findings revealed that the regression models maintained statistical significance at lower intermediate ( $F(1, 45) = 8.26, p = .006$ , partial  $\eta^2 = .155$  representing a large effect size), upper intermediate ( $F(1, 54) = 13.44, p = .001$ , partial  $\eta^2 = .199$  representing a large effect size); and advanced levels ( $F(1, 45) = 25.63, p = .000$ , partial  $\eta^2 = .363$  representing a large effect size).

Table 5. Test of significance of regression model

Group	Model		Sum of Squares	df	Mean Square	F	Sig.
Lower intermediate	1	Regression	461.870	1	461.870	8.261	.006 <sup>b</sup>
		Residual	2516.002	45	55.911		
		Total	2977.872	46			
Upper intermediate	1	Regression	1079.235	1	1079.235	13.444	.001 <sup>b</sup>
		Residual	4334.979	54	80.277		
		Total	5414.214	55			
Advanced	1	Regression	2344.960	1	2344.960	25.636	.000 <sup>b</sup>
		Residual	4116.147	45	91.470		
		Total	6461.106	46			

a. Dependent Variable: OPT

b. Predictors: (Constant), Self-efficacy

Table 6 displays the results of regression coefficients. Before discussing the results, it is worth mentioning that two sets of regression coefficients were produced; standardized (beta) and unstandardized (b) values. The standardized regression coefficients reflect the extent of change in dependent variable (pedagogical success) because of one standard deviation change in the predictor (sense of self-efficacy). For instance, the beta value for lower intermediate level was .394. So, if sense of self-efficacy increases one standard deviation, pedagogical success increases .394 standard deviations.

The unstandardized regression coefficients (bs) are explained considering the unit of measurement used to measure the variables. For instance, the b-value for upper intermediate level was .570. In other words, if sense of self-efficacy increases one-unit, pedagogical success increases .570 units.

Table 6. Regression coefficients <sup>a</sup>

Group	Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
			B	Std. Error	Beta		
Lower intermediate	1	(Constant)	17.636	4.030		4.376	.000



		Self-efficacy	.468	.163	.394	2.874	.006
Upper intermediate	1	(Constant)	19.060	4.688		4.066	.000
		Self-efficacy	.570	.156	.446	3.667	.001
Advanced	1	(Constant)	17.033	5.052		3.372	.002
		Self-efficacy	.727	.144	.602	5.063	.000

a. Dependent Variable: OPT

According to the results, it can be concluded that EFL learners' sense of self-efficacy significantly predicted pedagogical success at;

A: Lower intermediate level ( $b = .468$ ,  $Beta = .394$ ,  $t = 2.87$ ,  $p = .006$ ),

B: Upper intermediate level ( $b = .570$ ,  $Beta = .446$ ,  $t = 3.66$ ,  $p = .001$ ), and

C: Advanced level ( $b = .727$ ,  $Beta = .602$ ,  $t = 5.06$ ,  $p = .000$ ).

The above-mentioned unstandardized regression coefficients were compared two by two for any significant difference utilizing the online calculator developed by Soper (2020). As Table 7 showed:

A: There was not any significant difference between the amount of prediction at lower intermediate and upper intermediate levels ( $t = .452$  (99),  $p = .652$ ).

B: There was not any significant difference between the amount of prediction at lower intermediate and advanced levels ( $t = 1.19$  (90),  $p = .236$ ).

C: There was not any significant difference between the amount of prediction at upper intermediate and advanced levels ( $t = .739$  (99),  $p = .461$ ).

Table 7. Comparing two regression coefficients

	b-values (Slopes)	Standard Errors	t-value	df	p-value
Lower Intermediate	.468	.163	.452	99	.652
Upper Intermediate	.570	.156			
Lower Intermediate	.468	.163	1.19	90	.236
Advanced	.727	.144			
Upper Intermediate	.570	.156	.739	99	.461
Advanced	.727	.144			

## 5. Discussion

The results of the current study firstly demonstrated that there were significant correlations between sense of self-efficacy of EFL learners and their pedagogical success at lower intermediate, upper intermediate and advanced levels. Secondly, the findings revealed that sense of self-efficacy could predict EFL learners' pedagogical success in various proficiency levels; including lower intermediate, upper intermediate, and advanced levels.

The findings of this paper are in line with previously conducted theoretical and experimental research, although fewer works have been carried out in the institutional L2 context, and more so in Iran. According to Woolfolk et al. (1990),

a greater sense of self-efficacy in learners leads to more positive teacher evaluations. Research conducted by [Gibson and Dembo \(1984\)](#) confirmed the consistent relationship between self-efficacy as a critically important variable and positive teaching-learning outcomes.

The current study results are in line with [Artino's \(2012\)](#) study on academic self-efficacy and its correlation with educational development of the Spanish learners of English. Likewise, the current findings can take support from [Goulão's \(2014\)](#) study on the relationship between academic achievement in adult learners and self-efficacy as both of these studies show similar findings. In addition, the present research findings are in line with [Genç et al. \(2016\)](#) study on the EFL learners perceived self-efficacy and ideas on English language acquisition which was conducted in Turkey showing that a strong relationship existed between L2 and EFL development. This notion has been proved by [Betoret et al. \(2017\)](#) in their study regarding the significant relationship between self-efficacy, satisfaction and academic success. Likewise, the study findings are in line with [Baanu et al. \(2018\)](#) study on self-efficacy and students' academic achievement in senior guidance schools in North-Central, Nigeria where English is considered a foreign language. Self-efficacy beliefs have been considered significant in the educational development in different disciplines and in various social settings: In this respect, [Firmansyah et al. \(2018\)](#) study showed that the positive and direct correlation between self-efficacy and motivation can pave the way for promoting biology learning results of senior high school students. Likewise, [Dorfman and Fortus's \(2019\)](#) study in Canada showed that students' self-efficacy positively correlates with their learning science in different school systems.

The results of the current study revealed that self-efficacy sense of the EFL learners in different proficiency levels could enrich their pedagogical success. This shows that self-efficacy as a personality characteristic plays a significant role in the EFL development of the learners in different levels and it can be considered as an ever-present trait which plays an important role in the success of the L2 learners. This notion can take support from [Aydm's \(2019\)](#) study on the development of pre-service Turkish instructors perceived writing self-efficacy opinions and its later effect on their learners' L2 writing development. Such results enrich the notion that enhancing self-efficacy belief in both EFL teachers and learners can pave the way for the pedagogical success of the EFL learners. This study findings are also in line with the findings of some of the recent studies including that of [Agricola et al. \(2020\)](#) emphasizing the influence of feedback perception, motivation, and self-efficacy on the higher education learners' English development. Also, the present findings take support from [Qiu and Lee's \(2020\)](#) study on the role of regulated learning and self-efficacy ideas in peer collaborative writing which revealed that L2 learners' written products, self-reports, and task discussions could significantly develop under the effect of their self-efficacy beliefs.

Consistent with findings of [Hajovsky et al. \(2020\)](#), [Lue et al. \(2023\)](#), and [Basileo et al. \(2024\)](#), we found that there were statistically significant relationships between EFL learners' sense of self-efficacy and their pedagogical success at different proficiency levels. As [Basileo et al. \(2024\)](#) concluded self-efficacy had a vital role in the correlations among EFL learners' motivation, students' basic psychological needs, and pedagogical success across different disciplines. Our findings are also consistent with other research findings that have mentioned self-efficacy predicts educational accomplishment ([Salvo-Garrido, 2023](#); [Schunk & DiBenedetto; 2021](#), [Yildiz & Ozdemir, 2019](#)).

Though most of the previous studies found in the self-efficacy literature assert the significant and positive correlation between this trait and educational success of the EFL learners, [Heidari et al. \(2012\)](#) found that for the elementary levels, such a relationship may not work well. They found that the relationship between Iranian EFL learners' self-efficacy thoughts and use of vocabulary learning approaches was significant in the intermediate and advanced levels. However, for the elementary young students this correlation was not significant. This might have occurred due to the low cognitive development of the young individuals ([Bandura & Locke, 2003](#)) and the developmental nature of self-efficacy ([Dorfman & Fortus, 2019](#)). Shi's (2017) study reporting an empirical study on learners' self-efficacy in EFL/ESL setting, also showed that the relationship between self-efficacy beliefs and L2 development is more significant for the advanced level learners compared to the beginners.

This research is unique since it has evaluated learners' success utilizing a questionnaire as a distinctive scale for EFL instructors to investigate the role of self-efficacy in students' accomplishment. Similarly, the findings highlighted the determining role of student efficacy beliefs in their performance within the classroom context to some extent. As confirmed by the research results, students' self-efficacy beliefs can represent their success levels. In other words, learners perform more successfully in task accomplishment if they believe in their capabilities, providing more likelihood of their assessment as successful from the teachers' viewpoint.

Although this study revealed the positive role of self-efficacy in learners' success, this role should be investigated with no overestimations. For instance, the Pearson analysis results show the impossibility of explaining the students' success variations by merely referring to self-efficacy in the lower intermediate learners. This finding can be justified considering the effect of various educational, emotional, and affective behaviors and viewpoints represented by students and shaping teachers' perspectives toward student achievement and success. Several studies have also highlighted the complexity of the teaching process and the influence of different components of teacher quality and characteristics (Loh, 2019; Talsma et al., 2019).

## 6. Conclusion

Overall, as shown by the results of this research, students' self-efficacy plays a crucial role in their pedagogical success while contributing positively to the prediction and enhancement of their success at various proficiency levels. According to the obtained results, students' self-efficacy and performance were related, which was statistically significant. The research findings agree with the reports of previous literature, highlighting the statistically significant association of these two variables (Bates & Khasawneh, 2007; Taipjutorus, Hansen, & Brown, 2012).

Considering the interrelationship reported for learners' self-efficacy and goal-setting in literature, unmotivated students require teacher guidance to set challenging but meaningful goals in line with their interests and do their best to achieve them. If students possess positive perspectives toward their goal achievement, they will be more likely to experience lower degrees of anxiety, more self-confidence, and an improved sense of success and achievement. In addition, teachers of language teaching institutes in Iran have to pay attention to the possible adverse effects of their negative viewpoints on the learners' reduced self-perception. As the implications of the study, the teachers should focus on striving to change the undesirable perspectives of some students towards themselves, their field of study, or EFL. These students should know that the humanities major is valuable and significantly important and become familiar with the relevance of English learning to their future lives. Teachers are responsible for providing conditions to assist the humanities, improve their image of themselves, and foster their potential capabilities.

According to Moskowitz (1981, p.155), humanistic practices help students in understanding and accepting themselves, promoting their viewpoints of language learning, and improving their self-perceptions through a combination of the subject matter and the feelings, experiences, interests, and values represented by students. As stated by Bandura (1997), positive self-talk includes making positive statements, such as 'I can do it' effectively enhancing self-efficacy through individual assistance to overcome challenges and deal with problematic tasks. Hence, students can get more motivation through this strategy, encouraging them to keep on working on challenging tasks instead of giving up. Our research findings imply that EFL researchers should include self-efficacy in studies that investigate motivational outcomes such as learners' pedagogical success. Self-efficacy takes an important proportion of changes in academic achievement (Schunk & DiBenedetto, 2021). Drawing on the importance of self-efficacy as shown in this study makes the need to direct the researchers' attention to this concept which has apparently received less consideration, specifically from EFL courses. Examining the interaction of learners' self-efficacy with constructs like learning strategies, cognitive styles, and motivational issues, investigating gender differences regarding the variable, and identifying the extent to which employing humanistic and student-centered syllabus can lead to a change in students' self-efficacy are the issues on which the further studies might focus.

## References

- Agricola, B. T., Prins, F. J., & Sluijsmans, D. M. (2020). Impact of feedback request forms and verbal feedback on higher education students' feedback perception, self-efficacy, and motivation. *Assessment in Education: Principles, Policy & Practice*, 27(1), 6–25. <https://doi.org/10.1080/0969594x.2019.1688764>
- Alhadabi, A., & Karpinski, A. C. (2019). Grit, self-efficacy, achievement orientation goals, and academic performance in university students. *International Journal of Adolescence and Youth*, 25(1), 519–535. <https://doi.org/10.1080/02673843.2019.1679202>
- Anderson, R., Greene, M., & Loewen, P. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *Alberta Journal of Educational Research*, 34(2), 148–165.
- Artino, A. R. (2012). Academic self-efficacy: from educational theory to instructional practice. *Perspectives on Medical Education*, 1(2), 76–85. <https://doi.org/10.1007/s40037-012-0012-5>

- Aydın, İ. S. (2019). Improvement of pre-service Turkish teachers perceived writing self-efficacy beliefs. *Educational Sciences: Theory & Practice*, 19(1), 52–63. <https://doi.org/10.12738/estp.2019.1.0269>
- Baanu, T. F., Oyelekan, O. S., & Olorundare, A. S. (2018). Self-efficacy and chemistry students' academic achievement in senior secondary schools in North-Central, Nigeria. *MOJES: Malaysian Online Journal of Educational Sciences*, 4(1), 43–52.
- Bandura, A. (1983). Self-efficacy determinants of anticipated fears and calamities. *Journal of Personality and Social Psychology*, 45(2), 464–475. <https://doi.org/10.1037//0022-3514.45.2.464>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall. <http://www.emory.edu/EDUCATION/mfp/effpassages.html>
- Bandura, A. (1994). Self-efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behavior*, vol. 4 (pp. 71–81). Academic Press.
- Bandura, A. (1995). *Self-efficacy in changing societies*. Cambridge University Press.
- Bandura, A. (1997). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215.
- Bandura, A. (2005). Adolescent development from an agentic perspective. In F. Pajares & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents* (pp. 1–43). Information Age Publishing.
- Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, 88(1), 87–99. <https://doi.org/10.1037/0021-9010.88.1.87>
- Basileo, L. D., Otto, B., Lyons, M., Vannini, N., & Toth, M. D. (2024). The role of self-efficacy, motivation, and perceived support of students' basic psychological needs in academic achievement. *Front. Educ.* 9:1385442. <https://doi.org/10.3389/educ.2024.1385442>
- Bates, R., & Khasawneh, S. (2007). Self-efficacy and college students' perceptions and use of online learning systems. *Computers in Human Behavior*, 23(1), 175–191. <https://doi.org/10.1016/j.chb.2004.04.004>
- Berthold, M. (2011). Reliability of Quick Placement Tests: How much faith can we place on quick paper or internet-based placement tests. *Australian Journal of Teacher Education*, 35(6), 674–698.
- Betoret, F. D., Rosello, L. A., & Artiga, A. G. (2017). *Self-efficacy, satisfaction and academic achievement: The mediator role of students' expectancy value beliefs, frontiers in psychology*. Arnold. <https://doi.org/10.3389/fpsyg.2017.01193>
- Bong, M. (2001). Between-and within-domain relations of academic motivation among middle and high school students: Self-efficacy, task value, and achievement goals. *Journal of Educational Psychology*, 93(1), 23–35. <https://doi.org/10.1037//0022-0663.93.1.23>
- Bonyadi, A., Nikou, F. R., & Shahbaz, S. (2012). The relationship between EFL learners' self-efficacy beliefs and their language learning strategy use. *English Language Teaching*, 5(8), 113–121. <https://doi.org/10.5539/elt.v5n8p113>
- Bozzato, P. (2024). The future orientation of Italian adolescents in post-pandemic times: associations with self-efficacy and perceived academic achievement. *Educational Sciences*, 14(2), 170. <https://doi.org/10.3390/educsci14020170>
- Chemers, M. M., Hu, L. T., & Garcia, B. F. (2001). Academic self-efficacy and first year college student performance and adjustment. *Journal of Educational Psychology*, 93(1), 55–67. <https://doi.org/10.1037//0022-0663.93.1.55>
- Cleary, T. J., Zimmerman, B. J., & Keating, T. (2006). Training physical education students to self-regulate during basketball free throw practice. *Research Quarterly for Exercise and Sport*, 77(2), 251–262. <https://doi.org/10.5641/027013606x13080769704640>

- Code, J. (2020). Agency for learning: Intention, motivation, self-efficacy and self-regulation. In *Frontiers in education* (Vol. 5, p. 19). Frontiers Media SA. <https://doi.org/10.3389/feduc.2020.00019>
- Dorfman, B. S., & Fortus, D. (2019). Students' self-efficacy for science in different school systems. *Journal of Research in Science Teaching*, 56(8), 1037–1059. <https://doi.org/10.1002/tea.21542>
- Eghtesadi, A., & Jeddi, A. (2019). Teachers' critical thinking and self-efficacy as predictors of their pedagogical success. *International Journal of Applied Linguistics and English Literature*, 8(1), 62–70.
- Fahim, M., & Sa'ee pour, M. (2011). The impact of teaching critical thinking skills on reading comprehension of Iranian EFL learners. *Journal of Language Teaching and Research*, 2(4), 867–874. <https://doi.org/10.4304/jltr.2.4.867-874>
- Field, A. (2018). *Discovering statistics using IBM SPSS, statistics for statistics* (5th ed.). SAGE Publications.
- Firmansyah, F., Komala, R., & Rusdi, R. (2018). Self-efficacy and motivation: Improving biology learning outcomes of senior high school students. *JPBI*, 4(3), 203–208. <https://doi.org/10.22219/jpbi.v4i3.6878>
- Genç, G., Kuluşaklı, E., & Aydın, S. (2016). Exploring EFL learners perceived self-efficacy and beliefs on English language learning. *Australian Journal of Teacher Education*, 41(2), 4–15. <https://doi.org/10.14221/ajte.2016v41n2.4>
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(2), 569–582.
- Goulão, M. (2014). The relationship between self-efficacy and academic achievement in adults' learners. *Athens Journal of Education*, 1(3), 237–246. <https://doi.org/10.30958/aje.1-3-4>
- Hajovsky, D. B., Chesnut, S. R., & Jensen, K. M. (2020). The role of teachers' self-efficacy beliefs in the development of teacher-student relationships. *Journal of School Psychology*, 82, 141–158. <https://doi.org/10.1016/j.jsp.2020.09.001>
- Hashemi, M. R., & Ghanizadeh, A. (2011). Emotional intelligence and self-efficacy: A case of Iranian EFL university students. *International Journal of Linguistics*, 3(1), 1–16. <https://doi.org/10.5296/ijl.v3i1.877>
- Heidari, F., Izadi, M., & Ahmadian, M. V. (2012). The relationship between Iranian EFL learners' self-efficacy beliefs and use of vocabulary learning strategies. *English Language Teaching*, 5(2), 174–182. <https://doi.org/10.5539/elt.v5n2p174>
- Hill, N. E., & Taylor, L. C. (2004). Parental school involvement and children's academic achievement pragmatics and issues. *Current Directions in Psychological Science*, 13(4), 161–164. <https://doi.org/10.1111/j.0963-7214.2004.00298.x>
- Ho, L. (2005). *The relationships among self-efficacy, collective efficacy, and academic performance of middle school students*. Unpublished doctoral dissertation. National Changhua University of Education, Changhua, Taiwan.
- Keskin, H. K. (2014). A path analysis of metacognitive strategies in reading, self-efficacy and task value. *International J. Soc. Sci. & Education*, 4(4), 798–808.
- Kozanitis, A., Desbiens, J. F., & Chouinard, R. (2007). Perception of teacher support and reaction towards questioning: its relation to instrumental help-seeking and motivation to learn. *International Journal of Teaching and Learning in Higher Education*, 19(3), 238–250.
- Lent, R. W., Sheu, H. B., Singley, D., Schmidt, J. A., Schmidt, L. C., & Gloster, C. S. (2008). Longitudinal relations of self-efficacy to outcome expectations, interests, and major choice goals in engineering students. *Journal of Vocational Behavior*, 73(2), 328–335. <https://doi.org/10.1016/j.jvb.2008.07.005>
- Loh, E. K. (2019). What we know about expectancy-value theory, and how it helps to design a sustained motivating learning environment. *System*, 86, 102–119. <https://doi.org/10.1016/j.system.2019.102119>



- Luo, Q., Chen, L., Yu, D., & Zhang, K. (2023). The mediating role of learning engagement between self-efficacy and academic achievement among Chinese college students. *Psychology Research and Behavior Management*, 1533-1543. <https://doi.org/10.2147/prbm.s401145>
- Moafian, F., & Ghanizadeh, A. (2011). A correlational analysis of EFL university students' critical thinking and self-efficacy. *The Journal of Teaching Language Skills (JTLS)*, 3(1), 119–149. <https://doi.org/10.22099/jtls.2012.396>
- Moskowitz, G. (1981). Effects of humanistic techniques on attitudes, cohesiveness, and self-concept of foreign language students. *The Modern Language Journal*, 65(2), 149–157.
- Moradkhani, S., Raygan, A., & Moein, M. S. (2017). Iranian EFL teachers' reflective practices and self-efficacy: Exploring possible relationships. *System*, 65, 1–14. <https://doi.org/10.1016/j.system.2016.12.011>
- Motallebzadeh, K., & Nematizadeh, S. (2011). Does gender play a role in the assessment of oral proficiency? *English Language Teaching*, 4(4), 165–172. <https://doi.org/10.5539/elt.v4n4p165>
- Pajares, F. (1996). Self-efficacy beliefs and mathematical problem-solving of gifted students. *Contemporary Educational Psychology*, 21(4), 325–344. <https://doi.org/10.1006/ceps.1996.0025>
- Pajares, F. (2002). Self-efficacy beliefs in academic contexts: An outline. *Psychology Research*, 2(3), 30–42.
- Qiu, X., & Lee, M. K. (2020). Regulated learning and self-efficacy beliefs in peer collaborative writing: An exploratory study of L2 learners' written products, task discussions, and self-reports. *System*, 93, 102–112. <https://doi.org/10.1016/j.system.2020.102312>
- Rahimi, A., & Abedini, A. (2009). The interface between EFL learners' self-efficacy concerning listening comprehension and listening proficiency. *Novitas-Royal*, 3(1), 27–35.
- Rhew, E., Piro, J. S., Goolkasian, P., & Cosentino, P. (2018). The effects of a growth mindset on self-efficacy and motivation. *Cogent Education*, 5(1), 1492337. <https://doi.org/10.1080/2331186x.2018.1492337>
- Rimm, H., & Jerusalem, M. (1999). Adaptation and validation of an Estonian version of the general self-efficacy scale (ESES). *Anxiety, Stress, and Coping*, 12, 329–345.
- Ross, J. A. (1992). Teacher efficacy and the effects of coaching on student achievement. *Canadian Journal of Education*, 17(1), 51–65. <https://doi.org/10.2307/1495395>
- Safari, I. (2021). Relationship between Iranian EFL teachers' self-efficacy and their burnout level in universities and schools. *International Journal of Foreign Language Teaching and Research*, 9(35), 25–38.
- Salvo-Garrido, S., Zayas-Castro, J., Polanco-Levicán, K., & Gálvez-Nieto, J. L. (2023). Latent regression analysis considering student, teacher, and parent variables and their relationship with academic performance in primary school students in Chile. *Behav.* <https://doi.org/10.3390/bs13060516>
- Schunk, D., & Zimmerman, B. (2006). Competence and control beliefs. *Handbook of educational psychology*, 349–367.
- Schunk, D. H., & DiBenedetto, M. K. (2021). Self-efficacy and human motivation. In *Advances in motivation science* (Vol. 8, pp. 153–179). Elsevier. <https://doi.org/10.1016/bs.adms.2020.10.001>
- Schwarzer, R., & Jerusalem, M. (1995). Generalized learners' self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). NFER-NELSON.
- Seo, D., & Taherbhai, H. (2009). Motivational beliefs and cognitive processes in mathematics achievement, analyzed in the context of cultural differences: A Korean elementary school example. *Asia Pacific Education Review*, 10(2), 193–203. <https://doi.org/10.1007/s12564-009-9017-0>
- Shi, L. (2017). Empirical study on learners' self-efficacy in ESL/EFL context. *College Student Journal*, 50(3), 454–465.



- Soper, D. S. (2020). *A-priori sample size calculator for structural equation models* [Software].
- Taipjutorus, W., Hanson, S., & Brown, M. (2012). Investigating a relationship between learner control and self-efficacy in an online learning environment. *Journal of Open, Flexible and Distance Learning*, 16(1). <https://doi.org/10.61468/jofdl.v16i1.95>
- Talsma, K., Schütz, B., & Norris, K. (2019). Miscalibration of self-efficacy and academic performance. *Learning and Individual Differences*, 69, 182–195. <https://doi.org/10.1016/j.lindif.2018.11.002>
- Trautner, M., & Schwinger, M. (2020). Integrating the concepts self-efficacy and motivation regulation: How do self-efficacy beliefs for motivation regulation influence self-regulatory success? *Learning and Individual Differences*, 80, 10–18. <https://doi.org/10.1016/j.lindif.2020.101890>
- Wigfield, A., Byrnes, J. B., & Eccles, J. S. (2006). Adolescent development. In , P. Alexander & P. Winne (Eds.), *Handbook of educational psychology*, 2, (pp. 87-113). London: Routledge.
- Williams, D. M., & Rhodes, R. E. (2016). The confounded self-efficacy construct: Conceptual analysis and recommendations for future research. *Health Psychology Review*, 10(2), 113–128. <https://doi.org/10.1080/17437199.2014.941998>
- Williams, D. M., Rhodes, R. E. (2016). The confounded self-efficacy construct: conceptual analysis and recommendations for future research. *Health Psychol Rev.* 10(2), 113-28. <https://doi.org/10.1080/17437199.2014.941998>.
- Wistner, B., Sakai, H., & Abe, M. (2009). An analysis of the Oxford placement test and the Michigan English placement test as L2 proficiency tests. *Bulletin of the Faculty of Letters, Hosei University*, 58, 33–44.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82(2), 81–91.
- Yildiz, P., Ciftci, S. K. & Ozdemir, I. E. Y. (2019). Mathematics self-efficacy beliefs and sources of self-efficacy: A Descriptive Study with two Elementary School Students. *International Journal of Progressive Education*, 15(3), 194-206. <https://doi.org/10.29329/ijpe.2019.193.14>
- Zhang, X., & Ardasheva, Y. (2019). Sources of college EFL learners' self-efficacy in the English public speaking domain. *English for Specific Purposes*, 53, 47–59. <https://doi.org/10.1016/j.esp.2018.09.004>
- Zimmerman, B. J., Schunk, D. H., & DiBenedetto, M. K. (2017). The role of self-efficacy and related beliefs in self-regulation of learning and performance. In C. Dweck (Ed.), *Handbook of competence and motivation: Theory and application* (pp. 313–320). Routledge. <https://doi.org/10.4324/9780203839010>