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Reflective Thinking, Self-efficacy, Self-esteem and Academic Achievement of Iranian EFL students

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Abstract

The present study investigated the relationship between reflective thinking, general self-efficacy, self-esteem and academic achievement of Iranian EFL students. To this end, 132 Iranian EFL students from three state universities were recruited. To collect the data, the participants completed four questionnaires, namely background information questionnaire, the reflective thinking skills questionnaire, the general self-efficacy scale and Rosenberg self-esteem scale. The results of two correlation matrixes revealed that there were statistically significant positive relationships between general self-efficacy, self-esteem and academic achievement of Iranian EFL students, while reflective thinking had no significant relationship with self-esteem, self-efficacy and academic achievement of the participants; in addition, no significant relationship between the components of reflective thinking and academic achievement of Iranian EFL students was observed. Moreover, the results of multiple regression analysis showed that between self-esteem and self-efficacy, the former was a stronger predictor of academic achievement of the Iranian EFL students.

Keywords: reflective thinking, self-efficacy, self-esteem, academic achievement, Iranian EFL students.

Pensamiento Reflexivo, Autoeficacia, Autoestima y Rendimiento Académico de Estudiantes Iranís con Inglés como Segunda Lengua en Educación Superior: ¿Existe una Relación?

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Resumen

Este estudio investigó la relación entre el pensamiento reflexivo, la autoeficacia general, la autoestima y el rendimiento académico de estudiantes iraníes con inglés como segunda lengua. 132 estudiantes iraníes con inglés como segunda lengua fueron reclutados de tres universidades estatales. Los participantes completaron cuatro cuestionarios: un cuestionario de información básica, el cuestionario de habilidades de pensamiento reflexivo, la escala de autoeficacia general y la escala Rosenberg de autoestima. Los resultados de dos matrices de correlación revelaron que existe una relación positiva estadísticamente significativa entre la autoeficacia general, la autoestima y el rendimiento académico de estudiantes iraníes con inglés como segunda lengua, mientras que el pensamiento reflexivo no tuvo una relación significativa con la autoestima, la autoeficacia y el rendimiento académico de los participantes. Además, no se observó ninguna relación significativa entre los componentes del pensamiento reflexivo y el rendimiento académico de estudiantes iraníes con inglés como segunda lengua. También, los resultados del análisis de regresión múltiple mostraron que, entre la autoestima y la autoeficacia, la primera fue un predictor más fuerte del rendimiento académico de estudiantes iraníes con inglés como segunda lengua.

Palabras clave: pensamiento reflexivo, autoeficacia, autoestima, rendimiento académico, estudiantes iraníes con inglés como segunda lengua.

Numerous factors are involved in academic achievement of English as foreign language (EFL) students. Among these factors, affective factors play a significant role in their academic success. Drawing upon Gass and Sekinker's (2008) argument, non-language factors such as affective factors can play a determining role in students' success in EFL contexts. This can justify the significance of investigation into the impact of EFL students' affective factors on their academic success. In the same vein, Dornyei (2009) also exerts emphasis on the affective factors leading to individual differences, and in turn to variation in their performances. According to Williams and Burden (2000), a successful educator should be aware of the complexity of learning process and the factors involved in learning process to assist learners in achieving their goals. With the importance of affective factors in mind, a vast array of studies has been conducted to examine the relationship between psychological factors and EFL students' achievement (e.g. Asakereh & Dehghannezhad, 2015; Carroll et al., 2009; Ghanizadeh, 2016). However, the extant literature indicates that reflective thinking as a significant factor in EFL students' academic success has not been given due attention and self-efficacy, self-esteem and reflective thinking have not been brought together to date to ascertain their possible relationship with academic achievement of EFL students. The present study therefore attempted to explore the possible relationship between the above-mentioned affective variables and academic achievement of Iranian EFL students. The other motive behind conducting the current study was to unravel among the variables of the study which one is the strongest predictor of academic achievement of Iranian EFL students.

Reflective thinking

The concept of reflective thinking is associated with Dewey's (1933) seminal publication entitled *How we think: A restatement of the relation of reflective thinking to the educative process*. Barell (1984, p.194) posits that "reflective, productive, critical are all words used to describe thinking at higher, more complex than rote levels". Reflective thinking is composed of four stages, namely, habitual action, understanding, reflection and critical reflection (Kember et al., 2000). Learners who think reflectively can control their learning and are cognizant of the gap between what they know and what they need to know (Dewey, 1933). van Velzen (2016) believes that

students who are not engaged in reflective thinking fail to evaluate any given situation critically; consequently, they may not be able to improve the status quo. When students reflect on their actions and analyze them they can identify the aspects which need further improvement and those which have gone well (Van der Schaaf et al., 2011). Beveridge (1997) also posits that students who are able to perceive their success learn more and, in turn this can lead to further academic achievement. Ersözlü and Arslan (2009) further state that reflective thinking assists students to ascertain their thinking and learning process and to identify their strengths and weaknesses; in addition, it makes students actively engaged in their learning process (Song et al., 2006).

White (1981) holds that if schools exerted further emphasis on students' reflective thinking rather than merely emphasizing acquiring knowledge, the situation would be far better than the status quo. Students are supposed to develop their reflective thinking. To do so, they need to question their habitual actions (Lucas & Tan, 2007).

There are a handful of studies addressing the relationship between reflective thinking and students' academic performance. For example, Ersözlü and Arslan (2009) explored the impact of activities developing reflective thinking on Turkish primary school students' metacognitive ability. The results indicated that the activities improved the participants' metacognitive ability. That is, reflective thinking had a positive impact on the students' metacognitive skills. Soodmand Afshar and Rahimi (2015) also investigated the relationship between reflective thinking, emotional intelligence, and speaking skills of 150 Iranian EFL students. The results of the study showed that there were significant relationships between the variables of the study, and both emotional intelligence and reflective thinking were strong predictors of speaking skills, with the former being a stronger predictor. In another piece of research, Soodmand Afshar and Hamzavi (2014) explored the relationship between reflective thinking, listening anxiety, and listening comprehension of 223 Iranian EFL students. The findings of the study revealed that there was a positive relationship between reflective thinking and listening comprehension while there was a negative correlation between reflective thinking and listening anxiety.

Ghanizadeh (2016) also had an inquiry into the relationship between reflective thinking, critical thinking, self-monitoring, and academic

achievement of 196 Iranian university students. Part of the findings demonstrated that critical thinking and reflective thinking significantly predicted students' academic success, with habitual action being the weakest predictor and reflection the strongest one. Furthermore, Lew and Schmidt's (2011) study showed that Singaporean students' reflective thinking on what and how they learned brought about positive changes in their performance; however, the changes were modest. In part of his study, Phan (2009) also found that reflecting thinking had a direct impact on academic success of undergraduates studying at the University of the South Pacific, Laucala Campus, Suva, Fiji.

Self-efficacy

Self-efficacy, adopted from Bandura's social cognitive theory, refers to individuals' conviction that they are able to complete a task successfully (Bandura, 1977). According to Lee and Mao (2016) and Phan (2012), self-efficacy can predict students' motivation and academic achievement. Bandura (1977, 1999) posits that those who believe a task is beyond their ability are likely to fail in task performance while those who believe in their ability are likely to perform the task successfully and even if initially they encounter problems in the way of their task performance, they persist with their endeavors. Komarraju and Nadler's (2013) study on 407 psychology undergraduates with European American, African American, and other backgrounds corroborated Bandura's claim. The results of the study revealed that students with low self-efficacy had the inclination to believe that intelligence is a fixed and immutable trait while those with high self-efficacy believed perseverance and persistence can help them obtain their goals.

In Pajares's (1996, p.544) word, "how individuals interpret the results of their performance attainments informs and alters their environments and their self-beliefs, which in turn inform and alter their subsequent performances". That is, those who possess low self-efficacy envisage failure scenario while those with high self-efficacy visualize successful scenario (Bandura, 1999).

Bandura (1999) proposes four sources of self-efficacy development, namely performance accomplishments, vicarious experience, verbal persuasion, and emotional arousal. Performance accomplishments refer to individuals' success in performing a task as repeated failures can have

debilitative effects on their task performance in the future. Vicarious experience is defined as individuals' exposure to others' task performance through which they can obtain further confidence to perform future tasks. Verbal persuasion refers to positive feedback which a task performer receives while s/he is engaged in task performance, and emotional arousal can be defined as the affective factors impinging upon individuals' task performance.

With the importance of self-efficacy in mind, some studies were carried out to address the correlation between self-efficacy and academic achievement. Honicke and Broadbent (2016) reviewed 12 years of research (2003-2015) on the relationship between self-efficacy, academic achievement, motivational and cognitive variables. The results of this review showed a moderate relationship between self-efficacy and academic achievement. What follows are a number of studies addressing the relationship between self-efficacy and academic achievement. de Fátima Goulão (2014) investigated the relationship between academic self-efficacy of 63 Portuguese EFL freshmen in an online context and their academic achievement. The results of the study indicated the existence of significant correlation between self-efficacy and academic achievement of the participants. Carroll et al. (2009) conducted a cross-sectional study to examine the relationship between self-efficacy, academic aspirations, and delinquency and academic achievement of 935 students from ten schools in Australia. Part of the findings revealed that there was a positive relationship between academic self-efficacy and academic achievement while a negative relationship was observed between social self-efficacy and academic relationship. Tenaw (2013) also carried out a study on the relationship between self-efficacy, gender, and academic achievement of 100 Turkish students majoring in Chemistry. The findings of the study revealed that there was no significant difference between males and females in terms of their self-efficacy. Furthermore, there was a significant relationship between their self-efficacy and academic achievement. Bahmani Fard (2013) conducted a study to examine the relationship between self-efficacy, self-esteem and test anxiety of 72 Iranian students majoring in English literature. The findings of the study demonstrated positive relationship between self-esteem and self-efficacy. Moreover, self-esteem and self-efficacy had a positive relationship with the students' final scores. Shkullaku's (2013) inquiry into gender, self-

efficacy and academic achievement indicated that there was a significant difference between males and females regarding their self-efficacy; in addition, the findings revealed a significant relationship between self-efficacy and academic achievement. Wang and Neihart's (2015) qualitative study on Singaporean exceptional students also corroborated the contribution of self-efficacy to students' academic performance. On the other hand, Hwang, Choi, Lee, Culver, and Hutchison's longitudinal study (2016) on a large sample of Korean students showed that there was a reciprocal interplay between self-efficacy and academic achievement of the students. More specifically, the findings indicated that the impact of the students' past academic performance on their self-efficacy beliefs was stronger than the impact of self-efficacy beliefs on academic performance.

Self-esteem

Self-esteem refers to the amount of value people give to themselves (Baumeister, Campbell, Krueger, Vohs, 2003). Clemes and Bean (1990) assert that one of the principal factors impinging upon students' performance in school is the level of their self-esteem. They further state that students with low self-esteem tend to develop dissatisfaction with school context, which in turn, affects their learning process. Generally, those who appreciate their ability are more likely to succeed in their task performance than their counterparts with the same ability but less self-esteem (Apter, 1997). Low self-esteem can also lead to anxiety and depression, which can affect social performance (Branden, 1983).

A number of studies have been conducted to investigate the possible correlation between students' self-esteem and academic successes. For instance, an old study by Watkins and Astilla (1980) indicated the significant relationship between self-esteem and academic achievement; in addition, some recently published researches also demonstrated the significant positive relationship between the two variables. For example, Booth and Gerard (2011) investigated the relationship between self-esteem and academic achievement of 86 North American and 86 British senior high school students. Part of the findings of the study indicated the existence of relationship between the participants' Mathematics scores and their self-esteem. Bhagat (2016) conducted a study to investigate the relationship between self-esteem and academic achievement of 400 secondary students.

The results showed a positive correlation between males' self-esteem and their academic achievement while there was a negative correlation between females' self-esteem and their academic achievement. Román, Cuestas and Fenollar's (2008) study on 553 Spanish university students' self-esteem and academic achievement also indicated a positive relationship between the two variables. Furthermore, the findings of a study conducted by Duru and Balkis (2017) in the Turkish context also revealed that there was a significant positive relationship between self-efficacy and academic achievement of Turkish undergraduates.

Reflective thinking, self-efficacy, self-esteem and academic achievement

Generally, the Iranian education system has been mainly teacher-centered (Soodmand Afshar & Movasagh, 2014) and students have had little opportunity to have their voice heard; consequently, there is a danger that the psychological factors affecting their learning process are overlooked. Therefore, studies shedding light on these factors in relation to EFL students' academic success in the Iranian context can be of paramount importance.

Drawing on the literature, the role of reflective thinking in students' task performance has been emphasized by numerous scholars in the field (e.g. Beveridge, 1997; van Velzen, 2016) and a few studies also demonstrated a significant relationship between reflective thinking and academic achievement (e.g. Ghanizadeh, 2016; Soodmand Afshar & Rahimi, 2016). However, the relationship between reflective thinking, self-efficacy and self-esteem has remained uncharted. Partly the current study thus was aimed at addressing this lacuna. Furthermore, the literature showed self-efficacy and self-esteem were regarded as determining affective factors in academic contexts (e.g. Clemes & Bean, 1990; Lee & Mao, 2016; Phan, 2012) and a number of studies substantiated their relationship with academic achievement (e.g. Bhagat, 2016; Tenaw, 2013). Moreover, a handful of studies demonstrated the positive relationship between self-efficacy and academic achievement (e.g. Bahmani Fard, 2013). Despite the fact that all the variables of the current study have played a significant role in students' academic performance, it is not clear which variable is the strongest predictor of students' academic achievement; hence, the second motive for

conducting the present study. Therefore, the following research questions were formulated to address the niche in the literature:

1. Is there any significant relationship between reflective thinking, self-efficacy, self-esteem and academic achievement of Iranian EFL students?
2. Among reflective thinking, self-efficacy and self-esteem, which one is the strongest predictor of Iranian EFL students' academic achievement?
3. Is there any relationship among different components of reflective thinking and academic achievement of Iranian EFL students?

Method

Participants

A total of 132 second-year EFL undergraduates, out of which 100 were female and 32 were male, were recruited from three Iranian public universities based on a cluster random sampling. The participants whose first language was Persian and who had already been educated in the Iranian schools which are mainly teacher-centered (Soodmand Afshar & Movasagh, 2014) were majoring in either English literature or English translation at the time of the study. Moreover, their age ranged from 18 to 45 ($M=21$). All the participants had already passed general English courses such as listening and speaking, grammar and reading comprehension courses. Therefore, they were not expected to encounter any problem with understanding the items of the questionnaires. Having stated that, one of the researchers was present on the day of administration of the questionnaires to explain the purpose of the study and answer possible related questions asked by the participants.

Instruments

To collect the data, a background information questionnaire, the reflective thinking skills questionnaire (RTQ) (Kember et al., 2000), the general self-efficacy scale (GSE) (Schwarzer & Jerusalem, 1995) and Rosenberg self-esteem scale (RSES) (Rosenberg, 1965) were employed. Further information on the questionnaires is presented below:

Background information questionnaire was used to collect the participants' demographic information such as age, gender, major, grade point average (GPA).

The RTQ is a five-point Likert scale questionnaire which comprises 16 items. The questionnaire evaluates four components namely habitual action (items 1, 5, 9 and 13), understanding (items 2, 6, 10 and 14), reflection (items 3, 7, 11 and 15) and critical reflection (items 4, 8, 12 and 16). To ascertain the validity and reliability of the RTQ, it was pilot tested with 50 participants from the same population. The results of Kaiser-Meyer-Olkin (KMO) showed that the questionnaire enjoyed an acceptable KMO of 0.83. Moreover, Cronbach's Alpha was estimated 0.81.

The RSES is composed of ten items on a four-point Likert scale ranging from strongly agree to strongly disagree. Items 2, 5, 6, 8 and 9 are reverse scored, that is, strongly agree=0, agree=1, disagree=2 and strongly disagree=3. Higher score indicates more self-esteem. To examine the validity and reliability of RSES, it was piloted with 50 participants from the same population. The results of KMO revealed that the questionnaire enjoyed adequate KMO of 0.76. Additionally, Cronbach's Alpha was run to estimate the reliability of RSES, the results of which indicated an acceptable reliability index of 0.78.

The GSE is composed of ten items on a four-point scale ranging from "not true at all" to "exactly true". The sum of all items is considered as the total score of GSE. The total score ranges from 10 to 40, with a higher score rendering more self-efficacy. To examine the validity and reliability of the questionnaire, the GSE was also piloted with 50 participants from the same population. The results of KMO revealed an adequate KMO of 0.81 and the Cronbach's Alpha was estimated 0.83, which is acceptable.

Procedure

Having piloted the questionnaires, one of the researchers administered them to the participants at three state-run universities in Iran. No time limit was specified for completing the questionnaires; however, it took 25 minutes on average to fill out all the questionnaires. Although the participants were informed that participating in the study was not compulsory, they were requested to complete the questionnaires in the classroom in order to minimize the likelihood of their dropouts from the study. Furthermore, the participants were not asked to write down their names on the questionnaires so that they would provide their honest responses and their identities would be safeguarded.

Data analysis

SPSS software version 16 was used to analyze the data. To investigate the possible relationship between reflective thinking, self-efficacy, self-esteem and academic achievement of Iranian EFL students (research question 1), a correlation matrix (Pearson product-moment correlation coefficient) was run. A multiple regression analysis was run to examine the strongest predictor of Iranian EFL students' academic achievement from among reflective thinking, self-efficacy and self-esteem (research question 2). A correlation matrix (Pearson product-moment correlation coefficient) was also run to investigate the possible relationship between different components of reflective thinking and academic achievement (research question 3).

Results

The first research question set out to examine the relationship between reflective thinking, self-efficacy, self-esteem and academic achievement. A correlation matrix was run to answer this research question. As can be seen in Table 1, there was a significant relationship between self-efficacy, self-esteem and students' academic achievement, while reflective thinking had no correlation with self-efficacy, self-esteem and the students' academic achievement.

Table 1

A correlation matrix investigating the relationship between reflective thinking, self-efficacy, self-esteem and academic achievement

		Reflective- thinking	Self- efficacy	Self- esteem	Students' achievement
Reflective thinking	Pearson Correlation	1	.146	.007	.021
	Sig. (2- tailed)		.095	.938	.810
	N	132	132	132	132
Self-efficacy	Pearson Correlation	.146	1	.572**	.312**
	Sig. (2- tailed)	.095		.000	.000

N		132	132	132	132
Table 1 (continued)					
		Reflective- thinking	Self- efficacy	Self- esteem	Students' achievement
Self-esteem	Pearson Correlation	.007	.572**	1	.364**
	Sig. (2- tailed)	.938	.000		.000
	N	132	132	132	132
Students' achievement	Pearson Correlation	.021	.312**	.364**	1
	Sig. (2- tailed)	.810	.000	.000	
	N	132	132	132	132

** . Correlation is significant at the 0.05 level (2-tailed).

The second research question sought to investigate between reflective thinking, self-efficacy, self-esteem, which one is the strongest predictor of Iranian EFL students' academic achievement. A multiple regression analysis was run (see Tables 2, 3 and 4). It should be noted that as there was no correlation between reflective thinking and students' achievement, reflective thinking was not included in the multiple regression analysis.

Table 2

Model summary rendering the multiple correlation coefficients, the adjusted and unadjusted R of self-efficacy and self-esteem, with academic achievement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.386 ^a	.149	.129	1.1147

Regarding Table 2, the multiple correlation coefficient (R), employing the two predictors (i.e. self-esteem and general self-efficacy) simultaneously, is 0.39 ($R^2 = 0.14$) and the adjusted R^2 is 0.12. It shows that 12% of the variance in academic achievement of the participants can be predicted from the combination of the above-mentioned predictors.

ANOVA was also run to ascertain whether the combination of the predictors (self-esteem and general self-efficacy) significantly predicted the Iranian EFL students' academic achievement.

Table 3

ANOVA for the prediction of the academic achievement of the Iranian EFL students by the combination self-esteem and self-efficacy

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	27.78	2	9.26	7.45	.000 ^a
Residual	159.06	128	1.24		
Total	186.85	131			

As shown in Table 3, the combination of self-esteem and self-efficacy predicted academic achievement of the Iranian EFL students, $F(2, 128) = 7.45, p = .000 < .05$.

Table 4

Multiple regressions for the predictive power of general self-efficacy and self-esteem

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
(Constant)	14.44	.79		18.14	.000
Self-efficacy	.37	.24	.15	1.53	.128
Self-esteem	.72	.26	.27	2.76	.006

Concerning Table 4, between general self-efficacy and self-esteem, the latter was a stronger predictor of academic achievement of the Iranian EFL students, ($\beta = .27, t = 2.76, p = .000 < .05$).

The third research question investigated the possible relationship between different components of reflective thinking and academic achievement.

Table 5

A correlation matrix investigating the relationship between different components of reflective thinking and academic achievement

		Academic achievement	HA	U	R	CR
Academic achievement	Pearson Correlation	1	-.072	.098	.142	-.042
	Sig. (2-tailed)		.414	.265	.105	.634
	N	132	132	132	132	132
HA	Pearson Correlation	-.072	1	.055	.071	.201*
	Sig. (2-tailed)	.414		.531	.420	.021
	N	132	132	132	132	132
U	Pearson Correlation	.098	.055	1	.548**	.544**
	Sig. (2-tailed)	.265	.531		.000	.000
	N	132	132	132	132	132
R	Pearson Correlation	.142	.071	.548**	1	.437**
	Sig. (2-tailed)	.105	.420	.000		.000
	N	132	132	132	132	132
CR	Pearson Correlation	-.042	.201*	.544**	.437**	1
	Sig. (2-tailed)	.634	.021	.000	.000	
	N	132	132	132	132	132

Note: HA=habitual action, U=understanding, R=reflection, CR=critical reflection

*. Correlation is significant at the 0.05 level (2-tailed).

As Table 5 displays, there was no correlation between different components of reflective thinking and academic achievement of the Iranian EFL students.

Discussion

The current study was conducted to investigate the relationship between reflective thinking, general self-efficacy, self-esteem and academic achievement of Iranian EFL students. To our surprise, part of the findings revealed that there was no significant relationship between reflective thinking and academic achievement of Iranian EFL students. The findings of this part of the study were at odds with those of Soodmand Afshar and Hamzavi's (2014) and Ghanizadeh's (2016). It should be noted that Soodmand Afshar and Hamzavi's study only focused on the relationship between listening skills and reflective thinking, which means the relationship between only one language skill rather than general academic achievement and reflective thinking was taken into account. Therefore, caution should be exercised when the findings of the present study are compared with those of Soodmand Afshar and Hamzavi's (2014) and Ghanizadeh's (2016). It seems further research is needed to illuminate the interplay between the two variables. However, the findings can be explained by the premise that as in Iran education system grammar translation method (GTM) is still being practiced (Karimi & Richards, 2015), students may not be nurtured as reflective thinkers. Griffith and Frieden (2000) asserted that an education system which encourages memorization cannot develop reflective thinking in students. Moreover, in the Iranian education system, teachers are the authority and students are expected to be submissive (Abednia & Izadinia, 2013); therefore, there are little opportunity for students to develop their reflective thinking. Griffith and Frieden (2000) believe that teachers can encourage reflective thinking through Socratic questioning, journal writing, and stimulated recall protocol

In addition, reflective thinking had no significant relationship with self-efficacy and self-esteem. To the best of researchers' knowledge, no study has addressed the relationship between these variables to date; therefore, further research is needed to highlight this issue.

A significant relationship was observed between general self-efficacy and academic achievement. The findings of this part of the study were in harmony with those of Tenaw's (2013), Shkullaku's (2013), de Fátima Goulão's (2014). This capitalizes the significant contribution of self-efficacy to academic achievement. Teachers can refer to the sources of self-efficacy

(i.e. performance accomplishments, vicarious experience, verbal persuasion and emotional arousal) proposed by Bandura (1977) to help students develop their self-efficacy with the aim of enhancing their academic achievement.

The results demonstrated that there was also a significant relationship between self-esteem and academic achievement of Iranian EFL students. The findings of the current study are in line with those of Watkins and Astilla's (1980) and Román, Cuestas and Fenollar's (2008). It seems the worthiness that students attribute to themselves can be of paramount importance. However, some scholars in the field (e.g. Baumeister et al, 2003; Kohn, 1994) posit that it is students' academic achievement contributing to their high self-esteem rather than the other way around. That is, the more successful they are, the higher self-esteem they possess. This issue can be scrutinized more closely in the Iranian context to ascertain which contributes to which.

The results further revealed that there was a positive significant relationship between self-efficacy and self-esteem. The findings of the study substantiated those of Bahmani Fard (2013). According to Brooks and Noy (2010), self-efficacy and self-esteem are necessary for reaching career and personal goals and their significance in individuals' success are unquestionable.

The findings also indicated that between self-efficacy and self-esteem, the later was a stronger predictor of Iranian EFL students' success; therefore, self-esteem can be regarded an asset for Iranian EFL students. However, no significant correlation was observed between different components of reflective thinking and academic achievement of Iranian EFL students.

Conclusions and Implications

The findings of the study showed that while there was a relationship between self-efficacy, self-esteem and academic achievement of Iranian EFL students, reflective thinking had no relationship with other variables of the study. This can encourage teachers to exert further emphasis on self-efficacy and self-esteem of Iranian EFL students. More specifically, self-esteem was an asset for Iranian EFL students as it was the strongest predictor of Iranian EFL students. Furthermore, it seems reflective thinking was of no paramount importance when it came to its relationship with self-

efficacy, self-esteem, and academic achievement of Iranian EFL students. This can suggest that education system of the country need to turn the spotlight on reflective thinking, and teacher training programs and teachers need to give due attention to this notion.

Limitations and suggestions for further research

Qualitative data collection could have added to the depth and breadth of the findings. That is, the reason behind no relationship between reflective thinking and academic achievement may be illuminated through qualitative data collection. Therefore, future researchers are suggested to employ both qualitative and quantitative data collection methods to investigate factors which can contribute to the high self-efficacy, self-esteem and reflective thinking of Iranian EFL students. More importantly, future researchers may need to investigate teachers' understanding of reflective thinking so that they can have a better understanding of the teachers' points of view on the notion of reflective thinking in a given education system, and they can also explore possible factors impeding reflective thinking in the Iranian EFL students. Moreover, the findings suggest that researchers may need to conduct further research on the relationship between reflective thinking and the variables of the current study to come up with further comprehensive findings.

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