Original Article

Relationship of Teaching Efficiency with Academic Self-Efficacy and Self-Directed Learning among English Language Students: University Students' Perspectives

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(Received: 23 August 2014 Accepted: 18 March 2015)

Abstract

Introduction: Self-directed learning is originated from adult education which has currently gained a special place in educational systems and is influenced by many variables such as teaching self-efficacy and self-directed learning. This research investigated the relationship of teachers' teaching with academic self-efficacy and self-directed learning from English language students' perspectives.

Methods: The population of this correlational study comprised of all bachelor, master and Ph.D. English language students of Allameh Tabataba'i University (2014-2015) who had passed at least one semester. A total of 159 students were selected as study sample using Cochran formula and proportional stratified sampling. The data were collected through three standard questionnaires with confirmed validity and reliability. Data were analyzed by one-sample t-test, Pearson correlation and multiple regression.

Results: With regard to teaching efficiency, content presentation, learning evaluation and class management skills were higher than average and lesson planning and control over content skills were at an average level. Also, all dimensions of academic self-efficacy and self-directed learning were significantly higher than average. The correlation between teaching efficiency and self-efficacy (r=0.367) and self-directed learning (r=0.571), and between self-efficacy and self-directed learning (r=0.523) was statistically significant (P<0.01). Moreover, a combination of teaching efficiency dimensions could predict different dimensions of self-efficacy and all components of self-directed learning. Furthermore, self-efficacy dimensions were good predictors of self-directed learning.

Conclusion: Success in the realm of academia and organizational learning depends on the learners' updated knowledge and skills and self-directed learning. Also, it seems teachers' efficient teaching affects students' academic self-efficacy, orienting them toward self-directed learning.

Keywords: Teaching efficiency, Self-efficacy, Self-directed learning

Citation: Shohoudi M, Zandi Kh, Faridi MR, Fathi G, Safari Z. Relationship of teaching efficiency with academic self-efficacy and self-directed learning among English language students: University students' perspectives. Educ Res Med Sci. 2015; 4(2): 68-77.

Introduction

Self-directed learning, sometimes called "learning how to learn" (1), is an important factor in adult education and learning (2) and is defined as a process in which the learners are responsible for identifying the needs, formulating the objectives, following strategies and resources and evaluating the results of learning (3). However, this is not meant to disregard or downgrade the educational and supportive role of the teachers (4). On the other hand, in self-directed learning, the individual determines the learning objectives, selects an appropriate research method and evaluates the results of learning with or without the help of trainers (5).

Self-directed learning includes self-management, self-control, self-motivation and hard work (6). The researchers of this field have reported many advantages for self-directed learning, including increasing self-confidence, independence and motivation and developing skills for lifelong learning (7). Also, self-directed learning enables the learners to learn better and to have higher capacity for remembering the materials for a longer time (8). Chambers & Hardy (2005) believe when students are involved in class activities, are responsible for their own learning and indirectly get help from their teachers, their self-efficacy is promoted (9). Similarly, the learner's independence, as a subject related to self-directed learning, has a positively significant relationship with self-efficacy, and self-efficacy is considered a significant element in understanding the learners' readiness for self-directed learning (10). Some researchers have suggested that self-directed learners possess a high level of self-efficacy (11, 12). On the other hand, self-efficacy has occupied a large portion of self-directed learning literature and many researchers have confirmed the Bandura's theory regarding the correlation between self-efficacy and self-directed learning (13-15).

The concept of self-efficacy, being described in numerous studies, is one of the key concepts of Bandura's social learning theory (16). Bandura does not consider self-efficacy a mere production of the person's knowledge and skills (17), but regards it as the belief of a person in his/her abilities in dealing with difficult tasks or life events (18). Tuncer & Ozeren stated in their study that "Cetin (2008) views self-efficacy as cognitive, affective and behavioral processes that enable the individuals to control events, and Akkoyunlu & Orhan (2003) regards it as levels of continuity and stability that requires tolerating the hardships and problems" (19). In higher education institutions, although a proper and decent behavior is largely important in gaining knowledge and skill, self-efficacy has a predictive and mediating role in achievements and learning (20). Self-efficacy, as a motivational factor in our education system, is influenced by numerous factors (21), among which teacher's teaching method is of great significance (22). In fact, a teaching method presented to the students during a course affects their self-efficacy (23).

Teaching efficiency in higher education is an argumentative concept for which various definitions has been presented (24). By the same token, the Australian Learning and Teaching Council (2008) considers attention to teaching approaches that encourage students to learn as one of the basic standards of teaching efficiency (25). Bell (2005) has stated that the characteristics of teaching efficiency can be determined. He also explains that although there is little agreement among researchers about the components of teaching efficiency, rather they agree on some aspects which represent teaching efficiency (26). For example, many researchers have argued that efficient teachers are highly interested in the topics of their teaching and provide a safe and relaxing environment for learning (27). The results of the studies by Suydam (28) and Young (29) indicate that organization of materials, classroom management, use of students' ideas, task-orientedness, flexibility, use of different teaching methods and respecting students are the most important characteristics of efficient teachers. Further, control over content and teaching subject are other dimensions of teaching efficiency (30). Rüütmann & Vanaveski have reported four different types of knowledge for teaching efficiency, including knowledge of content, pedagogical content knowledge, general pedagogical knowledge and knowledge of learning and learners (31).

As for teaching foreign languages, the students praise the teachers with attributes that reduce concerns and anxiety in learning a foreign language. Here, the students expect teachers to have a friendly and considerate relationship with them (32). A number of studies have been performed about the efficacy of teaching foreign languages, including Agbetsiafa (2010) which indicated positive correlation between students' perception of teaching efficiency, facilitating learning, effective relationships and clarity of course elements, course evaluation and feedback (33). The results of a study performed to analyze the effect of teaching quality of a foreign language in Turkey on the senior students of the Faculty of Foreign Languages showed that students extended a great gratitude to the teachers who were able to create an environment with positive classroom interactions and those with general and special training skills. Other

components reported by students were personality characteristics, classroom behaviors and professional skills of the teachers (34).

It should be noted that in centralized educational systems, including many Iranian universities, teachers are mostly responsible for teaching and any failure or achievement is attributed to them. There are numerous definitions and diverse characteristics presented for teaching efficiency in higher education. However, a universal definition accepted by the authorities of this area, if not impossible, is much difficult, but this has not downgraded this issue and has perhaps enhanced its value because, based on the studies conducted so far, it positively affects the teachers' teaching efficiency, students' self-efficacy and self-directed learning.

Given the significant role of university as a driving force for socioeconomic development of societies as well as the heavy responsibility of universities, their responsibility and accountability will be normally increased, which will consequently highlight their attention to factors that improve the potential of universities to present the best possible output to society. On the other hand, universities and higher education institutions have a critical role in all countries and will provide the society with development and progress through their favorable outputs.

A review of literature has also shown that despite the importance of research variables, no research has been done to evaluate the relationship of teaching efficiency with academic self-efficacy and self-directed learning among students. Moreover, owing to the necessity and challenges of professional development of the young teachers in terms of teaching efficiency, the results of this study can provide a ground for reinforcing the effective teaching skills though educational planning and designing practical courses. It is necessary to pay attention to the relationship of research variables because English language students, owing to the special nature of their major, need to master a nonnative language which requires the efforts, competencies and skills of teachers to provide a better learning ground and help flourish the students' talents. As for the English language students of Allameh Tabataba'i University, it should be pointed out that the findings of this study can contribute to recognizing the strengths and weaknesses of the teachers' teaching methods and assisting them in achieving self-directed learning. Thus, the researchers made an attempt to evaluate the correlation of teaching efficiency with self-efficacy and self-directed learning among English language students.

Methods

In this correlational study, the study population included all English language students (n=270) of Allameh Tabataba'i University in the academic year 2014-2015. The bachelor, master and Ph.D. students who had passed at least one semester were included in the study. Since there was a possibility of a difference between academic self-efficacy and self-directed learning among students in terms of their academic level, a total of 159 samples were selected using Cochran formula and proportional stratified sampling to complete the questionnaires. It is noteworthy that during distribution and collection of questionnaires, the students were ensured about the confidentiality of their perspectives.

In the present study, the students were asked to express their opinions about the research variables, i.e. teaching efficiency, academic self-efficacy and self-directed learning according to the basic and special English language courses. Thus, the research data were gathered according to the general viewpoint of students about all basic and theoretical courses as well as all the teachers of the given courses. The data were collected during the last two or three weeks of the classes. The instruments for data collection included three scales as follows:

Self-directed learning scale

This scale is made based on the Fisher & King's components. It is rewritten with a little modification for students, with 16 items, according to a five-point Likert scale (from 1=completely disagree to 5=completely agree). The original scale has 52 items, which was first made by Fisher, King and Tague. They reduced the scale into 41 items after standardization (35). The reliability of this scale was confirmed by Cronbach's alpha (α=0.83), including self-management domain (α=0.87), willingness to learn (α=0.85) and self-control (α=0.80). Also, the validity of the scale was confirmed by construct validity using confirmatory factor analysis (36). It should be noted that in this study, the short form of the scale, including 16 items, was used; items 1-5 for the self-management domain, items 6-12 for willingness to learn domain and items 13-16 for self-control domain.

Academic self-efficacy scale

This scale was designed by Morgan and Jinkez (1999) and includes three dimensions: talent, effort and context with 30 items ranked by a five-point Likert scale (from 1=completely disagree to 5=completely agree). This scale has been used in numerous studies, with confirmed reliability and validity. The short form of this scale was used in this study, which comprised of 17 items, including

talent (items 1-5), effort (items 6-10) and context (items 11-17).

Teaching efficiency scale

Teaching efficiency was measured by Safari's scale, which consisted of 24 items and five dimensions: lesson plan development, control over content, content presentation skills, learning evaluation and class management. This scale is designed based on a four-point Likert scale (from 1=very little to 4=very much). Safari confirmed the validity of the scale using the views of experts and reliability through Cronbach's alpha (α=0.91) (37). This scale consisted of 22 items: lesson plan development (items 1-3), control over content (items 4-6), content presentation skills (items 7-11), learning evaluation (items 12-17) and class management (items 18-22).

Since the short forms of the scales were used in this study, the validity of the research tool was evaluated and confirmed by face and content validity as well as the perspectives of the teachers and authorities. The reliability of the scales, however, was measured by Cronbach's alpha; self-directed learning (α=0.86), academic self-efficacy (α=0.80) and teaching efficiency (α=0.92), indicating acceptable reliability indices. The obtained data were analyzed by SPSS software using one-sample t-test, Pearson correlation coefficient and multiple regression analysis.

Results

The study sample comprised of 92(58%) female and 67(42%) male students. In terms of age, 52.2% of samples were aged 20-24. 34.6% of the participants (n=55) were aged 25-30 and 13.2% (n=21) of them were aged >30 years old. After the normality of data was ensured, the research questions were evaluated.

To evaluate teaching efficiency, academic self-efficacy and self-directed learning, one sample t-test was applied. Since the responses of the academic self-efficacy and self-directed learning scales were ranked according to a five-point Likert scale, with an average of 3, score 3 was considered the standard mean or theoretical mean. Further, for teaching efficiency scale, since the responses were based on a four-point Likert scale, score 2.5 was considered as the theoretical mean. The results of Table 1 indicated that in the case of teaching efficiency variable, the status of content presentation skills, learning evaluation and class management dimensions was reported to be significantly higher than average, and lesson plan development and control over content domains were found to be at an average level. The findings also showed that the status of all dimensions of academic self-efficacy and self-directed learning was significantly higher than average.

Table 1. Dimensions of teaching efficiency, academic self-efficacy and self-directed learning

Variables	Dimensions	Mean	SD	t	P	Theoretical mean
Teaching efficiency	Lesson plan development	2.483	0.559	-0.382	>0.05	2.50
	Control over content	2.570	0.553	1.599	>0.05	2.50
	Content presentation skills	2.661	0.657	3.107	<0.01	2.50
	Learning evaluation	2.606	0.675	1.995	<0.05	2.50
	Class management	2.728	0.654	4.398	<0.01	2.50
Academic self-efficacy	Talent	3.993	0.915	13.680	<0.01	3
	Effort	3.537	0.945	7.171	<0.01	3
	Context	3.756	1.708	5.585	<0.01	3
Self-directed learning	Self-management	3.160	0.843	2.396	<0.05	3
	Willingness to learn	3.210	0.814	3.251	<0.01	3
	Self-control	3.259	0.904	3.613	<0.01	3

To analyze the correlation among the research variables, Pearson correlation coefficient was used. As shown in Table 2, the correlation coefficient between teaching efficiency and academic self-efficacy was statistically significant (r=0.367, P<0.01). Also, the correlation between teaching efficiency and self-directed learning was found to be statistically significant (r=0.571, P<0.01). Further, there was a significant relationship between academic self-efficacy and self-directed learning (r=0.523, P<0.01). In general, the results showed a significantly positive correlation between research variables, among which teaching efficiency and self-directed learning were found to have the maximum correlation (r=0.571).

Table 2. Correlation among teaching efficiency, academic self-efficacy and self-directed learning

Variables	Teaching efficiency	Academic self-efficacy	Self-directed learning
Teaching efficiency	1		
Academic self-efficacy	0.367**	1	
Self-directed learning	0.571**	0.523**	1
****<0.01**			

Using multiple regression analysis simultaneously, the effects of teaching efficiency components on academic self-efficacy dimensions were studied. The results showed that the coefficient of determination for talent through teaching efficiency dimensions was 0.286. Hence, it can be argued that teaching efficiency dimensions explained 28.6% of variations in talent variable. Also, coefficient of determination for effort through teaching efficiency dimensions was found to be 0.117, indicating teaching efficiency dimensions explained 11.7% of variations in the effort domain. In addition, since the F values of talent and effort domains of academic self-efficacy were significant (P<0.01), it can be said that a combination of teaching efficiency dimensions can be a good predictor for these dimensions of academic self-efficacy (Table 3). However, the results of multiple regression regarding the prediction of the third dimension of self-efficacy, context, indicated that its corresponding F value was 0.230, which was not statistically significant (P>0.05). Therefore, the dimensions of teaching self-efficacy cannot predict the context.

Table 3. The role of teaching efficiency in predicting the dimensions of academic self-efficacy

Dependent variable	Multiple correlation	Coefficient of determination	F	P
Talent	0.535	0.286	12.247	**<0.01**
Effort	0.342	0.117	4.047	**<0.01**
Context	0.230	0.053	1.706	**>0.05**

The regression coefficients of predictive variables are presented in Table 4. The regression coefficient shows how much variation occurs in the dependent variable for a standard deviation in predictive variable. As shown in Table 4, the t values corresponding to the B (Unstandardized Coefficients) values of content presentation skills, learning evaluation and class management dimensions were statistically significant. Thus, each of these dimensions can individually have a significant effect on the talent domain. As for the effort dimension of academic self-efficacy, the effect of teaching efficiency dimensions was not significant individually, and in the case of context, only lesson plan development was reported to have a significant impact on this dimension.

Table 4. Regression coefficients of the effects of teaching efficiency dimensions on academic self-efficacy dimensions

Predictive variables	Dependent variables	B (Unstandardized Coefficients)	Beta (Standardized Coefficients)	t	P
Constant	**Talent**	1.740	-	4.942	**<0.01**
Lesson plan development		0.135	0.082	0.985	**>0.05**
Control over content		-0.242	-0.147	-1.536	**>0.05**
Content presentation skills		0.301	0.216	2.370	**<0.05**
Learning evaluation		0.315	0.232	2.493	**<0.05**
Class management		0.337	0.241	2.666	**<0.01**
Constant	**Effort**	1.938	-	4.797	**<0.01**
Lesson plan development		0.032	0.019	0.206	**>0.05**
Control over content		0.129	0.075	0.711	**>0.05**
Content presentation skills		0.152	0.106	1.042	**>0.05**
Learning evaluation		0.273	0.195	1.880	**>0.05**
Class management		0.027	0.018	0.184	**>0.05**
Constant	**Context**	2.655	-	3.512	**<0.01**
Lesson plan development		0.727	0.238	2.475	**<0.05**
Control over content		-0.568	-0.184	-1.678	**>0.05**
Content presentation skills		0.093	0.036	0.342	**>0.05**
Learning evaluation		0.047	0.019	0.173	**>0.05**
Class management		0.142	0.054	0.522	**>0.05**

The effects of teaching efficiency dimensions on self-directed learning components were evaluated by multiple regression analysis simultaneously. The results of Table 5 indicate that coefficient of determination for self-management through teaching efficiency dimensions was 0.245. Moreover, coefficients of determination for willingness to learn and self-control dimensions were observed to be statistically significant (P<0.01). Therefore, it can be stated that a combination of teaching efficiency dimensions can be an appropriate predictor of the mentioned dimensions.

Table 5. The role of teaching efficiency dimensions in predicting self-directed learning dimensions

Dependent variable	Multiple correlation	Coefficient of determination	F	P
Self-management	0.495	0.245	9.956	<0.01
Willingness to learn	0.514	0.264	10.960	<0.01
Self-control	0.515	0.265	11.045	<0.01

The results of Table 6 showed a significant level for the t values corresponding to the beta dimensions of lesson plan development and learning evaluation for all three dimensions of self-directed learning. Therefore, each of these dimensions alone affected the dimensions of self-directed learning. The effect of other dimensions of teaching self-efficacy on the dimensions of self-directed learning was not reported to be significant.

Table 6. Regression coefficients of the effects of teaching efficiency components on self-directed learning dimensions

Predictive variables	Dependent variables	B (Unstandardized Coefficients)	Beta (Standardized Coefficients)	t	P
constant	**Self-management**	0.987	-	2.960	<0.01
Lesson plan development		0.344	0.228	2.653	<0.01
Control over content		0.114	0.075	0.766	>0.05
Content presentation skills		-0.066	-0.052	-0.551	>0.05
Learning evaluation		0.252	0.202	2.107	<0.05
Class management		0.200	0.155	1.667	>0.05
constant	**Willingness to learn**	1.112	-	3.499	<0.01
Lesson plan development		0.313	0.215	2.531	<0.05
Control over content		-0.035	-0.024	-0.247	>0.05
Content presentation skills		0.219	0.177	1.913	>0.05
Learning evaluation		0.328	0.272	2.870	<0.01
Class management		-0.009	-0.008	-0.082	>0.05
constant	**Self-control**	0.807	-	2.289	<0.05
Lesson plan development		0.367	0.227	2.679	<0.01
Control over content		-0.017	-0.011	-0.110	>0.05
Content presentation skills		0.159	0.116	1.250	>0.05
Learning evaluation		0.260	0.195	2.057	<0.05
Class management		0.177	0.128	1.400	>0.05

The findings of multiple regression analysis presented in Table 7 indicate that coefficient of determination for self-management through academic self-efficacy dimension was 0.254. Thus, it can be said that teaching efficiency dimensions explained 25.4% of variations of self-management. Further, coefficients of determination for willingness to learn and self-control dimensions were 0.285 and 0.162, respectively. As the F values for self-management, willingness to learn and self-control dimensions were found to be significant (P<0.01), it can be argued that a combination of teaching efficiency dimensions can be considered a proper predictor for the given dimensions.

Table 7. The role of academic self-efficacy in predicting self-directed learning dimensions

Dependent variable	Multiple correlation	Coefficient of determination	F	P
Self-management	0.504	0.254	17.625	**<0.01**
Willingness to learn	0.534	0.285	20.614	**<0.01**
Self-control	0.403	0.162	9.997	**<0.01**

As indicated in Table 8, except for the effect of context of academic self-efficacy on willingness to learn, the impact of predictive variables on dependent variables was significant in other components.

Table 8. Regression coefficients of the effects of academic self-efficacy on self-directed learning dimensions

Predictive variables	Dependent variable	B (Unstandardized Coefficients)	Beta (Standardized Coefficients)	t	P
Context	**Self-management**	1.131	-	3.815	<0.01
Talent		0.181	0.196	2.524	<0.05
Effort		0.251	0.281	3.655	<0.01
Context		0.112	0.227	3.182	<0.01
Context	**Willingness to learn**	1.057	-	3.772	<0.01
Talent		0.338	0.380	4.989	<0.01
Effort		0.174	0.202	2.691	<0.01
Context		0.050	0.104	1.493	>0.05
Context	**Self-control**	1.495	-	4.439	<0.01
Talent		0.213	0.215	2.611	<0.01
Effort		0.157	0.164	2.011	<0.05
Context		0.096	0.181	2.402	<0.05

Discussion

The present study evaluated the correlation among teaching efficiency, academic self-efficacy and self-directed learning among English language students of one of the state universities of Iran. The findings showed that students evaluated the means of academic self-efficacy, self-directed learning and three dimensions of teaching efficiency higher than the theoretical mean. The research variables were also reported to have a significantly positive correlation with each other. The results of multiple regression analysis indicated that a combination of teaching efficiency dimensions can predict academic self-efficacy and all dimensions of self-directed learning. Further, the dimensions of academic self-efficacy significantly predicted the dimensions of self-directed learning.

The results of this study were in line with the findings of the studies carried out by Jafari Sani et al. and Tomlinson et al. (22, 23) with regard to the correlation between teaching efficiency and academic self-efficacy. These researchers concluded that self-efficacy is one of the advantages of teaching efficiency. Moreover, the results of the present study were in agreement with those of Chambers & Hardy (2005), Stockdale & Brockett (2011) and Oliveira & Simoes (2006) in terms of the relationship between self-efficacy and self-directed learning (9, 11, 12). These researchers asserted that one of the channels leading to self-directed learning is learners' self-efficacy. To explain the above results, it can be argued that teaching efficiency, as mentioned in theoretical basics and research literature, is considered a key issue and somehow argumentative, and researchers and authorities of this domain have considered it specifically and have accounted a number of characteristics for it, each requiring a special attention.

To achieve a measurable standard to evaluate the teacher's teaching efficiency in this study, this variable was evaluated in five general dimensions of lesson plan development, control over content, content presentation skills, learning evaluation and class management because the objective was to evaluate the major tasks and missions of teachers. Also, according to the results of one-sample t-test that was run to compare the study sample mean and theoretical mean, it can be argued that students evaluated most of the dimensions of teaching efficiency as effective. Normally, when the teachers' teaching methods and techniques are effective in the opinion of students, it will have numerous advantages for them. Based on a review of the studies conducted in this regard as well as the findings of the present study, self-efficacy (generally) and academic self-efficacy (specifically) are regarded as one of these positive outcomes. According to the authorities of psychology and education, self-efficacy (in general) is a constructive power that enables the people to present an optimum performance, which is the consequence of trust in one's internal abilities and potentials. Based on this viewpoint of self-efficacy, academic self-efficacy can be taken into account as a special kind of self-efficacy that is dependent upon the correct performance of academic tasks and duties. It includes such components as talent, effort and context which are associated with academic objectives, inquiry and research at university, where self-efficacy is defined as promotion of the academic and research skills of students.

Teaching self-efficacy is one of the factors affecting the creation, maintenance and promotion of general self-efficacy and academic self-efficacy of teachers. Here, the self-efficient students and active researchers, by receiving independence and freedom of action from their teachers in learning how to learn and finding their way to gain knowledge, become self-directed learners. Self-directed learning enhances the willingness to learn in students and provides them with self-management and self-control skills. It is also influenced by the teachers' methods and techniques directly and indirectly. On the other hand, the teachers' teaching efficiency directly overshadows self-directed learning with mediation of academic self-efficacy.

Based on the results of this study concerning the role of teaching efficiency in promotion of academic self-efficacy and self-directed learning, the students' academic self-efficacy and self-directed learning are suggested to be enhanced through implementation of the following simple executive proposals: presentation of defined monthly and term lesson plans to students by teachers to facilitate planning for performing academic activities, clear notification of important subjects and materials by teachers through lesson plan and during academic activities, clear specification of learning evaluation criteria by teachers, allocation of a part of students' performance evaluation score to academic and research activities that provide the possibility of promoting self-directed learning, use of objective, practical and reality-based examples during content presentation process, providing a ground for students to promote self-directed learning by teachers through such assignments as summarizing the materials, class presentation and encouraging students to pose questions and criticize academic theories, providing the students with an explicit feedback on their scientific explanation and academic performance, and acknowledgment of students' achievements by teachers, especially the students with less participation in discussions, and necessity of providing positive feedback and enhancing their intrinsic motivation.

Furthermore, given the role of academic self-efficacy dimensions in predicting the dimensions of self-directed learning, the following suggestions are presented to improve academic self-efficacy and self-directed learning in students: holding academic competitions, festivals and Olympiads on provoking students' talents at different university, provincial, regional and national levels, avoiding reprimanding and blaming students in public as much as possible, providing a ground for students' cooperation with official translation services around the city, province and country to promote the students' skills and to facilitate their self-efficacy, creating more interest and better relationship between students and materials through appropriate needs assessment, production of diverse course content and implementation of flexible teaching methods.

Conclusion

The findings of the current research indicated that promotion of teaching efficiency can affect the students' academic self-efficacy and enhancement of self-directed learning. Moreover, improvement of a sense of academic self-efficacy can also provide a ground for promotion of self-directed learning.

Acknowledgments

There is no conflict of interest in this study.

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