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Promoting Academic Achievement: The Role of Self-efficacy in Predicting Students' Success in the Higher Education Settings

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Self-efficacy forms a major factor that influences many life aspects, as a result, it has been researched by many psychologists and educators worldwide from different perspectives. Embracing the context of Bandura's Self-efficacy Theory as a theoretical framework, this quantitative empirical research paper introduces an overview of the role that self-efficacy plays in shaping higher education students' academic achievement among a diverse group of college students. The diverse group comprises N=374 students who took part in this research study and responded to the General Self-efficacy Scale (GSE) to disclose the perception of their self-efficacy and the ability to perform the required academic tasks. Multiple analysis techniques including Descriptive analysis, Pearson Correlation Coefficient, t-test for independent sample, and Simple Linear Regression were conducted to achieve the paper's objectives. Data analysis demonstrated a strong positive correlation between students' general self-efficacy and academic achievement r=0,748, p<0,001. Moreover, students' self-efficacy was found as a significant predictor of students' academic achievement. Findings indicated that no gender-based differences in students' general self-efficacy among higher education students. The discoveries of this research study can be implemented in instructional designing, curriculum development, and college counseling services to promote students' academic achievement.

Keywords: self-efficacy, academic achievement, higher education, gender differences, UAE.

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Улучшение результатов обучения: роль самоэффективности при прогнозировании успеваемости студентов в условиях высшего образования

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Самоэффективность является ключевым фактором, влияющим на многие стороны жизни, поэтому многие психологи и педагоги во всем мире исследуют ее с разных точек зрения. Используя концепцию А. Бандуры о самоэффективности в качестве теоретической основы, автор данного количественного эмпирического исследования рассматривает роль самоэффективности в формировании академической успеваемости студентов высших учебных заведений на примере неоднородной группы студентов колледжа. Группа состоит из N=374 студентов, принявших участие в данном исследовании и ответивших на вопросы шкалы общей самоэффективности (ШОС) с целью оценки своей самоэффективности, а также способности выполнять требуемые учебные задания. Для решения поставленных задач в работе применялись методы множественного анализа, включая описательный анализ, коэффициент корреляции Пирсона, t-тест для независимой выборки и простую линейную регрессию. В результате анализа данных была выявлена сильная положительная корреляция между общей самоэффективностью студентов и академической успеваемостью (r=0,748, p<0,001). Более того, самоэффективность студентов является значимой составляющей их академической успеваемости. Выводы показали, что гендерные различия между студентами высших учебных заведений по уровню общей самоэффективности отсутствуют. Полученные в ходе данного исследования результаты могут быть использованы при разработке учебных планов, учебных программ и при оказании консультационных услуг в колледже для повышения успеваемости студентов.

Ключевые слова: самоэффективность, академическая успеваемость, высшее образование, гендерные различия, ОАЭ.

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Introduction

From the time when Albert Bandura started his research [5] about self-efficacy, it has become an interesting topic for researchers and educators, as a result, self-efficacy has been used to predict several human behaviors. The past decades witnessed an expanding focus on self-efficacy and students' achievement motivation [4; 19]. Academic achievement is a valuable goal for many students from different grade

levels. The high academic achievement opens doors for more career opportunities for graduated students, allows them to enter competitive fields, and be prepared for their future careers. Accordingly, students are constantly striving to achieve better grades and show outstanding academic performance. One of the most defining factors that affect students' academic performance is self-efficacy. The United Arab Emirates (UAE) is a developed country with a strong economy located in the Gulf area and comprises individuals from more than 200 diverse nationalities. The country provides a solid education system that takes account of the different needs of all students from various backgrounds. The UAE focuses on achieving a high rank in the world in entrepreneurship by transitioning to a knowledge-based economy, which promotes innovation, creativity, research, and development in all sectors. Thus, the country relies on the higher education sector to supply the Emirati society with qualified potential future leaders. Current research studies in the UAE focus critically on students' self-efficacy from multiple perspectives such as e-learning self-efficacy and social self-efficacy. However, comprehensive research that examines the correlation between general self-efficacy and students' academic achievement in the UAE has not been fully investigated or explored.

The current research study proposes to examine the students' general self-efficacy level and interpret it in the context of Bandura's Selfefficacy Theory. Moreover, the study explores students' academic achievement and the association between self-efficacy and academic achievement within a diverse group of students in higher education settings in the UAE. Furthermore, this study aims to examine whether self-efficacy can predict stud' academic achievement. Additionally, gender differences in self-efficacy will be explored here. For this study, self-efficacy refers to students' beliefs in their ability to perform a general and academic task, this variable is measured by General Self-efficacy Scale (GSE) [27]. The academic achievement here is measured by students' academic performance in their course work, represented by their Grade Point Average (GPA).

The findings of this research paper will benefit Emirati society in the context of informing the job market about the quality of the potential candidates who are expected to meet the dynamic work demands. Thus, in the societal context, the study sheds light on the role of higher education in preparing graduate cadres who can meet the needs of the rapidly growing future, which contributes to society's development. In addition, the study results will benefit both the higher education and counseling sectors in the UAE in the context of practice and implementation. From the international viewpoint, the discoveries can benefit educators who accentuate the importance of comparative education, diverse expatriate group, or international education. Furthermore, those who are considering relocating to the UAE and becoming engaged in higher education or counseling as students, educators, or counselors will find it meaningful.

Literature Review

Self-efficacy Theory

Five decades ago, psychologist Albert Bandura created the term 'self-efficacy," and proposed the Self-efficacy Theory. Bandura [5] explained the concept of self-efficacy as a person's belief in their abilities that is associated with addressing various situations. In other words, selfefficacy refers to the subjective view of one's ability to perform sequences of required actions to deal with potential situations [5]. Bandura later published research that defined and popularized the concept of self-efficacy effectively as "The belief in one's capabilities to organize and execute the courses of action required to manage prospective situations" [6]. Bandura's definition proposes two aspects; (1) self-efficacy is a belief about an individual's ability, it is not completely consistent with one's actual capability in a specific field. (2) Individuals relate their efficacy assessment to specific objectives, which suggests the task itself and the nature of the situation.

According to Albert Bandura [5], individuals can develop their beliefs about their self-efficacy through different four main resources of influence, including the following:

(1) Mastery experiences: it is perceived as the most effective source that supplies efficacy

knowledge as it provides the most reliable indicator of whether an individual can gather the needed requirements to succeed in a task. When an individual succeeds, he/she develops a vigorous belief in his/her own efficacy. If failures arise before developing self-efficacy, it is undermined [7].

- (2) Vicarious experiences: vicarious experiences consist of observing other people complete a task successfully. As explained by Bandura [5], when individuals observe other people like them succeed in a task through continual effort, individuals' beliefs about their abilities to achieve a successful task are enhanced. The existence of definite role models promotes the belief in self-efficacy.
- (3) Social persuasion: this is an influencer factor in self-efficacy; when people receive positive verbal feedback about their performance in a task, that persuades them that they can succeed. Encouragement and discouragement related to individuals' performance in a task is influenced by their self-efficacy. Verbal persuasion is more beneficial when it is administered an early age.
- (4) Emotional states: people's subjective well-being determines their feeling about their capabilities in a particular situation, so self-efficacy depends on lacking physiological disorders such as anxiety, depression, stress, and fear. Feeling healthy emotionally helps people to build their self-efficacy, so managing personal mood when facing challenging situations improves the sense of self-efficacy.

The Concept of self-efficacy

As per Carpenter [12], the concept of self-efficacy is characterized by individuals' self-belief of being successful in specific tasks or achieving objectives. To simplify it, self-efficacy is the individual's belief in his capability to achieve a certain task or pass a situation successfully. Self-efficacy is associated with individuals' skills and abilities and what individuals believe regarding their capabilities and what they can accomplish. The feeling of high self-efficacy boosts people's motivation and subjective well-being. Self-efficacy indicates confidence level among individuals in their ability to practice

self-control over individual behaviors, desires, motivation, and social setting. [9] suggested that self-efficacy is believed to describe and predict an individual's belief, thought, emotion, and behavior. Daily life aspects depend on many basic components which include self-efficacy as the main one that affects not only people's feelings but also it contributes to one's success because it helps individuals to determine their goals and promotes the achievement of these goals.

In the contemporary competitive world, self-efficacy is important to stay confident to overcome complex and challenging situations. Based on the empirical tests, self-efficacy was found to function as a common mechanism that could help to integrate various modes of treatment to promote behavior changes [7]. Selfefficacy is not just a factor, but also a key to better academic achievement and achievement. When people feel secure with their capabilities, they approach hard and challenging tasks as they master them. On the other hand, people with low self-confidence in their capabilities feel threatened by difficult tasks, which encourages them to avoid them. Thus, people with low selfefficacy may have less commitment to their tasks and goals. For this study self-efficacy refers to students' belief in their abilities to address different educational situations and be able to achieve high academic achievement.

Self-efficacy and Academic A

The role of self-efficacy as a factor that shapes students' academic performance has been given a great focus by psychologists. Discussing self-efficacy within the context of social-cognitive theory, Bandura [8] defines self-efficacy as a motivational orientation that arouses grit when encountered by a challenging situation, improves careful actions, promotes long-term vision, adopts self-regulation, and enables self-correcting when it is needed. Self-efficacy performs a vital function in our lives because it enhances the productivity of individuals, and it has been highly important in many organizations and educational institutions. Soon after Bandura's focused research on self-efficacy, research evidence increased to confirm the positive associations between students' academic efficacy and their performance. Furthermore, the research findings from the past few decades showed that, in addition to the positive effect of self-efficacy on the students' performance, there is evidence that the effort quality differs among students in using additional cognitive and metacognitive managing approaches among students with high academic efficacy than their peers with lower efficacy beliefs [24]. Self-efficacy is assumed to affect people's efforts, activities choice, and perseverance through a large variety of human functioning. In addition, individuals develop self-efficacy beliefs relative to defined objectives. [14] examined the role of self-efficacy on students' academic achievements, the research outcome demonstrated that students' self-efficacy and academic achievement are positively correlated.

The benefit of self-efficacy underlies helping students to learn and develop based on their own abilities with less need for any external support and guidance. As stated by [12], selfefficacy enhances students' self-confidence and experiences and allows them to address issues and challenges independently. [30] investigated the relationship between self-efficacy and students' achievement using a very large sample in China, their findings revealed that self-efficacy can predict students' mathematics' achievements significantly. The research findings indicated that self-efficacy was found to be a mediator factor between students' achievement in mathematics and their relationship with their teachers. Students with high self-efficacy feel more confident in their problem-solving ability to solve difficult problems and deliver outstanding achievement on the academic level, therefore, it is important to enhance the overall students' achievement and activities. [15] studied the relationship between self-efficacy and students' academic achievement, and the findings revealed a satisfaction relationship between these two variables.

Deliberating the importance of self-efficacy in supporting goal attainment revealed that selfefficacy affects students' goal achievements significantly. According to [16], an individual with self-efficacy demonstrates the skills and knowledge required to achieve goals and overcome obstacles. [16] revealed that enhanced experiences and self-efficacy enable individuals to adopt the right method and avoid the challenges to achieve their goals. Currently, self-efficacy has been considered the most important element of a child's development. Self-efficacy is not only effective in achieving academic goals but also in achieving personal as well as professional goals.

As highlighted by [16], the link between mastery orientation and goal attainment is not as precise as the link between self-efficacy and goal attainment. Self-efficacy also helps in reducing study times; thus, the students can provide their best performances even by learning for not much time. It was found that, selfefficacy has played an effective role in enhancing individuals' performances in their respective fields. It has been evaluated that self-efficacy has enabled students to achieve their academic goals and adults to achieve their professional objectives. The higher education stage is quite competitive for students because they need to be prepared for the growing rapid world; hence, they are recommended to provide their greatest achievement. The research on the association between self-efficacy and academic success suggest that academic success is inspired by the self-efficacy. The study of [20] revealed that students who have high self-efficacy are more confident and are expected to achieve higher academic achievement, which suggests that self-efficacy plays a critical role in predicting academic achievement. In the UAE, [1] found that students' self-efficacy can boost their performance in online learning. [21] analyzed the correlation between self-efficacy and academic success among first-generation diverse ethnic groups of college students, it was found that education self-efficacy can significantly predict augmented academic achievement.

In organizations, self-efficacy has enabled individuals to provide their greatest performances by overcoming all potential threats and challenges [18]. On the other hand, in educational institutes, self-efficacy has enabled students to achieve their personal goals as well as to acquire higher grades in academic assessments.

As demonstrated by [17], challenges and issues are common parts of everyone's life; however, it is important to have self-efficacy to overcome them and achieve goals. In schools and universities, self-efficacy has enabled students to overcome their weaknesses and enhance their learning abilities [9].

Self-efficacy and Gender

Gender plays visible roles in many aspects such as academic success, motivation, intelligence, and self-efficacy. Understanding the difference-based gender in self-efficacy has been searched and investigated by many researchers [5; 42] conducted a research study to investigate perceived self-efficacy towards computer use and gender differences among college students. the study results revealed gender differences in perceived self-efficacy related to achieving complex tasks on computers. The study of [10] examined gender and race differences in self-efficacy and how gender could impact self-efficacy. The results demonstrated moderate differences in self-efficacy based on gender. Diseth and a group of researchers studied the relationship between self-efficacy, self-esteem, and incremental intelligence theories among middle school students aiming to examine how these variables may differ based on students' gender and their grade level, and how these form a predictor of academic achievement. The results revealed positive relations between self-efficacy, selfesteem, and intelligence theories, while middle school girls were found with lower levels of selfefficacy and self-esteem. In the UAE, the study of [2] focused on investigating the association among some factors including gender, selfesteem, loneliness, and self-efficacy of college

students. The research results revealed that gender-based differences in the measured variables reside. Female students showed higher loneliness, lower self-efficacy, and lower self-esteem compared to male students.

Research Questions

To achieve the research objectives of this paper, these research questions are recommended.

- 1. What is the self-efficacy level among higher education students in the UAE?
- 2. What is the academic achievement level of higher education students in the UAE?
- 3. What is the relationship between self-efficacy and student academic achievement among higher education students in the UAE?
- 4. Is there a gender-based difference in students' self-efficacy in the higher education settings in the UAE?

Materials and Methods

Study Sample

A diverse group of students formed the sample of this research study. A total of 374 undergraduate students enrolled in different colleges and universities in the UAE were chosen randomly to participate in this research study and respond to the General Self-Efficacy Scale (GSE) [27]. The 374 — sample is distributed as follows; 151 (40,4%) are males and the female participants represent 223 (59,6%). The descriptive analysis showed that most of the samples' age ranged from 18 to 24 years, the age categories are displayed in table 1. A diverse sample from different backgrounds and regions who reside in the UAE engaged in the research study as shown in table 2.

Distribution and Percentages of Participants by Gender (N=374)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18—24	262	70.1	70.1	70.1
	25—31	72	19.3	19.3	89.3
	32—38	23	6.1	6.1	95.5
	+ 39	17	4.5	4.5	100.0
	Total	374	100.0	100.0	

Table 1

Table 2
Distribution and Percentages of the Diverse Group of Participants (N=374)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UAE/GCC	139	37.2	37.2	37.2
	Egypt/North Africa	36	9.6	9.6	46.8
	Middle East/Not GCC	22	5.9	5.9	52.7
	Asian (India/Pakistan)	51	13.6	13.6	66.3
	USA	38	10.2	10.2	76.5
	Europe	37	9.9	9.9	86.4
	African	47	12.6	12.6	98.9
	Others	4	1.1	1.1	100.0
	Total	374	100.0	100.0	

Research Instrument

As the current study intends to discover the levels of self-efficacy and how it relate to the student's academic performance, the General Self-Efficacy Scale (GSE) [27] was utilized to achieve the research objectives and examine the students' perceived self-efficacy. The General Self-Efficacy Scale (GSE) is a 10 — item measurement scale that is created to measure individuals' self-efficacy; one's positive self-beliefs about their capacity to cope with challenging life situations. The GSE is a self-report measurement scale designed to measure individuals perceived self-efficacy. The GSE is a 10 — items Likert scale with 4 — points ranging from Not at all true = 1 to, Hardly true = 2, Moderately true = 3, to Exactly true = 4. All items of GSE are phrased positively. To calculate the total score, add the sum of all 10 — items, so the total score is expected to range from 10-40. The higher the score attained by students; the more self-efficacy is found.

Reliability and Validity

The scale has been used in many studies in different countries with hundred thousand participants. As explained by Schwarzer and Jerusalem [27], the GSE showed high internal consistency with Cronbach's α ranges between 0,76 and 0,90, which indicates high internal reliability. For validity, the GSE scale was proven to be related positively to satisfaction with the workplace, emotion, and optimism and negatively correlated with some psychological disor-

ders such as stress, depression, anxiety, burnout, and health issues, which confirms the validity of the measurement scale. For this research paper, *Cronbach's* α was calculated to assess the internal consistency between the GSE items and measure the scale reliability. Data analysis showed that the scale items have high reliability, represented by a *Cronbach's* α =0,850, which is consistent with the findings of [38] who revealed that the Cronbach's α score for this test (*GSE*) is between 0,79 and 0,88 which indicates enough reliability and internal consistency.

Data Collection

The procedure of data gathering began in the mid of spring of 2021 and continued for eight weeks. After obtaining the Institutional Review Board IRB approval, the researcher contacted many professors in different universities in the UAE seeking approval to conduct this research study. The General Self-Efficacy Scale (GSE) was modelled on Google forms with a full description of the study, the method of answering the guestions, and the consent form. After getting approval, participants were invited to attend a virtual meeting with the researcher. The researcher started the meeting with a presentation about the self-efficacy concept and explained the procedure for answering the questions and was available during administering the GSE to answer any questions. The students voluntarily replied to the GSE. All data was gathered and analyzed through SPSS version 22.0.

Data Analysis and Results

At the beginning of the analysis, the researcher addressed all issues that affect outliers, any missing values, normality, homogeneity of variance, and independence. To answer *RQ 1*, descriptive analysis was performed, results showed that students perceived general self-efficacy is medium to a high level of perception represented by the total of GSE (*M*=32.136, *SD*=4.931). For *RQ 2*, the descriptive analysis revealed that higher education students in the UAE are identified with medium to high academic achievement represented by

their CGPA (M=3.376, Median=3.50, Mode=4.00, SD=0.4989). Regarding the correlation between perceived self-efficacy and students' academic performance, (RQ 3), the Pearson Correlation Coefficient r revealed a high positive correlation, r=0.748, p<0.001 is statistically significant which shows that students' self-efficacy is positively associated with their academic achievement as measured by their GPA (see table 3).

Thus, when the self-efficacy increases by 1 unit, the student's academic achievement increases by .560 units (see figure).

Table 3
The Correlation Between Students' Self-Efficacy and Academic Achievement (N=374)

		CGPA	GSE_Total
CGPA	Pearson Correlation	1	0.748**
	Sig. (2-tailed)		0.000
	N	374	374
**. Correlation	on is significant at the 0.01 level (2-tailed).		

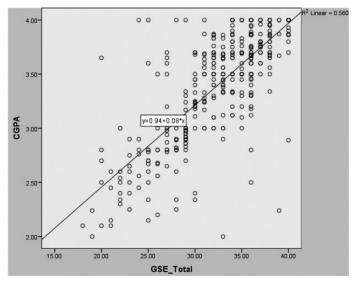


Figure. The Relationship Between Self-efficacy and Academic Achievement Predicting the impact of self-efficacy on students' academic performance mandates conducting Simple Linear Regression.

The researcher hypothesized all issues of assumptions of linearity and homoscedasticity. Regression analysis demonstrated that R^2 =56% of the total variance in students' academic achievement represented by their (GPA) is accounted for by their feeling of self-efficacy, F (1, 372)=473,773, p<0,001 is statistically significant representing a linear relationship between students' self-efficacy and academic performance is existing. The following equation represents the regression model.

Academic Achievement=0.942+0.560 * Self-efficacy (1)

Answering RQ 4, concerning the genderbased difference in perceived self-efficacy, the mean score of self-efficacy was calculated. In addition, the t-test for independent samples demonstrated that the self-efficacy mean score for male students (N=151) is (M=32.629, SD=4.907) when compared with those of female students (N=223) (M=31.803, SD=4.930) was not statistically significant, in addition, Levene's Test for equality of variances is not statistically significant F(372)=0.282, p=0.596, which specifies the equality of sample variances, so here we study the equal variance assumed to explain the findings, t(372)=1.594, p=0.112, not statistically significant, these findings designate that the genderbased difference in the students' perceived self-efficacy does not reside.

Discussion

The current research study reports on the general self-efficacy level and academic performance among a diverse group of higher education students in the UAE. Results showed that higher education students demonstrate a medium to a high level of perceived self-efficacy as indicated by the GSE. These findings could be interpreted in the context of Bandura's Self-efficacy Theory as students have a positive perception of their capability to achieve high academic achievement but not necessarily reflects the actual ability of students, nonetheless here in this current study, however, the sample is a diverse student but their perceived self-efficacy is very consistent with their actual ability to succeed as presented by their GPA. Although students provided their perceived general self-efficacy, they employed this perception towards their academic achievement which was confirmed by the consistency between their perception and academic achievement. The results of students' positive academic achievement could be explained in the context of Bandura's Theory about resources of self-efficacy, the powerful source: mastery experiences. Thus, when students succeed, they develop a solid belief about their possessed ability to maintain success [7]. Furthermore, students' self-efficacy motivates them to enhance their learning process and achieve appropriate academic success. Moreover, these findings could be interpreted as students' vicarious experiences through communicating with other students who have graduated earlier than them boosts students' beliefs that they own the ability to achieve the same academic achievement. Thus, the diversity of students enabled them to communicate, learn, and develop their skills through communicating with a group of expat learners. Here in this research study, a strong positive correlation between students' self-efficacy and their academic performance is expected because general self-efficacy can influence people's behavior and endeavors. These findings are consistent with [16] who reveal self-efficacy helps students to cope with challenges and demonstrate high academic achievement. Furthermore, these outcomes are supported by the findings of [20] who discovered that high self-efficacy boosts self-confidence and students' enhances academic performance. The high percentage (56%) that indicates the variances in academic success account for students' general self-efficacy agrees with the findings of [15; 20; 30] and who demonstrated that self-efficacy can predict and improve students' academic success significantly. The result of no gender-based difference in - self-efficacy shows that students from both genders have similar feelings about their capabilities and actions toward different situations. Thus, the findings indicate that higher education in the UAE provides equal learning opportunities to a diverse group of learners, implementing equity in education and protecting students' rights. Consequently, higher education contributes to the society's progress and prosperity.

The outcome of this research could be implemented in the counseling centers on and off campus to enhance the perception of students' self-efficacy and encourage them to work hard to achieve their academic goals. Furthermore, higher education institutions can emphasize the importance of students' self-efficacy by offering students academic advising sessions, students' orientation, and workshops to enhance their

self-efficacy, which can influence their academic performance.

Limitations of the present paper are found beneath the simple linear regression as it examines the linear relationship between two variables, the dependent and independent variables, so it suggests that a straight-line relationship between the two variables is existing, which is not accurate in some cases. Moreover, the characteristics of diversity should be discussed here to boost the results.

Conclusion

This research article was achieved to examine students' self-efficacy and their academic performance and find out how does the self-efficacy relate to and predicts students' academic achievement among higher education students in the UAE, moreover, explores the gender-based difference in students' general self-efficacy. Higher education students in the UAE showed medium to high levels in both selfefficacy and academic achievement as measured by students' GPA and the GSE. Furthermore, self-efficacy demonstrated a strong positive correlation (0,75) with students' academic achievement. Additionally, it was revealed that 56% of students' academic achievement can be explained by their self-efficacy, which indicates that self-efficacy is a significant predictor of students' success within a diverse group of learners in the higher education sector in the UAE. The results proved that no gender-based difference resides among higher education students in the UAE. Thus, higher education in the UAE includes a diverse group of students successfully and provides equal learning opportunities to all students regardless of their background or gender.

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Recommendations for Practice

Based on the discoveries of this research study, the following recommendations are presented to instructors, higher education policymakers, stakeholders, and decision-makers, to be incorporated into the higher education sector. The study discoveries recommend measuring students' self-efficacy at the beginning of the academic year to identify their self-efficacy level so the college counseling centers can offer a training session to students with low self-efficacy and follow up with their academic success to improve their perceptions and beliefs in their ability to succeed. In the context of instructional design and curriculum development, instructors can embrace elective courses that improve students' self-efficacy for better academic achievement. Moreover, when explaining an academic task or assignment, instructors can integrate some instructional techniques to promote students' self-efficacy, it would be beneficial to evoke and awaken students' skills and ability to do it. Thus, it could be supported by connecting the assignment/task with a previously achieved one that the students accomplished. Moreover, the recommendations can be extended to include self-efficacy when designing assessment tools related to coursework in different subject areas.

Future research: The study outcomes recommend examining more factors that could influence students' academic achievement in the UAE such as diversity characteristics, self-esteem and achievement motivations. Moreover, examine the impact of offering self-efficacy training sessions on improving the self-efficacy levels and measures the impact of integrating self-efficacy components in the curriculum and instructional design on students' academic performance.

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