Self-Directed Learning and Emotional Intelligence: Differences between Students with High and Low Academic Performance

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The answer to students' learning challenges lies in exploring the connections and differences between self-directed learning, emotional intelligence, and academic achievement. This study investigated the differences in self-directed learning and emotional intelligence between high achievers and low achievers. The data collection instruments were the self-directed learning scale and the emotional intelligence scale. The results showed significant differences between students with high academic performance and students with low academic performance in self-directed learning, in favor of high achievers. Students with low academic performance exhibited greater emotional intelligence. There was a significant positive correlation between self-directed learning and emotional intelligence in students with better academic results. The correlation between self-directed learning and emotional intelligence in students with low academic performance was significant and negative. The study concluded that self-directed learning has a broad positive impact on university students' academic performance by raising their achievement levels.

Keywords: self-directed learning, emotional intelligence, high academic performance, low academic performance.

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Самостоятельное обучение и эмоциональный интеллект: различия между студентами с высокой и низкой академической успеваемостью

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Ответ на проблемы, возникающие у студентов в обучении, кроется в изучении связей и различий между самостоятельным обучением, эмоциональным интеллектом и академической успеваемостью. В данном исследовании изучались различия между высокоуспевающими и низкоуспевающими студентами. Для сбора данных использовалась шкала самостоятельного обучения и шкала эмоционального интеллекта. Результаты показали значительные различия между студентами с высокой академической успеваемостью и студентами с низкой академической успеваемостью в отношении самостоятельного обучения, причем в пользу высокоуспевающих. Студенты с низкой академической успеваемостью продемонстрировали более высокий уровень эмоционального интеллекта. Наблюдалась значительная положительная корреляция между самостоятельным обучением и эмоциональным интеллектом у студентов с более высокими академическими результатами. Корреляция между самостоятельным обучением и эмоциональным интеллектом у студентов с низкой академической успеваемостью была значимой и отрицательной. В результате исследования был сделан вывод о том, что самостоятельное обучение оказывает широкое положительное влияние на академическую успеваемость студентов университета, повышая уровень их успеваемости.

Ключевые слова: самостоятельное обучение, эмоциональный интеллект, высокая академическая успеваемость, низкая академическая успеваемость.

Introduction

With fast changes in technologies and education demands, there is more need to highlight the crucial roles that self-directed learning (SDL) and emotional intelligence (EI) can contribute to various levels of education in different atmospheres and different countries. In higher education, independent learning places a strong emphasis on personal growth, accountability, and autonomy to meet social expectations. As

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a result, alongside SDL, other comparable ideas like independent learning and lifelong learning are emphasized and stated as typical traits of graduates in many universities worldwide. The amazing ability of self-directed learning allows students to choose from a wider variety of educational opportunities and materials with greater freedom. It helps satisfy the requirements of the learner, boosts their innate motivation to learn, and gives pupils access to previously sought-after knowledge wherever they are and whenever they want it. On the other hand, if a student requires an explanation for a topic that he did not understand in traditional learning (face-to-face learning), he must schedule an appointment with the instructor. There's a good chance the teacher will decline to repeat the explanation if he doesn't get it the first time. The student in SDL is independent, engaged, and responsible for completing their work. Thus, it has been demonstrated that SDL offers a variety of possibilities, the most noteworthy of which is a sensation of confidence that enhances the student's capacity to master his or her learning without explicit help (Eid, 2022). Emotional intelligence (EI) distinguishes between people who succeed and those who fail to overcome life's challenges. EI is a complex variable that includes some positive skills that assist an individual in achieving success in various aspects of life, i.e., self-management, sympathy, etc. Therefore, Sahibzada, et al. (2019) stated that continuous study and development endeavors concerning Emotional Intelligence are vital. EI is important for both students and teachers Wang's study (2023) revealed significant findings that emphasized the crucial functions that EI possesses in teachers' construction of the educational landscape.

This research responds to the question: "How can we, as faculty members, help students achieve higher academic performance?" The study is also a result of the Ministry of Education's and Saudi universities' demands for more research on the variables associated with improved academic performance. Furthermore, it investigates the causes of the difficulties that university students face in achieving their best academic performance. Due to the widespread COVID-19 pandemic, it is urgently necessary for schools and communities to motivate kids to develop their SDL abilities. A thorough assessment of the literature revealed several conclusions about how learner characteristics contribute to academic success and learning success in educational environments (Koc, 2019; Zhoc et al., 2023). As a result, SDL and EI have a big impact on the characteristics and learning preferences of students.

The results of this study could pave the way for the participation of university students in training programs to improve SDL and EI. The finding of a relationship between EI and SDL and differences between high-performing and low-performing students confirms the need to pay more attention to improving student performance and managing learning materials.

Correlation between SDL and EI

Cognitive, metacognitive, and emotional abilities that may be learned and honed via increasing self-awareness and practice are included in EI and SDL (Bar-On, 2010; Cazan & Schiopca, 2014; Schulze, 2014; Goodwin, 2016; Zhoc et al., 2018). SDL and emotional intelligence are positively correlated, according to Lee & Lee's research (2020). In line with Zhok et al. (2018), who examined SDL and EI in higher education, SDL is seen as a crucial goal of higher education. The findings demonstrated that students with high EI had higher SDL skills than others. This study proves that students with higher emotional intelligence are more independent, promoting better academic achievement and general growth and contributing to greater college satisfaction. Hwang and Kim (2023) found a substantial positive link between SDL and emotional intelligence. According to Cazan and Schiopca (2014) and Koc (2019), SDL may operate as a buffer between psychological traits (such as EI or self-efficacy) and academic success. Engin (2017) discovered that, in a learning context, EI could predict SDL.

Purpose of the Present Study

Self-directed learning and emotional intelligence are vital variables that play an essential role in many aspects of a typical learning environment. In college courses, researchers have considered some of the essential variables that could
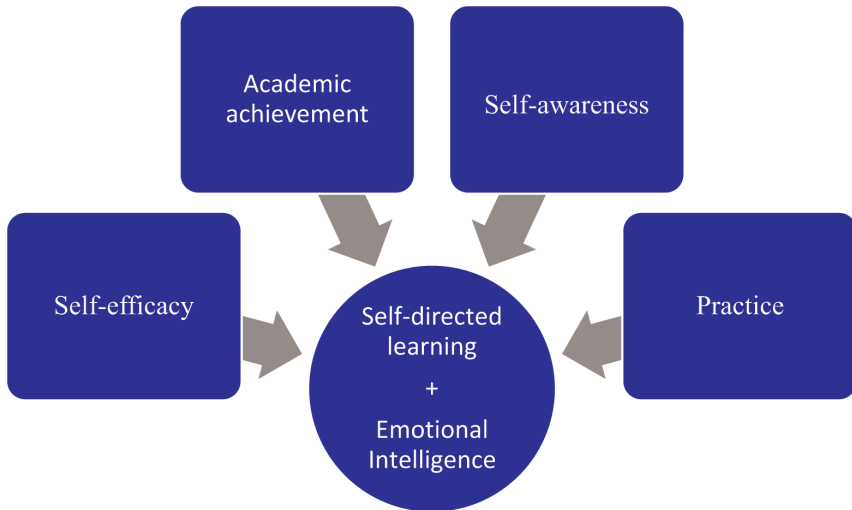
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Fig. 1. Improved aspects of the relationship between self-directed learning and emotional intelligence.
(Suggested by the author)

explain the high performance of some students and the low performance of others. Point-based concepts have been explored in research on SDL related to learning outcomes. Furthermore, emotional intelligence is a hybrid that includes motivation and social skills that many students benefit from. According to the literature, independent learning and emotional intelligence are closely related to high academic performance (Bandari et al., 2020; Lee & Lee, 2020; Zhoc et al., 2018; Rahimi, 2016; Grandinetti, 2015). Zhoc & Chen (2016) showed that universities need to assess students' characteristics (such as EI and SDL) and then connect them with appropriate learning environments and teaching methods to achieve the best results.

Recently, universities in Saudi Arabia have strived to be among the world's universities to compete in the labor market with their successful students. Therefore, many universities have focused on studying the difference between high and low achievers. It has also been demonstrated that encouraging students to achieve outstanding academic achievement can be accomplished by addressing the psychological issues they encounter while learning. A novel approach to examining the significance of this

relationship is to examine self-directed learning and its relationship with emotional intelligence in successful Saudi university students. This study may provide helpful advice on improving self-directed learning with increased emotional intelligence. These inquiries were made considering the literature review:

1. Is there a difference in self-directed learning between high- and low-level students?

2. Is there a difference in emotional intelligence between high- and low-performing students?

3. Is there a relationship between self-directed learning and emotional intelligence in high achievers?

4. Is there a relationship between self-directed learning and the emotional intelligence of university students with low academic performance?

Self-directed Learning

Many academics have tried to define self-directed learning (SDL) and have contributed to the discovery of multiple interpretations of the term (Eid, 2022). The definition of self-directed learning according to Bhandari et al. (2020) is "an active learning approach in which students

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are responsible for their learning outcomes, with the instructor acting as a facilitator of learning." An additional definition of SDL is provided by Leatemia et al. (2016): "Students controlling their learning process using planning, implementation, monitoring, and assessment." SDL is a process (Chan 2018; Schulze 2014). But according to recent research, SDL isn't anything that belongs in the personality trait category (Cazan & Schiopca, 2014; Zhoc et al., 2018). Studies in literature have demonstrated a connection between students' self-directed learning and academic success (Grandinetti, 2015). Sansom (2023) exhorts educators to investigate Self-Directed Learning approaches within the context of higher education classes. According to a study by Bhandar et al. (2020), the top students scored higher on most SDL skills. However, they should also work on improving their interpersonal skills. Hwang and Kim (2023) presented evidence supporting the importance of self-directed learning competency in the link between optimism and emotional intelligence.

Emotional Intelligence

As Floyd (2017) pointed out, our emotions can significantly influence our behavior, even in the classroom, so practicing EI in a learning environment promotes learning. According to Sahibzada, et al. (2019), EI is directed towards knowledge expansion, enhancing self-worth, workforce autonomy, and societal transformation. Regarding emotional intelligence, people with EQ skills are highly adaptable and able to manage emotions. However, those who lack these skills are more likely to have impaired emotional functioning and social interactions with others (Salovey & Mayer, 1990). Radford (2014) examines two concepts related to contemporary theories on the nature of emotional intelligence. The first idea is dichotomous and regards emotion as a fundamental mode of conduct for introspection. Others view feelings as power reserves that may be traded during expression.

In their publication, Salovey and Mayer (1990) define EI as "a subcategory of social intelligence that involves the ability to observe, distinguish one's own emotions and those of others, and use this knowledge to regulate one's

beliefs and behavior". Goleman introduced EI in 1995 as a hybrid model, focusing on natural skills and attributes for leadership success. Emotional intelligence, linked to professional talent, accounts for 67% of leadership capacity (Goleman, 1998). Coleman (2015) defined emotional intelligence (EI) as the capacity to recognize emotions in oneself and others, appropriately identify and describe the many emotions one feels, and use emotional information to inform one's beliefs and conduct. Furthermore, according to Al Akaishi (2003), emotional intelligence (EI) is "a person's ability to recognize and regulate their own emotions, motivation, and feelings, as well as the ability to understand and manage the emotions of others flexibly through strong communication skills".

The EI theory consists of four components: feeling emotions, using emotions to solve problems, understanding emotions to categorize them, and managing emotions. Accurate emotional intelligence starts with feeling emotions, which involves recognizing and expressing them. The second and third branches focus on using emotions to make better decisions and take calculated risks. The fourth branch involves managing emotions for self-awareness and reflection (Salovey et al., 2002). Rahimi (2016) discovered a strong connection between EI and academic success. EI and intellectual satisfaction have a helpful link, according to Urquijo and Extreme (2017). Academic engagement was also mentioned as a mediator between EI and educational satisfaction.

Study design

This study is based on a descriptive scheme that describes the behavior of the sample but does not influence it in any way. The purpose of descriptive research is the systematic collection of data to describe a phenomenon, situation, or population. Saudi Arabian university students were randomly selected as a sample. Eid (2018) developed a self-learning scale to assess participants in an ongoing study on self-directed learning. Al Akaishi's (2003) emotional intelligence scale was used to assess the participants' emotional intelligence in this study. SPSS was used to analyze research data. All data was collected electronically through the online survey

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service and sent to SPSS for statistical analysis. To answer these questions, the author utilized statistical methods (T-test, Pearson correlation, Cohen's d, mean, and standard deviation).

Data collection

The sample consisted of university male students (with a GPA of 2.5 and above, ages 18 to 22). Participants were 224 university students with a GPA of more than 2.5. The researcher divided 2.5 to 5 into 4 to get the higher quartile, which was from 4.375 to 5, and the lower quartile, which was from 2.5 to 3.125. The university students with high academic performance were 52, representing the higher quartile with a GPA of 4.375 to 5. The university students with low academic performance were 56, representing the lower quartile with a GPA of 2.5 to 3.125. The participants were 108 university male students (ages 18 to 22- M = 20.4, SD = 0.99) with high and low academic performance.

Study Tools

Self-directed Learning Scale. The self-directed learning scale was developed by Eid (2018). It consisted of thirty phrases. Eid (2018) examined the reliability of the Self-directed learning scale, which was calculated by the test-retest in Saudi Arabia. Two weeks later, the scale was introduced to the 22 students. The reliability value was 0.941.

Emotional Intelligence Scale. Al-Akayishi (2003) conducted a study at the University of Baghdad to investigate mental health and its relationship with emotional intelligence among university students. Because of the cultural similarities between the Gulf countries, this scale was chosen in the current study. The scale consists of 36 items. It was retested for 40 students, and the reliability value was 0.80. The researcher

investigated the reliability of the EI scale in the Saudi Arabian environment. The scale was administered to 25 university students. The half-split was measured. The value of the half-split was 0.715. The EI scale is reliable in the Saudi Arabian environment.

Results

To answer the study questions, 108 students were recruited. Descriptive analyses were conducted to establish normality and to determine if the data met the assumptions for selecting appropriate statistical methods.

Research Question 1

The first question shows significant differences in self-directed learning between high-performing and low-performing students. The average grades of high-achieving students are higher than those of low-achieving students. It was (M = 118.5, SD = 14.24) for successful students and (M = 98.35, SD = 13.27) for unsuccessful students. The effect size, as measured by Cohen's d, was d = 0.96, indicating a large effect.

According to the findings, students with high academic performance have more self-directed learning skills than students with low academic performance. As a result, this confirms that students with high academic performance are accountable for their current and future learning. They work hard to achieve even higher academic performance, indicating that they are engaged in their tasks. They take the initiative and independently seek out various methods and approaches to learning. They have some unique and positive characteristics that enable them to engage in the learning process much more effectively than students with low academic performance.

Table 1

**T-test of self-directed learning of university students with high
and low academic performance**

Variable	Students	N	mean	Std. Deviation	T-Test	Sig.	Cohen's d
Self-directed learning	Students with high academic performance	52	118.5	14.24		.000	0.96
	Students with low academic performance	56	98.35	13.15	7.609		

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Research Question 2

The answers to the second question revealed a significant difference in emotional intelligence between students who performed well and those who did not. The average score for the students who performed the best was 122.98, while the average score for those who performed the worst was 128.82. According to mean scores, low achievers have more outstanding EI scores than high achievers. The effect size, as measured by Cohen's d, was d = 0.35, indicating a small effect.

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Research Question 3

The findings of research question 3 are like those of Lee & Lee (2020) and Zhoc et al.

(2018). The answer to the third question revealed a link between university students' exemplary academic achievement and emotional intelligence regarding self-directed learning. The results confirm the significance of enhancing EI in university students' self-directed learning. This significant relationship can also be explained by the fact that motivation and self-management are components of EI, and the student with high SDL skills has the motivation and self-control to learn independently. Bar-On (2006) identified a link between EI and SDL. He went on to say that having a higher level of SDL improves one's EI.

Research Question 4

The findings of research question 4 showed that there is a significant negative correlation between self-directed learning and the EI of students with low academic performance. Engin (2017), in line with the result of this question, asserted that in a learning context, EI could predict SDL. Zhok et al. (2018), who examined SDL and EI in higher education, found that students with high EI had higher SDL skills than others. In contrast, the answer to question 4 makes it clear

Table 2

T-test of emotional intelligence of students with high and low academic performance

Variable	Students	N	mean	Std. Deviation	T-Test	Sig.	Cohen's d
Emotional intelligence	Students with high academic performance	52	122.98	12.89	2.14	.034	0.35
	Students with low academic performance	56	128.82	15.22			

Table 3

Correlation between self-directed learning and EI of students with high academic performance

Correlation	N.	value	Sig.
Self-directed learning and EI of students with high academic performance	52	.394	.004

Table 4

Correlation between self-directed learning and EI of students with low academic performance

Correlation	N.	value	Sig.
Self-directed learning and EI of students with low academic performance	56	−.299	.025

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that students with low academic performance could have a higher level of EI, but self-directed learning isn't the same.

Discussion

According to Bhandari et al. (2020), who found a link between self-directed learning and substantial academic achievement, the answer to study question 1 is in line with their findings. Grandinetti (2015) found a link between student academic progress and self-directed learning. This supported the current study's first research question's finding, which stated that students with high SDL achieve high academic performance. The outcome is consistent with the nature of high academic performance, which necessitates some personal qualities. The learner should have perseverance, responsibility, a desire to learn, self-organization, striving for realistic goals, high ambition, and long-term planning based on these characteristics.

Although there is a sizable variation in the second question, the means for high and low achievers are comparable. There needs to be more research on the link between solid academic achievement and EI. Hwang and Kim (2023) and Tremonte et al. (2024) discovered a tangible link between high academic achievement and EI. Since there is no relationship between IQ and emotional intelligence, it follows from the findings that substantial academic achievement and emotional intelligence are unrelated. The body of research on emotional intelligence supports this conclusion.

EI and SDL both need cognitive, metacognitive, and affective skills, which may help to explain why EI and SDL were associated in this study. Additionally, the socioemotional components of learning can enhance SDL and EI, which can enhance academic success (Koc, 2019; Zhoc et al., 2018).

Limitations and Future Recommendations

Despite the positive outcomes, it is crucial to recognize the study's substantial limitations. First, the sample only consisted of one Saudi Arabian university. As the sample is not representative of higher education, the study should be replicated at other universities to establish the generalizability of the results. Second, the sample was mostly male, with the exception of female university students. Future research could include conducting more studies on male and female university students. The study also made use of self-reported GPA. Using actual performance data from student records can improve the data's dependability. Additionally, self-reports, which may be skewed and may not accurately reflect performance, have been used to evaluate emotional intelligence and self-directed learning (Mega et al., 2014). Future research might also call for behavioral evaluations.

Conclusion

Arab university students with poor academic performance require more encouragement from their professors to complete their assignments without assistance. According to Cohen's d, question 1's effect size was d = 0.96, showing a significant effect that highlights the value of self-directed learning for college students who perform well academically. Self-directed learning has a broad positive impact on university students' academic performance by raising their achievement levels. Zhoc, et al. (2018) emphasized that "self-directed learning" in Chinese higher education institutes facilitates the relationship between EI and learning achievements.

Goleman (1998) distinguished between IQ and EQ and stated that students with higher academic performance should not have a higher EI. Thus, the answer to the second question was d = 0.35, which indicates a small influence, according to Cohen's d, which measures effect size. High levels of academic achievement and exceptional learning are slightly affected by emotional intelligence (EI). In addition, Goleman stated that assessing learning outcomes should also take into account non-IQ traits such as tenacity for self-development, teamwork, flexibility, and self-confidence. The answers to questions 3 and 4 highlighted the connection between EI and self-directed learning for all types of students, regardless of their academic standing in higher education. Iqbal et al. (2022) asserted that students at universities can more effectively improve their study habits with the support of emotional intelligence.

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The current study's findings might point to changes that should be made to rules and regulations to encourage faculty members at several colleges to use instructional strategies that promote high SDL and EI. Thus, these actions could help staff members deal with difficult situations related to students with low academic performance. It is advised that psychological training programs to enhance SDL and EI be conducted concurrently when self-directed learning is low to get the best outcomes.

Conflict of Interest

I have no conflicts of interest to disclose.

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