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Research Paper

Psychological Interventions to Enhance Self-Efficacy and Motivation in Libyan Students

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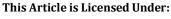
Abstract

Extensive research shows that higher self-efficacy is associated with increased motivation, perseverance, and academic success; however, there is a notable gap in understanding how these constructs interact within the unique context of Libyan higher education. This study explores the relationship between self-efficacy and motivation among university students in Libya, where cultural norms, Islamic principles, and socio-political factors deeply influence educational practices. To address this issue, the study employed a cross-sectional design and collected data through self-administered questionnaires from students at major universities in Libya. The data were analyzed using Pearson correlation and multiple regression techniques to examine the strength and direction of the relationship between self-efficacy and student motivation. The findings revealed a significant positive correlation between these two variables, indicating that students with higher levels of self-efficacy are more motivated in their academic pursuits. Furthermore, the multiple regression analysis identified self-efficacy as a significant predictor of student motivation, explaining 46% of the variance observed in the sample. These results underscore the critical role of self-efficacy in fostering student motivation within the Libyan educational context. The findings suggest that targeted interventions to enhance self-efficacy could significantly improve educational outcomes. The findings provide a foundation for future research and the development of educational strategies tailored to the specific needs of Libyan students, thus contributing valuable insights to the broader literature on self-efficacy and motivation in higher education.

Keywords: *Student Motivation; Libyan Universities; Educational Interventions; Self-Efficacy; Academic Performance.*

INTRODUCTION

Educationalists, researchers, and policymakers who are most interested in the psychological factors that influence students' academic achievements and overall performance are those who study those factors. Self-efficacy and student motivation are two essential concepts that have received significant attention in recent years, among other factors. The concept of self-efficacy, which originated from Bandura's Social Cognitive Theory, refers to an individual's belief that they can complete tasks successfully and overcome challenges effectively (Bandura, 1997). On the other hand, Deci and Ryan's Self-Determination Theory influences student motivation and is the driving force that directs, sustains, and regulates students' behaviors and efforts in pursuing academic goals. Deci and Ryan (2012) developed self-determination theory. Understanding the complex relationship between self-efficacy and student motivation is essential because it has significant repercussions for improving educational outcomes and creating a more stimulating educational setting.

Universities in Libya, which play an essential role in the nation's higher education system, are observing rising interest in studying the dynamics of self-efficacy and student motivation

among the diverse student population they serve (Gharssalla, 2018). The one-of-a-kind cultural context, institutional practices, and learning environments that characterize Libyan universities call for an in-depth investigation into how these psychological constructs are related in this setting (Ezzreg, 2023). Examining the dynamic relationship between self-efficacy and student motivation takes on an even greater significance when considering the challenges faced by higher education institutions in Libya (Asker, 2012). These challenges include retaining students, promoting academic excellence, and ensuring student well-being.

It has been repeatedly demonstrated that a strong correlation exists between student self-efficacy and student motivation using empirical evidence from various educational settings worldwide. Students who strongly believe in their abilities are likely to demonstrate higher levels of intrinsic motivation, perseverance, and academic engagement (Zimmerman, 2000). On the other hand, students with a low sense of achievement may experience decreased motivation, resulting in a lack of interest in their academic pursuits and possibly poor academic performance. However, due to the numerous contextual and cultural factors specific to universities in Libya, a specialized investigation is required to determine the precise nature of this relationship within this particular educational landscape (Moh, 2013).

Several other elements influence students' experiences and results when examining the connection between confidence and student motivation in Libyan universities (Alhodiry, 2016; Al Moghani, 2003). Corporate governance in educational settings, particularly colleges and universities, can affect the general organizational environment, decision-making processes and resource allocation, influencing motivation for learning and self-efficacy.

This research aims to construct a conceptual framework that methodically investigates the complex relationship between self-efficacy and student motivation in Libyan educational institutions. We aim to clarify how students' self-efficacy beliefs interact with and influence their motivation levels by drawing on the fundamental principles of Bandura's Social Cognitive Theory and Deci and Ryan's Self-Determination Theory. In doing so, we hope to shed light on how social cognitive theory and self-determination theory came to be (Elmuradov et al., 2015). In addition, we will investigate the role that external factors play in shaping students' self-efficacy perceptions and motivational orientation. These factors include social support, classroom environment, and interactions between teachers and students.

Two different possible ramifications can be derived from this study. In the first place, the paper aims to enhance the existing body of knowledge by contributing to the scant research on the subject within the Libyan context. Second, the results of this research could be used as a foundation for developing evidence-based interventions and educational strategies geared explicitly toward increasing self-efficacy and intrinsic motivation among university students in Libya. Universities in Libya can cultivate a generation of motivated and self-directed learners capable of effectively contributing to the advancement of society if they create an environment that is nurturing and empowering for learning.

Despite extensive research on self-efficacy and student motivation, a notable gap exists in the understanding of these constructs within Libyan higher education. Most of the existing studies have been conducted in Western settings, and they lack cultural and institutional relevance to Libya. The unique cultural context of Libya, which includes Sharia principles, significantly influences student motivation and self-efficacy but remains underexplored. Additionally, the distinct institutional practices of Libyan universities, such as governance and resource allocation, have not been adequately addressed in the current literature. Socioeconomic challenges, including economic instability and varying access to quality education, further complicate the academic landscape in Libya. There is a lack of empirical studies that provide comprehensive data on how these factors

affect student motivation and self-efficacy in Libyan universities.

Moreover, research on effective interventions tailored to the Libyan context is sparse. Addressing these gaps requires the incorporation of cultural, institutional, and socioeconomic factors into research. Developing and testing context-specific interventions and conducting empirical studies using robust methodologies will provide valuable insights. Comparative studies across educational settings can identify universal and context-specific aspects that enhance global understanding of self-efficacy and motivation. This will support the development of effective educational strategies to improve the academic outcomes of Libyan students.

In the following sections of this research, we will delve into the theoretical underpinnings of self-efficacy and student motivation, review relevant literature from international and Libyan educational contexts, present the conceptual framework, and discuss the potential practical implications of our findings. This study can serve as a stepping stone to improving the educational landscape in Libyan universities, which will ultimately enable students to excel academically and shape a prosperous future for themselves and their nation. Therefore, the research objectives as the following:

1. To explore the relationship between self-efficacy and student motivation among Libyan university students.
2. To identify and evaluate factors influencing self-efficacy and student motivation within the Libyan educational context.
3. To propose psychological interventions to enhance self-efficacy and student motivation among Libyan university students.

LITERATURE REVIEW
Self-Efficacy

Social cognitive theory explains the relationship between personal factors, human behavior, and the environment. This includes beliefs and behaviors toward personal factors, behaviors, and environmental stimuli. Among them, self-efficacy is a critical internal factor (Kheirkhah et al., 2017). When the literature is examined, many researchers have defined self-efficacy. Self-efficacy is an individual's judgment of his/her ability to fulfill his/her duties. Self-efficacy is a person's self-expectations regarding the degree to which he/she will succeed in new situations (Çetin & Aşkun, 2018). Self-efficacy is the personal judgment of individuals about the level of success they can achieve in performing the actions they need to cope with situations they are likely to encounter. Accordingly, self-efficacy is a personal assessment of an individual's ability to complete tasks. Self-efficacy is an individual's belief in their ability to perform a specific behavior (Tannady et al., 2019). Self-efficacy reflects how an individual views their ability. In observational learning, observers must monitor and evaluate their performance. Self-evaluators can make the right decision when they know whether they have the skills needed to learn the behavior. Self-efficacy is the perception of an individual's ability to establish a determined success and organize what is necessary to achieve success (Malkoç & Mutlu, 2018). In other words, it is a judgment of how successful a person will be in overcoming difficult situations that may arise in the future. The perception of efficacy also affects individuals' determination when faced with difficulties and how long they will complete tasks. People who consider themselves sufficient tend to try harder when encountering difficulties (Rhew et al., 2018).

Student Motivation

Motivation comes from the French and English word "motive," and the Latin word comes from "movere." Motivation is a familiar concept that encompasses motives, desires, needs, drives, and interests. Desire to do the job and its level explain the level of motivation. The effect that causes

people to exhibit certain behaviors despite certain events is defined as motivation (Sharififard et al., 2018). Motivation is when people act and try to achieve a specific goal. Motivation seems like related to people's wishes, desires, needs, goals, purposeful actions, and receiving feedback that expresses their status according to their goals. Motivation also encompasses wants, desires, needs, drives, and interests (Maraghi et al., 2018). In philosophy, motivation is interpreted as "the various causes or factors that lead to voluntary movements of consciousness." Conscious or unconscious motives are exhibited when people act. If these motives are at the intellectual level or at the idea level, they are called motivations. When they are at the sensitivity level, they are often called impulses. According to these explanations, motivation is a product of thought (Hasyim, 2018). Many scientists have examined motivation and have introduced different definitions from different perspectives (Burić & Kim, 2020).

Accordingly, achievement motivation involves a personal struggle to perform an activity at the best possible level. Motivation arises for individuals to perform better. Human behavior consists of inner strength, reflecting psychic energy (Moreira-Fontán et al., 2019). Motivation is not an intrinsic power but a complete reflection of behavior. Motivation comes from the need to avoid or fail. The knowledge gained by understanding or giving meaning to the world results from efforts to combine and balance previous knowledge. Motivation is related to achievement triggered by eight types of needs (Conradty et al., 2020). Three factors form the basis of motivation: making a person do something, directing the behavior and ensuring that the behavior continues, and feeling extraordinary happiness for doing this behavior (Shin, 2018).

The Relationship Between Self-Efficacy and Student Motivation

Table 1 summarizes the various studies exploring the impact of self-efficacy and motivation across different participant groups and contexts. These studies employed a range of quantitative methodologies to analyze the relationship between these psychological constructs and their influence on performance, motivation, and academic success. The findings highlight the significant role of self-efficacy in enhancing motivation and provide insights into practical strategies for improving these factors in educational and professional settings.

Table 1: Summary of Studies on Self-Efficacy and Student Motivation

Study	Participants	Method	Findings
Hasyim (2018)	Universitas Islam, Indonesia students	Quantitative technique	Self-efficacy significantly affects motivation (interest, dedication, self-confidence)
Maraghi et al. (2018)	Virtual medical education students at Shahid Beheshti University	Cross-sectional investigation	Positive correlation between self-efficacy and academic success ($r = 0.62$, $p < 0.01$)
Rhew et al. (2018)	Sixth, seventh, and eighth grade students with reading disabilities	Quasi-experimental study	Growth mindset improves motivation ($p < 0.05$)
Tannady et al. (2019)	Employees at DKI Jakarta, Indonesia	Structural equation modeling analysis	Work environment and self-efficacy impact motivation ($t = 4.82$, $\beta = 0.48$, $p < 0.01$, $R^2 = 0.688$)
Kheirkhah et al. (2017)	Midwifery students at the Tehran University of Medical Sciences	SPSS version 16	Proactive measures enhance self-efficacy and motivation ($p < 0.01$)
Conradty et al.	STEM students aged	Descriptive	No gender or age bias in

(2020)	9-19	statistics	motivation
Shin (2018)	Students in project-based learning groups	Project-based learning analysis	Project-based learning improves motivation and self-efficacy (p < 0.01)
Çetin and Aşkun (2018)	Employees in Turkey's organized industrial zone	Longitudinal analysis	Self-efficacy and intrinsic motivation influence job performance (p < 0.01)
Malkoç and Mutlu (2018)	University students in Istanbul, Turkey	Regression analysis	Self-efficacy linked to academic drive (p < 0.05)
Sharififard et al. (2018)	Iranian medical science students	Multiple regression and descriptive statistics	Belief in academic ability as linked to success (p < 0.01)
Moreira-Fontán et al. (2019)	Secondary school teachers	Structural Equation Model (SEM)	ICT-related factors predict motivation (R^2 = 0.699)
Burić and Kim (2020)	High school instructors and students	Multilevel structural equation modeling	Instructional quality was linked to students' motivational beliefs (p < 0.05)
Farihah and Rakasiwi (2020)	Students in SMP Negeri 12 Jember, Indonesia	Simple linear regression	Self-efficacy influenced learning motivation (R^2 = 0.497, p < 0.05)
Ju and Mei (2021)	Malay-speaking students in Mandarin Chinese	Multiple linear regression	Language anxiety and self-efficacy predict performance (p < 0.05)
Tabassam et al. (2021)	Pakistani university students	Concurrent triangulation mixed methods	Self-efficacy, autonomy, and motivation were linked to language acquisition (p < 0.01)
Mede and Çinar (2018)	Intermediate-level students in Istanbul, Turkey	Quantitative analysis	CLIL improves motivation (p < 0.05)
Ergün and Avcı (2018)	Undergraduate students in Turkish universities	Stepwise multiple regression analyses	Self-efficacy predicts knowledge-sharing behaviors (p < 0.01)
Blom et al. (2021)	Participants in private firms	Cluster randomized controlled trial	Behavioral interventions improved motivation (p < 0.01)
Wangid and Widyastuti (2021)	Students in various departments	Two-way ANOVA	Gender differences in motivation (p < 0.05)
Wulandari et al. (2019)	Diabetes patients	Logistic regression	Motivation influences self-efficacy (p < 0.05)

The above findings underscore the importance of self-efficacy in various domains and highlight its significant impact on motivation and performance. These findings provide a robust foundation for developing interventions to enhance self-efficacy and motivation in educational, professional, and personal contexts. In the above context, the following hypothesis is proposed:
H1: A positive correlation exists between self-efficacy and student motivation.

RESEARCH METHOD

The study targeted the student population within the Libyan university sector, employing a purposive sampling method to select a diverse sample of 300 students from various universities across Libya. Data were collected from major universities in Tripoli, Benghazi, and Misrata, reflecting the country's distinct cultural and institutional contexts. The primary data collection method involved self-administered questionnaires distributed online via Google Forms and in

person to maximize reach and ensure high response rates. Participants were provided with a cover letter outlining the study's purpose and were assured of the confidentiality of their responses before completing the questionnaire. The study used 17 items from Sherer and Adams (1983) to assess self-efficacy, while the measurement of student motivation was based on seven items adopted from Lang and Fries (2006). Responses were recorded on a 5-point Likert scale, ranging from "1 = strongly disagree" to "5 = strongly agree." Data were analyzed using SPSS V. 26, which proceeded through several stages. Initially, descriptive statistics were employed to summarize the sample's demographic characteristics, including mean scores, standard deviations, and ranges of values for key variables. The normality of the data was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests, in addition to examining skewness and kurtosis values to evaluate the distribution of scores. Pearson correlation coefficients were calculated to explore the relationship between self-efficacy and student motivation to determine the strength and direction of this relationship.

Furthermore, multiple regression analysis was conducted to identify self-efficacy as an independent variable that significantly predicted student motivation. Hypotheses concerning the positive correlation between self-efficacy and student motivation and the impact of self-efficacy on student perseverance and engagement were tested, with statistical significance set at the $p < 0.05$ level. The findings were interpreted within the specific context of the Libyan educational environment, leading to the formulation of recommendations for educational institutions to implement targeted interventions to enhance students' self-efficacy and motivation. Through these comprehensive data analysis techniques, this study seeks to provide robust empirical evidence on the relationship between self-efficacy and student motivation among Libyan university students, offering practical recommendations to improve educational outcomes.

FINDINGS AND DISCUSSION

The study sample includes 300 Libyan university students, predominantly male (67%), with a diverse age range (18-33+ years). Participants are evenly distributed across three universities over four years of study. The fields of study vary, with engineering being the most represented (26.7%). This diverse sample ensures broad representation across demographic and academic categories. The results are shown in Table 2.

Table 2. Demographic Characteristics of the Study Population

Demographic Characteristic	Category	Frequency (n)	Percentage (%)
Gender	Male	201	67%
	Female	99	33%
Age Group	18-22 years	120	40%
	23-27 years	90	30%
	28-32 years	60	20%
	33 years and above	30	10%
University	Tripoli University	100	33.30%
	Benghazi University	100	33.30%
	Misrata University	100	33.30%
Field of Study	Engineering	80	26.70%
	Science	70	23.30%
	Arts and Humanities	50	16.70%
	Business	50	16.70%
	Other	50	16.70%
Year of Study	1st Year	75	25%

2nd Year	75	25%
3rd Year	75	25%
4th Year	75	25%

Table 3 presents the descriptive statistics for the variables of self-efficacy and student motivation among the participants. The mean self-efficacy score was 3.85, with a standard deviation of 0.64, indicating moderate levels of self-efficacy among participants, with scores ranging from 2 to 5. For student motivation, the mean score was slightly higher at 4.02, with a standard deviation of 0.59 and scores ranging from 2.5 to 5. These statistics summarize the central tendency and variability of the key variables studied.

Table 3. Descriptive Statistics of Self-Efficacy and Student Motivation

Variable	Mean	SD	Minimum	Maximum
Self-Efficacy	3.85	0.64	2	5
Student Motivation	4.02	0.59	2.5	5

Table 4 presents the outcomes of the normality assessments for self-efficacy and student motivation variables. Both the Kolmogorov-Smirnov and Shapiro-Wilk tests yielded p-values greater than 0.05, confirming that the data for these variables are normally distributed. Specifically, for self-efficacy, the Kolmogorov-Smirnov p-value is 0.20, and the Shapiro-Wilk p-value is 0.15, with skewness and kurtosis values of 0.12 and -0.35, respectively, indicating a slight positive skewness and a slight platykurtic distribution. Similarly, student motivation has a Kolmogorov-Smirnov p-value of 0.21 and a Shapiro-Wilk p-value of 0.16, with skewness and kurtosis values of 0.08 and -0.28, suggesting near-normal skewness and a slightly platykurtic distribution. These results confirm that the data for both variables do not significantly deviate from normality, making them suitable for further statistical analysis.

Table 4. Normality Test Results for Self-Efficacy and Student Motivation

Variable	Kolmogorov-Smirnov (p-value)	Shapiro-Wilk (p-value)	Skewness	Kurtosis	Normality Test (p-value)
Self-Efficacy	0.2	0.15	0.12	-0.35	> 0.05
Student motivation	0.21	0.16	0.08	-0.28	> 0.05

Table 5 presents the strength and direction of the relationship between these two variables. The correlation coefficient between self-efficacy and student motivation was 0.68**, indicating a strong positive relationship that was statistically significant at the 0.01 level. This suggests that higher self-efficacy levels are associated with higher student motivation. The table's diagonal confirms that each variable is perfectly correlated with itself, as expected. Overall, the results demonstrate a significant link between self-efficacy and student motivation among the participants.

Table 5. Pearson Correlation Coefficients Between Self-Efficacy and Student Motivation

Variables	Self-Efficacy	Student motivation
Self-Efficacy	1	
Student Motivation	0.68**	1

*** indicates the correlation is significant at the 0.01 level (2-tailed).*

Table 6 presents an analysis exploring how self-efficacy predicts student motivation. The unstandardized coefficient (B) is 0.68, indicating that for each unit increase in self-efficacy, student motivation is expected to increase by 0.68 units, assuming that all other factors remain constant. The standardized coefficient (β) is also 0.68, which reflects the strength and direction of the relationship between self-efficacy and student motivation when both variables are measured in standardized units. The t-value of 12.34 suggests that the predictor (self-efficacy) is highly significant in the model, with a p-value of less than 0.001, confirming the statistical significance of this relationship. The R^2 value of 0.46 indicates that 46% of the variance in student motivation can be explained by self-efficacy alone, while the adjusted R^2 value of 0.45 provides a slightly refined estimate, accounting for the number of predictors in the model. Additionally, the F-statistic of 152.22, with a corresponding model p-value of less than 0.001, further supports the overall significance of the regression model. These results demonstrate that self-efficacy is a strong and significant predictor of student motivation, explaining a substantial portion of the variation in the dependent variable.

Table 6. Multiple Regression Analysis of Self-Efficacy as a Predictor of Student Motivation

Independent Variable	Unstandardized Coefficient (B)	Standardized Coefficient (β)	t-value	p-value	R^2	Adjusted R^2	F-statistic	p-value (Model)
Self-Efficacy	0.68	0.68	12.34	< 0.001	0.46	0.45	152.22	< 0.001

The results of testing the hypothesis that there is a positive correlation between self-efficacy and student motivation (H1). The p-value for this test was less than 0.001, indicating that the correlation was statistically significant. As a result, the hypothesis is supported, confirming a significant positive correlation between self-efficacy and student motivation. As self-efficacy increases, student motivation also tends to increase, which is a crucial finding for understanding how these variables interact.

DISCUSSION

The statistical results of this study explored the relationship between self-efficacy and student motivation among Libyan university students, revealing a significant positive correlation between these variables. The findings indicated that students with higher levels of self-efficacy tend to exhibit greater student motivation, a relationship quantified by Pearson's correlation coefficient, which demonstrated a strong positive association at a significance level of p < 0.01. This suggests that self-efficacy is a critical factor that influences students' motivation in academic settings. Further analysis using multiple regression confirmed that self-efficacy was a significant predictor of student motivation, accounting for 46% of the variance in student motivation, as indicated by an R^2 value of 0.46. The robustness of this regression model was supported by an F-statistic of 152.22 and a p-value of less than 0.001. These findings underscore self-efficacy's pivotal role in shaping students' motivation and highlight the importance of fostering self-efficacy to enhance academic outcomes. These results were compared in the discussion with previous research that consistently demonstrated a positive relationship between self-efficacy and student motivation across various educational contexts. Students' self-efficacies in reading English textbooks was the focus of Hasyim (2018) research A quantitative technique was used in this study. Universitas Islam, Indonesia's students majoring in Management and Faculty of Economics take Basic Academic Reading in the first semester of their studies. Closed-ended questionnaires and structured interviews were used

to obtain the primary data in this study (a 90% response rate). Purposive random sampling was performed, and Pearson's product moment correlative coefficient was used for data analysis. The findings of this study demonstrate that students' self-efficacies significantly impacts their motivation in relation to the interest, dedication, and self-confidence aspects of their motivation. Self-efficacy and motivation play crucial roles in helping students succeed academically, according to Maraghi et al. (2018).

Believing in one's abilities significantly impacts a student's drive, decisions, efforts, and perseverance, all contributing to academic success. A cross-sectional investigation on the association between educational self-efficacy and educational motivation among students enrolled in a virtual course in medical education at the Shahid Beheshti University of Medical Sciences in 2014-15 was conducted in this study. An exhaustive count of the numbers was used to complete the task. The demographic information questionnaire, Zajacova's self-efficacy questionnaire, and Vallerand's educational motivation questionnaire were used to collect factual data. Finally, Excel 2010 and SPSS version 18 were used to analyze the obtained data. The correlation between educational self-efficacy and academic success is favorable and direct. In addition, there was a strong correlation between students' self-efficacies and their desire to succeed in school. There was no statistically significant correlation between the various components of educational motivation and various degrees of academic success.

Rhew et al. (2018) conducted a study to determine whether a growth mindset intervention can increase the self-efficacy and motivation of exceptional education for teenagers. Sixth, seventh, and eighth grade children with reading disabilities were included in the study population. The research design included comparison and treatment groups, making it a quasi-experimental study. Brainology, a growth mindset intervention, was administered to the treatment group. Reader Self-Perception Scale 2nd Edition and the Motivation for Reading Questionnaire were used to determine if there were variations in the mean scores for self-efficacy and motivation to read. The motivation of adolescents unique education participants improved significantly due to the growth mindset intervention, but their feelings of self-efficacy remained the same.

An investigation of the work environment and self-efficacy characteristics in DKI Jakarta, Indonesia, by Tannady et al. (2019) aimed to assess their effects on professional job motivation. According to the results of the initial survey, which polled 30 employees and asked them seven questions to gauge their level of motivation, 53.33 % of respondents indicated a low level of motivation and required improvement. The effects of each exogenous variable on each variable were studied using structural equation modeling. Self-efficacy was employed as an exogenous variable with three dimensions that covered six indicator questions for the work environment factors. In addition, the motivation variable was an endogenous variable with two dimensions and four indicators. A structural model analysis was used to determine the effect of the workplace on the t-statistic. There is evidence that the value motivation score is 4.82, and a coefficient of 0.32 has an impact.

On the other hand, self-efficacy was found to impact t value, with a coefficient of 0.48. DKI Jakarta's creative industry workers' motivation is positively influenced by their work environment and self-efficacy, according to the R^2= 0688 value; it was shown that self-efficacy and motivation are linked among Tehran University of Medical Sciences midwifery students in Kheirkhah et al. (2017); its statistical population includes all undergraduate students at the School of Nursing and Midwifery in Tehran, Iran, and the Shahid Beheshti University of Medical Sciences. For self-efficacy and motivation, Cronbach's alphas of 0.819 and 0.809 were used to establish the validity of the questionnaire, respectively. Analysis of the data was carried out using SPSS version 16. Increased motivation, self-efficacy, and academic achievement can be achieved through proactive measures

such as lesson preparation, positive reinforcement, and financial rewards.

Among the STEM disciplines studied by Conradty et al. (2020) were mathematics, physics, chemistry, and technology, which are typically transdisciplinary for students between the ages of 9 and 19. Students were encouraged to imagine, investigate, experiment, test, modify, and theorize in all modules. Five exemplary courses, including physics, math, and biology, were chosen to measure motivation and inventiveness; as a result of these two studies, we better understand how people's motivation and self-efficacy are related to their level of active cognition, such as idea processing (Act) (Flow). Subjects ranged in age from nine to 18 years old. In conclusion, there was no evidence of gender or age bias in any variable analyzed. Participation interjected Self-efficacy and act but not career motivation or flow.

Students' motivation and self-efficacy are the primary goals of Shin (2018). It has been shown that project-based learning is a successful educational method because it encourages students to take an active role in their education. Students can build their knowledge and reflect on their projects through project-based learning, resulting in greater motivation and self-efficacy. The 79 students were divided into 13 groups, each working toward a specific objective. Projects and tasks for each team member were allocated to ensure the team's pre-determined goals were met. Students were required to work cooperatively on film production as part of this subject. There are strong indications that project-based learning improves students' motivation and enhances their ability to work together. After the project, students' replies to a post-survey poll indicated that they had a good outlook on project-based learning. More studies are needed to understand how project-based learning impacts motivation and self-efficacy among students of various grades, levels, and ages.

Using longitudinal analysis, Çetin and Aşkun (2018) sought to learn more about the impact of occupational self-efficacy on work performance. The discussion included 76 employees from various companies in Turkey's organized industrial zone. Over ten weeks, participants completed a weekly survey. It was found that occupational self-efficacy and intrinsic motivation considerably influence job performance, and intrinsic motivation is a partial mediator in this relationship.

The study by Malkoç and Mutlu (2018) aimed to evaluate the links between academic self-efficacy, motivation, and procrastination in the classroom. The researchers also examined whether student motivation mediates the link between academic self-efficacy and tardiness. More than 300 university students (218 women and 101 men) enrolled in Istanbul, Turkey's private education faculty, provided data for this study. The instruments used to collect data were the Self-Efficacy Scale, Student Motivation Scale, and Aitken Procrastination Inventory. According to the findings, students' academic self-efficacies and procrastination are partly linked to academic drive.

Sharififard et al. (2018) examined academic self-efficacy and motivation among Iranian medical science students. Sources and Procedures: At Qom University of Medical Sciences, Iran, 264 undergraduate nursing students were randomly recruited for this study. Data analysis was performed using multiple regression and descriptive statistics, and questionnaires were used to acquire data. According to the study findings, students' success was linked to their belief in their academic abilities outside the classroom. That performance inspires students to believe in their skills and self-efficacy and be more academically driven.

Moreira-Fontán et al. (2019) examined the structural connections between these constructs and teachers' self-determination and professional commitments. An online questionnaire was used to collect data from 350 secondary school teachers, who were then evaluated using a two-step Structural Equation Model (SEM) technique. The structural model indicated that all ICT-related factors were significant predictors of autonomous motivation, accounting for 26% of the variation in the model. Over 69.9% of the variation in work engagement can be explained by ICT-related

factors and self-motivation. Digital self-efficacy and institutional support also predicted emotional factors. Employees with high levels of digital self-efficacy and support for innovation were likelier to engage in their jobs. They shed light on the importance of these factors in teachers' motivation and engagement at work.

Students' self-efficacy and intrinsic motivation were examined in the Burić and Kim (2020) study, which used responses from both teachers and students and employed a sophisticated doubly latent multilevel structural equation modeling approach to examine the relationships between TSE, instructional quality (i.e., classroom management, cognitive activation, and supportive climate), and students' motivational beliefs. All 94 high school instructors and their students were involved in the study. TSE was favorably associated with the three instructional quality measures but not with student-motivating views. Students' motivating views were linked to instructional quality, as predicted.

Students' motivation and learning results in the area of flat-side building were examined by Farihah and Rakasiwi (2020). In the 2019-2020 academic year, this research was conducted in class 8 of SMP Negeri 12 Jember, east Java, Indonesia. In the form of a survey, this study used a quantitative method. The sampling method was based on simple randomness. Questionnaires and tests were used to collect data. The data were analyzed using a simple linear regression test. Their sense of self-efficacy influences students' drives to learn, but their learning results are unaffected. Self-efficacy has a 49.7% impact on learning motivation, whereas other characteristics have a 50.3% impact.

Foreign language motivation, language anxiety, and self-efficacy were explored by Ju and Mei (2021). Participants in the study were 98 Malay-speaking students of Mandarin Chinese at a Malaysian public institution. Participants' knowledge of Mandarin Chinese vocabulary was assessed using an impromptu vocabulary exam. Specific tools were used to test learning motivation, language anxiety, and self-efficacy in the acquisition of Mandarin Chinese vocabulary. In the multiple linear regression analysis, language anxiety and self-efficacy were significant predictors of Mandarin Chinese vocabulary performance, although motivation was not. Students' emotional states significantly affected their acquisition of Mandarin Chinese vocabulary, as demonstrated by this study.

Self-efficacy, learner autonomy, and motivation in second language acquisition were the focus of a recent study by Tabassam et al. (2021). This study was conducted to determine whether self-efficacy, student autonomy, and motivation had no bearing on mastering a foreign language like English. The research was conducted using a concurrent triangulation mixed-methods methodology. A customized questionnaire was used to collect data from undergraduates at carefully selected Pakistani public and private universities. Self-efficacy, learner autonomy, and motivation are strongly linked to second language acquisition. There was a wide variation in the influence of these factors on English learning. However, When it came to motivation and learner autonomy, self-efficacy had a fair influence on English language acquisition, but it excelled when it came to learner autonomy. Motivation was the most important factor for learning English as a second language.

Mede and Çinar (2018) studied the impact of merging content and language-integrated learning on students' motivation to study English at a private preparatory school in Istanbul, Turkey. An investigation will also be conducted on how students and instructors evaluate this method for teaching English. There were 19 intermediate-level pupils in attendance, along with their teacher. Pre- and post-motivation surveys collected quantitative data, while reflective diaries kept by the two CLIL tutors collected qualitative data on how they influenced students' drive to learn English. According to their reflective diaries, students and teachers found CLIL to be an

entertaining and effective method of teaching and learning English. Because of CLIL, students learned how to take more ownership of their education. Lastly, both groups discussed the challenges associated with this strategy, including scheduling, workload, and public speaking issues. Using CLIL in English classrooms is recommended and influenced by these findings.

The study by Ergün and Avcı (2018) analyzed how undergraduate students' knowledge-sharing behaviors (knowledge receiving and knowledge providing) in online learning settings are predicted by self-efficacy, motivation, and a sense of community characteristics. Students from two Turkish universities (N = 284) participated in the study. Stepwise multiple regression analyses were performed to identify the factors that predicted the giving and receiving of information as knowledge-sharing behaviors. Knowledge-sharing self-efficacy was the strongest predictor of knowledge-providing and receiving behaviors, followed by incentives and a feeling of community. In contrast, knowledge giving was only affected by internal factors, while knowledge receiving was only affected by external factors. The independence factor has a harmful impact on information acquisition but a positive impact on knowledge transfer.

The purpose of the research conducted by Blom et al. (2021) was to compare a waiting-list control group to two different behavioral interventions to determine which one significantly impacted participants' motivation levels, self-efficacy, and barriers to behavioral change. The investigation was conducted as a cluster randomized control experiment in two private firms. Before and after a six-month intervention, self-efficacy, motivation, and perceived impediments were examined. After the intervention, the iPA group exhibited considerably more autonomous and regulated motivation to engage in physical activity than the control group.

In a study by Wangid and Widyastuti (2021), 758 students completed a voluntary Google Form. The measure was divided into three categories: motivation, efficacy, and perception scales. Two-way analysis of variance was used to analyze the data. According to the findings, male and female students had different views on a teacher's efficacy, motivation, and perspective. Higher motivation, efficacy, and perceived instructor efficacy were found in female students than in male students. Students studying social sciences, humanities, and hard sciences were included. Regarding teacher motivation, efficacy, and perception, female students in the social humanity department had the highest scores, followed by male students in the social humanity department, female students in precise science, and male students in precise science.

An observational analytic strategy using a cross-sectional approach was employed by Wulandari et al. (2019). Purposive sampling was used to select 115 participants for the study. Data were analyzed using logistic regression with a significance threshold of 0.05. After controlling for age, gender, and education, this study found that patients' self-efficacies was most strongly influenced by motivation. The conclusions of this study show a strong link between patients' desire to recover from their sickness and the support of their families. The study concluded that patients with diabetes must build self-efficacy and drive to adhere to self-care regimens.

CONCLUSIONS

This study investigates the intricate relationship between self-efficacy and motivation among university students in Libya. These findings have significantly contributed to our understanding of how these psychological constructs function within Libyan higher education's specific cultural, institutional, and educational frameworks. Through rigorous statistical analysis, this research has demonstrated a strong positive correlation between self-efficacy and student motivation, emphasizing that students with higher levels of self-efficacy are more likely to engage in their studies, persist in the face of challenges, and achieve academic success. One of this study's key

outcomes is its identification of self-efficacy as a crucial predictor of student motivation. The statistical results revealed that self-efficacy alone accounted for a substantial proportion of the variance in student motivation levels. This finding underscores the importance of fostering self-efficacy among students to enhance their academic outcomes. This aligns with existing literature that consistently highlights the role of self-efficacy in promoting perseverance, engagement, and academic achievement across various educational contexts. However, the uniqueness of this study lies in its focus on the Libyan educational environment, which presents distinct cultural and institutional dynamics that influence student behavior and attitudes. Libya's education system is deeply embedded within a cultural framework shaped by Islamic principles, traditional societal values, and a history of political and economic challenges. These factors create a unique environment in which different variables may influence the development of self-efficacy and motivation compared to other contexts. The study highlighted several contextual factors that significantly shape students' self-efficacies and motivation in Libya. Cultural norms, including the emphasis on communal values and the influence of Shariah principles, can affect students' perceptions of their abilities and willingness to engage in academic tasks. Additionally, the governance structures within Libyan universities, characterized by centralized decision-making and limited student autonomy, may impact students' sense of control over their academic lives, further influencing their self-efficacy and motivation. The study findings highlight the need for context-specific interventions that address the unique challenges faced by Libyan students. For instance, educational policies and practices that promote student autonomy, encourage active learning, and provide opportunities for self-directed learning can enhance self-efficacy and motivation. Furthermore, integrating culturally relevant content and teaching methods that align with Islamic values can foster a learning environment in which students feel more confident and motivated to succeed. In light of these findings, this study has several important implications for educational practitioners, policymakers, and researchers in Libya. First, there is a need to prioritize the development of students' self-efficacy as a key component of educational strategies to improve academic outcomes. This could involve training teachers to adopt teaching methods that promote self-efficacy, such as providing constructive feedback, setting achievable goals and creating supportive classroom environments. Second, policymakers should consider the cultural and institutional factors that influence student motivation when designing educational policies. For example, policies that increase student participation in decision-making processes and provide opportunities for collaborative learning can empower students and enhance their self-efficacy. Additionally, addressing students' socioeconomic challenges, such as limited access to resources and financial instability, could reduce barriers to motivation and academic success. Third, this study highlights the importance of further research on self-efficacy and motivation in Libyan higher education. Given the limited body of research on this topic, future studies could explore the impact of specific interventions on student outcomes, examine the role of teachers and peers in shaping self-efficacy, and investigate the relationship between self-efficacy and other psychological constructs such as resilience and coping strategies. In addition, longitudinal studies that track changes in self-efficacy and motivation over time could provide valuable insights into the long-term effects of educational interventions. Finally, this research contributes to the broader literature on self-efficacy and motivation by providing empirical evidence from a context that has been underrepresented in previous studies. By focusing on Libyan universities, this study adds to our understanding of these constructs in a new cultural and educational setting and highlights the importance of considering cultural and institutional factors when conducting educational research. The findings underscore the need for a more nuanced approach to studying self-efficacy and motivation, considering the complex interplay of individual, cultural, and institutional factors. In

conclusion, this study provides valuable insights into the relationship between self-efficacy and student motivation in Libyan universities. The strong positive correlation between these constructs highlights the critical role of self-efficacy in fostering student motivation and success. The study's focus on Libya's unique cultural and institutional context has revealed important factors that influence student behavior and attitudes, offering practical recommendations for improving educational outcomes. As such, this research lays the groundwork for future studies and the development of targeted educational strategies to help Libyan students reach their full potential and contribute positively to society. By addressing the research gaps identified in this study and implementing the suggested interventions, Libyan educational institutions can significantly enhance the academic experiences and outcomes of their students. This, in turn, could lead to broader societal benefits, including a more educated and motivated population capable of driving positive change in Libya and beyond.

LIMITATION AND FURTHER RESEARCH

While providing valuable insights into the relationship between self-efficacy and student motivation among Libyan university students, the study is not without its limitations, which offer directions for future research. One notable limitation is the sample size, which, although representative of specific universities, may not fully capture the diversity of the broader Libyan student population or be generalizable to other cultural and educational contexts. Additionally, the study's cross-sectional design limits our understanding of how self-efficacy and motivation evolve over time, suggesting the need for longitudinal research that tracks these variables throughout students' academic journeys. Reliance on self-reported data introduces potential biases, such as social desirability and recall bias, which future studies could mitigate by incorporating objective measures of academic performance. Furthermore, while the study focused on the Libyan context, it did not fully explore how specific cultural and institutional factors influence self-efficacy and motivation, highlighting the need for qualitative research to provide a deeper, contextually grounded understanding. The scope of the variables examined was also limited, as the study did not account for other factors that could impact self-efficacy and motivation, such as socioeconomic status, family background, and peer influences. Addressing these gaps, future research could benefit from longitudinal studies, comparative cross-cultural analyses, and intervention-based research to assess the impact of targeted strategies on enhancing self-efficacy and motivation. Additionally, exploring the role of technology, the influence of teachers, and the broader socioeconomic and policy implications could provide a more comprehensive understanding of how to support student success in Libya and other similar contexts. These efforts are essential for developing educational systems that cater to students' academic needs and empower them to reach their full potential.

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