

Research Article

Modeling and Prediction of Student Achievement: The Role of Self-Efficacy, Motivation, Time Management, and Engagement

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Abstract

This study investigates the role of time management, self-efficacy, motivation, and engagement in predicting student achievement. Data were collected through an online questionnaire administered to bachelor's students in Business Informatics, Economics, and Law at a large higher education institution. The results indicate that students scored above average across all variables. Among the examined factors, self-efficacy and motivation emerged as stronger determinants of student achievement compared to time management and engagement. In addition, self-efficacy and motivation showed stronger positive correlations with academic performance and demonstrated greater predictive power. These findings contribute to the existing literature on academic performance by highlighting the relative importance of psychological and behavioral factors. The study provides practical insights for educators and institutions, emphasizing the need to support students' motivation and self-efficacy in order to enhance academic outcomes.

Keywords: University; Student Achievement; Time-management; Efficacy; Regression Model; Motivation; Engagement.

INTRODUCTION

Various work has been focused on “different components that are found accountable for students' achievement” [1]. Time management [2], student motivation [3], and knowledge construction and student engagement [4] seemed to predict academic achievement, participation, and related academic behaviours, along with the “student's competence was a noteworthy straight predictor of students achievement” [5]. Conceptual approaches have put forwarded that “teachers' motivational trusts related to various student academic changes through particular instructional applications and that teachers' belief on motivation and teaching practices is reciprocally interrelated” [6]. Even though “emotional commitment has obtained much awareness in the study work in education, moderately little is perceived about its predictors and relation to academic progress” [7],

meanwhile, “deeply engaged plays a vital role in encouraging students' academic performance” [8]. According to previous work has resulted that “student commitment came out as a reliable proxy for students' learning and their academic progress. It is an operational process betwixt the school and the students to achieve learning outcomes. It seems to have been compounded by the belonging sense, individual partaking, and cooperative commitment” [9].

The inquiry conducted [10] demonstrated that “32.6% of the variation in course outcomes is spelled out by course organization, 16.6% of the variation is expounded by faculty-student interaction, and 28.4% of the discrepancy is explicated by student involvement”. Another study [11] conveyed that “knowledge building and student involvement in teaching activities hold strongly active learning”. Moreover, “emotional self-efficiency is a vital component in student academic involvement and results, but few works have pointed out emotional self-efficiency structures from a instructional' student-centered approach and looked into their impact to self-management, inspiration, and academic record” [12], meantime, “teacher self-efficiency is linked to teachers' professional fulfilment, recall, motivation for improvement, and job-related stress, which in turn is associated with academic success” [13]. Furthermore, “the deterioration of students' accomplishments has been a well-known issue while their perception about concept formation and self-efficacy have been revealed to impact their academic record. Nonetheless, little is revealed about the significant connection among them” [14]. Students “who indicate an important sense of self-efficacy, use a large range of self-management approaches, and keep high level of motivation during their learning process are likely to succeed, those who are not sure about their competencies, require metacognitive support, and show low level of motivation tend not to achieve their aims” [15]. However, there is little research that employs time management, efficacy, motivation, and engagement, as well as their influence on student achievement. Hence, it is of principal importance to obtain more enlightenment into this association.

The focus of this study is on predictors of student achievement by time management, efficacy, motivation, and engagement along a survey, which was administered with bachelor students in the course of the last term of the school year. The questionnaire describes the independent constructs of the study; meanwhile, the data of the dependent variable were taken from the registry office of the university. The study aimed to secure advanced findings on whether and how the independent constructs determine student achievement.

LITERATURE REVIEW

The Determination of student achievement by time management, efficacy, motivation, and engagement

The association of motivational beliefs, autonomous motivation, and self-efficacy with intellectual engagement and achievement has been pointed up by many scholars [1, 6, 16]. The research works indicate that teaching self-efficacy [17], time management [2], and

students' high emotional self-efficacy [11], may influence students achieving better academic performance. The significant impact on students' achievement seemed to be related to students' conceptual perception [13], students' self-motivation [18], as well as previous scholastic achievement, learning involvement, and conscientiousness [19]. Some other studies [13]; other inference [13, 20, 21], substantiate that "teachers' preparation to teach cross-curriculum skills, students' acknowledgments of involved and structured instruction, and, students' expectations, of present-focused time perspective and academically underprepared status are important constructs in their linking to classroom management, instruction, and student progress". Meantime, the role motivation [22], game-based learning [11, 23], "controlled motivation, and the evidently two-sided coin" [24], "influences of self-based aims on student involvement and cognition result". Other scientific conclusions [25-28] revealed that "student engagement, boarding students, collegial school management and actively involved in the learning activity are found to be positively related to academic outcomes as well as personal development of the students". The withdrawal when experiencing anger [29], instruction in face-to-face mode [30], additionally, extrinsic motivation, and activities excitement and emotional figures within perceivable structuring context [31, 32], "had a meaningful positive effect on academic achievement". Some other work [33-36], showed that "boosters, creativity fostering teacher behaviour, inherent and compassionate motivations for becoming an instructor were positively related to student achievement, meantime, confinement, and restriction were associated with problematic inspiration and commitment".

Prediction of student achievement by time management, efficacy, motivation, and engagement

Effective scheduling and independent inspiration [37], spare time applying and ability of conveyance [38], additionally, transmission skill and science self-efficiency [39], as well as, proficiency-approach purposes and specific self-effectivity [40], and contrast of middle-term results in the area of face-to face and online learning [41], were revealed to be positive predictors of accomplishment. The other work indicates that school climate [3], "data processing, concern, point of view, attention, and study tools" [7], "teachers' outlook and context support, self-effectivity and autonomous inspiration" [11], came out as a powerful and steady predictor of stimulation, deep cognition and students' achievements.

While, the prediction of student achievement by experience with diversity and efficacy, intrinsic motivation and time management, self-efficacy beliefs, online instruction and competence were also emphasized by many research authors [5, 42-46]. At the same time, uncovering [9, 47-49], found that time spent on assignments, students' positive motivation and engagement, as well as the faculty were important predictors of student academic outcomes and engagement. Student success skills [50], self-efficacy, self-regulation and motivation [14], openness to experience [51], stress and socioemotional processes [52], managerial leadership [53], and school organizational structure increase student achievement results.

Research Gaps and Contributions

Referring to literature review, there exists a research work that incorporates the equation between time management, efficacy, motivation, engagement, and student achievement as a bivariate model, that includes one of independent variables and dependent variable. Meanwhile, there is a gap in examination studies that address the study of combined predictions in student achievement. Furthermore, it is evidenced that there is an absence of a multivariate equation among the study's constructs. Another argument is missing of two statistical models using in a single study; one that investigates group differences and the other that includes the relationship between independent and dependent variables.

Limited multivariate studies in Eastern European contexts, especially in Albania and potential cultural differences with other parts of the world is another argument to investigating these relationships. Furthermore, the study of these indications seemed to be significant. Consequently, this study is crucial to illuminate the prediction of student achievement by the independent variables based on a t-test and multivariate regression statistical analysis. Study results will shed light specifically on prediction of student achievement by time management, efficacy, motivation and engagement.

Research Framework

The conceptual framework is grounded on Social Cognitive Theory, that encompasses acquisition and performance of diverse skills, strategies, and behaviours, see Figure 1.

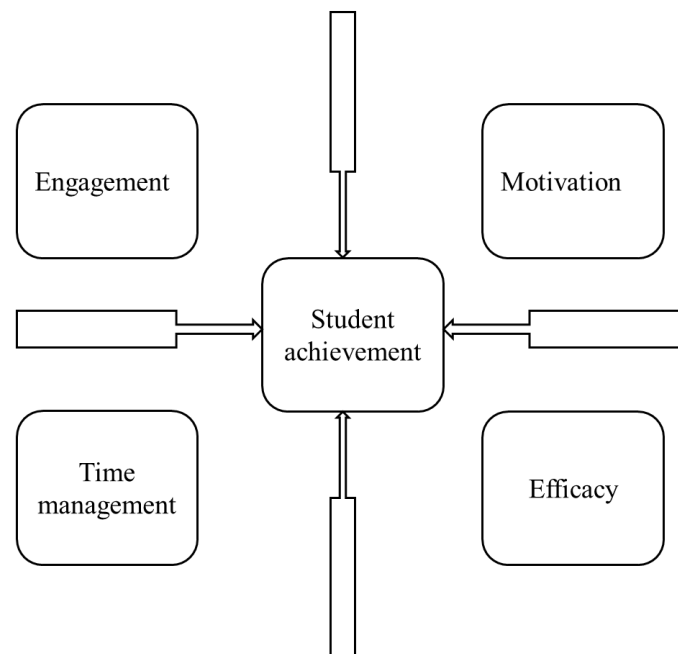


Figure 1. Theoretical foundation

Social cognitive principles have been applied to the learning of cognitive, motor, social, and self-regulation skills, as well as to the topics of violence, moral development,

education, health, and societal values [55]. The main processes include setting aims, reasoning about anticipated results of actions, measuring progress toward aims, as well as thoughts, emotions, and actions' self-regulating. Bandura explained that one distinctive feature of social cognitive theory is the central role it assigns to self-regulatory functions. The research framework revolves around student achievement, comprising five explanatory constructs. The examination aims to analyse the work on of the predictor variables on students' achievement. The structure following indicates the arrangement and correlation among the key components.

On the basis of the structure's elements, the Research Questions as well as the Hypothesis of this examination have been built, as come after:

Research Question 1: How time management, efficacy, motivation, and engagement do students expect to be at university?

Research Question 2: How do students' time management, efficacy, motivation, and engagement determine student achievement?

Research Question 3: How do students' time management, efficacy, motivation, and engagement predict student achievement?

Hypothesis 1: Time management positively predicts student achievement.

Hypothesis 2: Efficacy positively predicts student achievement.

Hypothesis 3: Motivation positively predicts student achievement.

Hypothesis 4: Engagement positively predicts student achievement.

METHODOLOGY

Framework and Sampling

Research data was accumulated at a large higher education institution in the capital city of the country. The sample of respondents consisted of bachelor's degree students studying at the university. An electronic questionnaire was delivered to bachelor' students in three faculties of the university: Information technology and innovation (31.3%), Economics (35.1%), and Law (33.6%). A cluster random sample was selected for the study. About 95% of the target respondents responded positively to the questionnaire development. Regarding study year the sample consisted of BA 1st year students (36.2%), BA 2nd year (30.8%), and BA 3rd year (32.9%). Referring to gender the respondents were composed of males (44.9%), and females (55.1%). The data about student's achievement were collected as grade point average (GPA) by the officially documented register.

Instrument

The independent variables, time management, efficacy, motivation, and engagement were estimated by a tool founded on work done [54]. The instrument was adapted and piloted before the administration with the sample of interest. The questionnaire was founded on the Likert model. The administration of the questionnaire was done through the final part of the school year. The gathered data were transferred into SPSS 26.0 where

t-test, Pearson correlation, and regression analyses were made. The questionnaire used in the research contained, in addition to the main variables, (1) time management, (2) efficacy, (3) motivation, and (4) engagement, also moderator, mediator and extraneous variables. The instrument contained different measurement scales, including dichotomous or binary ones, but mostly the Likert scale with 4 alternatives: (a) never, (b) rare, (c) sometimes and (d) always. Cronbach's alpha was used to measure the reliability of the questionnaire in the research. Alfa Cronbach's outputs of instrument' scales for the main variables vary from 0.84 to 0.93 validating a high reliability value.

Statistical Review

The answer of the first research question came out by outputs of basic statistics, respectively frequencies of variables. Research question two, regarding the determinants of student achievement, was analysed using a t-test for time management, efficacy, motivation, and engagement. The third research question, regarding the relation linking time management, efficacy, motivation, engagement, and students' achievement, was analysed by first scrutiny the Person correlation outputs. Second, it is applied linear regression test, to acquire more comprehension into this association.

The Assumptions

Multicollinearity was assessed using tolerance values, and variance inflation factors (VIF), see Table 1.

Table 1. Multicollinearity (VIF)

| Predictor | Tolerance | VIF |
|-----------------|-----------|-------|
| Time management | .990 | 1.010 |
| Efficacy | .262 | 3.824 |
| Motivation | .261 | 3.833 |
| Engagement | .924 | 1.082 |

All predictors meet acceptable criteria. Although Efficacy and Motivation show higher VIF values (~3.8), they remain below the critical threshold of 5, indicating no serious multicollinearity. Normality was assessed using skewness and kurtosis statistics.

Table 2. Normality (Skewness & Kurtosis)

| | Descriptive Statistics | | | | |
|---------------------|------------------------|-----------|------------|-----------|------------|
| | N | Skewness | | Kurtosis | |
| | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Time management | 741 | -.977 | .090 | .261 | .179 |
| Efficacy | 741 | -.769 | .090 | .190 | .179 |
| Motivation | 741 | -.785 | .090 | .265 | .179 |
| Engagement | 741 | -.939 | .090 | .572 | .179 |
| Student achievement | 741 | -.382 | .090 | -.669 | .179 |
| Valid N (listwise) | 741 | | | | |

As shown in Table above, skewness values ranged from -0.38 to -0.98 and kurtosis values ranged from -0.67 to 0.57 , all of which fall within the acceptable range of ± 2 .

The normality assumption was evaluated by examining residual statistics and standardized residuals, see Table 3.

Table 3. Residuals

| Residuals Statistics (a) | | | | | |
|--------------------------|----------|---------|--------|----------------|-----|
| | Minimum | Maximum | Mean | Std. Deviation | N |
| Predicted Value | 1.1814 | 3.4196 | 2.6410 | .58692 | 741 |
| Residual | -2.41956 | 2.71859 | .00000 | .71054 | 741 |
| Std. Predicted Value | -2.487 | 1.326 | .000 | 1.000 | 741 |
| Std. Residual | -3.396 | 3.816 | .000 | .997 | 741 |

(a) dependent variable: student achievement

The mean of the residuals was approximately zero ($M = 0.00$, $SD = 0.71$), indicating unbiased prediction errors. Standardized residuals ranged from -3.40 to 3.82 , which is within acceptable limits for large samples ($N = 741$). These results suggest that the residuals were approximately normally distributed and that the normality assumption was satisfied. Overall, diagnostic analyses indicated no violations of the assumptions of multicollinearity or normality of residuals.

RESULTS AND DISCUSSION

Variables Score Distribution

Table 4 introduces the frequencies' scores of time management, efficacy, motivation, engagement, and student achievement. 15.8% of respondents, as shown in the below table reported time management in never and rare measures of the tool; while 84.2% of respondents reported sometimes and always levels. Thus, roughly half of the sample of students permanently manage their time of study (49.1%). So, it is confirmed that there is a high value of time management by students in different activities at the university. 21.3% of respondents reported efficacy in never and rare measures of the instrument; meanwhile, 78.7% of respondents reported sometimes and always levels. Thus, efficacy is found in $\frac{1}{4}$ of the students in high level (25%). Hence, it is evidenced that one-fourth of the students' sample showed efficacy during their studies.

21% of respondents reported motivation in never and rare values; meanwhile, 78.9% of respondents reported sometimes and always levels. Hence, motivation is found in nearly $\frac{1}{4}$ of the students in high level (23.6%). Therefore, there is a big difference in motivation between low levels (never, rare), and high levels (sometimes, always). 5.1% of respondents reported engagement in never and rare figures; meanwhile, 94.9% of respondents reported sometimes and always levels. Thus, more than half of the sample of students (55.5%) are engaged during their teaching activities at the university. So, it is evidenced that there is a

very high value in the engagement of students. 36.9% of respondents reported student achievement at a low or medium level of the scale; at the same time, 63.1% of respondents outlined a high or very high level. Therefore, nearly all of the students demonstrated a high (47.2%) or very high (15.9%) level in their achievement. It is evidenced that there is a high value of student achievement at the university. In conclusion, in time management and engagement students scored above the average, meantime, in efficacy, motivation, and student achievement students scored below the average.

Table 4. Values of frequencies of constructs

| Value Labels | Time management (%) | Efficacy (%) | Motivation (%) | Engagement (%) | Student achievement (%) |
|-----------------|---------------------|--------------|----------------|----------------|-------------------------|
| Never | 3.4 | 9.2 | 9.3 | .5 | |
| Rare | 12.4 | 12.1 | 11.7 | 4.6 | |
| Sometimes | 35.1 | 53.7 | 55.3 | 39.7 | |
| Always | 49.1 | 25.0 | 23.6 | 55.2 | |
| Low level | | | | | 15.0 |
| Medium level | | | | | 21.9 |
| High level | | | | | 47.2 |
| Very high level | | | | | 15.9 |

Findings and Discussion on Student Achievement' Determinants

There are different variables, which determine student achievement during teaching and learning activities. As depicted in Table 5, the figures of a one-sample t-test indicated that the mean scores of students' time management (3.29) were higher than the expected mean value (.29) at ($t = 10.027$, $df = 740$, $p < 0.05$). This result indicates that students had effective time management at different teaching activities at faculty. In the same way, the previous work [2], proved that time management was a positive correlate of achievement. Thus, time management has been found as the major construct to determine student achievement at university. This implies that if lecturers effectively manage the time of teaching activities at the university level it would impact the student's academic progress.

Table 5. t-Test output of student achievement' determinants

| Variables | N | Mean score | SD | Mean difference value | t- value | Sig (2-tailed) |
|-----------------|-----|------------|--------|-----------------------|----------|----------------|
| Time management | 741 | 3.2996 | .81331 | .29960 | 10.027 | .000 |
| Efficacy | 741 | 2.9447 | .85798 | -.05533 | -1.755 | .000 |
| Motivation | 741 | 2.9325 | .84998 | -.06748 | -2.161 | .000 |
| Engagement | 741 | 3.4953 | .61208 | .49528 | 22.027 | .000 |

On the other hand, the frequencies' table also indicated that the mean scores of the efficacy construct (2.94) significantly higher than the expected mean value (3.00) at ($t = -1.755$, $df = 740$, $p < 0.05$). The result showed that students have enough efficacy at teaching

and learning process and efficacy decide better student achievement. Another investigation [16] showed also that “self-effectivity and independent inspiration enhance peer and rational commitment with a moderate result, and independent inspiration positively mediates the impact of self-effectivity on both peer and rational commitment”.

Regarding motivation, the results of a one-sample t-test indicated that the mean scores of motivation variable (2.93) significantly higher than the expected mean value (2.99) at ($t = -2.161$, $df = 740$, $p < 0.05$). This result also indicates that students have adequate motivation for university activities and motivation predicts better student achievement. At the same time, an alternative study [22], emphasized that “stimulation constructs such as recognized control, figure, and self-management predict students’ academic progress in a way that supports the variance described by rational tests. The empirical data is rooted in long-standing theory that stimulation constructs hold a significant function alongside constructs of cognition in comprehension students’ learning”. The while, a prior probe [24], “indicated to the more adjustable role of self-determining motivation relative to controlled one, and the two-edged-sword impacts of self-based aims on students’ engagement”.

The results of a one-sample t-test suggested also that the mean scores of the engagement construct (3.49) were higher than the expected mean value (3) at ($t = 22.027$, $df = 740$, $p < 0.05$). The output describes that students had a positive engagement in different teaching activities at the university and engagement determines students’ achievement. The other inference [25] also pointed out that “student engagement is found to be positively linked to learning outcomes as well as the personal development of the students”. In conclusion, efficacy and motivation were likely to determine better student achievement at university compared to time management and engagement.

Findings and Discussion about the Prediction of Student Achievement

In the Table 6 it is revealed a negligible correlation linking time management and student achievement, $r = .054$, $n = 741$, $p > .005$. In consequence, high figures of time management are correlated with high figures of student achievement, but the result is not important. Meantime, there exists a strong positive affiliation betwixt efficacy and student achievement, $r = .616$, $n = 741$, $p > .005$. Thus, high scores of efficacy construct are linked with high scores of student achievement, and the result is significant. There be also a strong positive correlation connecting motivation and student achievement, $r = .611$, $n = 741$, $p > .005$. Consequently, high values of motivation variables are correlated with high values of student achievement, and the result is important. On the other hand, there exists a low positive correlation joining engagement and student achievement, $r = .179$, $n = 741$, $p > .005$. Consequently, high scores of engagement variables are connected with high scores of student achievement, but the result is not so important. In conclusion, efficacy and motivation correlate positively more strongly with student achievement in contrast to time management and engagement.

Additionally, a multiple regression analysis was conducted to examine the predictors of student achievement as can be seen in Table 7.

Table 6. Outputs of Pearson correlation test

| Independent variables | Student achievement | | |
|-----------------------|---------------------|-------------------------|----------------|
| | N | Pearson correlation (r) | Sig.(2-tailed) |
| Time management | 741 | .054 | .000 |
| Efficacy | 741 | .616 | .000 |
| Motivation | 741 | .611 | .000 |
| Engagement | 741 | .179 | .000 |

Table 7. Regression summary for variables predicting student achievement construct

| Model Summary (b) | | | | |
|-------------------|----------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .637 (a) | .406 | .402 | .71247 |

(a) Predictors: (Constant), Engagement, Time management, Efficacy, Motivation

(b) Dependent Variable: Student achievement

Effect Size is evaluated by using $f^2 = \frac{.406}{1-.406} = \frac{.406}{.594} = 0.68$

The model shows a large effect size ($f^2 = 0.68$). The overall regression model explained 40.6% of the variance in student achievement ($R^2 = .41$, adjusted $R^2 = .40$), corresponding to a large effect size (Cohen's $f^2 = 0.68$).

The R^2 figure out the affinity among time management, efficacy, motivation, engagement, and student achievement, as shown in Table 8, is .406%, $p < .005$. This result indicates that 40.6% of the output is in concordance with the regression approach. The statistical approach fulfils statistical significance (Sig. = .000; this signifies that $p < .0005$). The beta value.025 designates that 2.5% of the variability in student achievement is elucidated by time management. As a deduction, the prediction value of time management is very low. Meantime, a regression analysis conducted before [38], shows that that "students' stimulation is predicted by their free time managing and communication abilities, but at a negligible measure". Additionally, not only spare time applying but also conveyance ability predicts students' progress, although the effect is in low scale. A reason for that conclusion may be related to co-correlation effect between independent and dependent constructs. Therefore, future studies may investigate co-effect of other combinations in student achievement. Hence, Hypothesis 1 "Time management positively predicts student achievement", is supported.

At the same time, beta value .344 represents that 34.4% of the variation in student achievement is described by efficacy. Hence, prediction figure of efficacy is important. Other authors [39], in their investigation also revealed that "self-efficiency of teachers for managing non-desired students' behaviours was a positive predictor of commitment of teachers in cognition". Thus, transmission skill and science self-efficiency correlates positively with cognition commitment of teachers, meaning students' progress. Therefore, the effect is caused half by instruction disposition and half by self-efficiency. Meanwhile,

in our study, efficacy explains a high figure of student's achievement. Therefore, Hypothesis 2 "*Efficacy positively predicts student achievement*", is also supported.

Table 8. Unstandardized and standardized outputs

| Dependent variable | Independent variables | R Square | Unstandardized coefficients | Standardized coefficients | Sig. |
|---------------------|-----------------------|----------|-----------------------------|---------------------------|------|
| | | | B | B | |
| Student achievement | Time management | .406 | .029 | .025 | .000 |
| | Efficacy | | .369 | .344 | .000 |
| | Motivation | | .339 | .313 | .000 |
| | Engagement | | .013 | .009 | .000 |

The beta value .313 signifies that 31.3% of the variability in student achievement is justified by motivation. Hence, the prediction value of motivation is significant. In the meantime, an unearthing [8], indicated that "understanding of teachers and context support for students, self-efficiency, and autonomous stimulation significantly predict deep commitment in cognition and emotional component". In addition, previously work [15], pointed out that "self-efficacy, self-regulation, and motivation affect adults' academic achievement". In contrast to our study, these works were dedicated understanding of teachers, context support, self-efficiency or self-efficacy, autonomous stimulation, self-regulation, and motivation the impact in students' achievement. Our result explains a high measure of change in dependent construct, indicating the same trend but differences to previous work. Therefore, Hypothesis 3 "*Motivation positively predicts student achievement*", is supported.

In [49] students' positive motivation and engagement were important predictors of student academic outcomes and engagement.

While the beta value is .009 designates that 0.9% of the variation in student achievement is interpreted by engagement. Hence, the prediction value of engagement is negligible. Further, an outstanding work [49], showed that "faculty and individual and cooperative engagement were the contributing predictors of student engagement and management abilities that in turn impact student academic success with a nonsignificant value". Wilst, in current study, prediction value of engagement toward students' achievement is positive but very low. This may be by overlapping effect of independent constructs in the research model. Future studies may measure partial correlation between other constructs and students' achievement. Hence, Hypothesis 4 "*Engagement positively predicts student achievement*", is also supported. In conclusion, by contrasting four constructs, it may be resulted that efficacy and motivation predict better student achievement as opposed to time management and engagement.

SUMMARY AND CONCLUSION

The aim of the is to investigate the prediction of time management, efficacy, motivation, and engagement into student achievement. One of the main limitations of the research that should be recognized is the implementation of a self-report instrument by respondents to measure the independent variables. Depending on the results of the current study it is possible to conclude that respondents scored above the mean in time management and engagement factors, and below the average in efficacy, motivation, and student achievement constructs. In addition, efficacy, and motivation were possible to determine better student achievement, compared to time management and engagement to resolve student achievement in the teaching and learning activities. At the same time, it is found that efficacy and motivation correlate positively more strongly with student achievement, as opposed to time management and engagement.

Furthermore, the best predictors of student achievement were efficacy and motivation, in contrast to time management and engagement. Universities should increase their interventions through different activities to improve especially students' efficacy and motivation. Also, special care should be taken to ensure quality in the treatment of students. On the other hand, future researchers can implement longitudinal studies or other designs to deepen research on student achievement. The results of this study amplify research design methodology as multivariate equation among the study's constructs and applying two statistical models using in a single study were used to investigate the relationships among constructs. Overall, the findings of this study enhanced the theoretical development of Social Cognitive Theory [55], that encompasses acquisition and performance of skills and strategies, as well as practical understanding as time management, efficacy, motivation and engagement are important constricts that predict student achievement.

AUTHOR CONTRIBUTIONS

Conceptualization, A.S.; Methodology, N.X.; Literature review, A.S., E.B., & N.X.; Descriptive and Inferential analysis, N.X.; Original draft preparation, A.S.; Review and Editing, A.S., E.B., & N. X.; Supervision, A.S.

CONFLICT OF INTERESTS

The authors declare that there is no conflict of interest.

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