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Relationship between time management behaviors and self-efficacy with academic performance in e-learning environment

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Abstract

The aim of this study was to investigate the relationship between time management behaviors and academic self-efficacy with academic performance a sample of master students in Bandar Lengeh (Iran). Participants were 180 students were selected by the convenience sampling method. The Time Management Behavior Scale and General Academic Self-Efficacy Scale (GASE) were used for data collection. The academic performance was the grade point average(s) (GPA) of the first semester of 2021. Regression analysis was used to determine which variables were associated with academic performance in e-learning environment. It was found that students' time management and self-efficacy were correlated significantly with grade point average. Totally, time management behaviors and self-efficacy are the key factors that predict the good academic performance in e-learning environment. The findings have useful implications for the design of e-learning courses in higher education

Keywords
academic performance, time management, self-efficacy, e-learning

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Introduction

Time management skills have been identified as having a "protecting" effect on stress (Misra & McKean, 2000) and are a important clue of higher performance and lower stress and anxiety in university students (Kearns & Gardiner, 2007). However, many students find it hard to regulate both their studies and their external lives (Van der Meer et al., 2010) leading to time mismanagement, concentrated sleep patterns, and increased levels of stress (Pharris et al., 2021). Poor time management actions include not assigning time properly for work projects, studying for exams, and failing to meet deadlines set by academic staff are frequently documented as a major source of stress and poor academic performance (Nadinloyi et al., 2013). Moreover, empirical evidence recommends that effective time management is related with greater academic achievement (Macan et al., 1990). In a study, MacCann et al. (2012) examined relationships between the Big Five personality factors, time management, and academic performance in 556 community colleges students. A path model controlling for vocabulary, gender, and demographic covariates confirmed that time management mediates the relationship between conscientiousness and students' academic achievement at community college.

The self-efficacy component of Albert Bandura's social-cognitive theory is supposed by many scholars to be an important theoretical contribution to the examine of academic achievement, motivation, and learning (Artino, 2012). According to Bandura (2006), self-efficacy beliefs lie at the central of human agency. It is not sufficient for individuals to have the necessary knowledge and skills to perform a task; they also must have the belief that they can successfully perform the required behavior(s) under typical and, essentially, under challenging circumstances. Effective functioning, then, requires skills and efficacy beliefs to perform them appropriately—two components that develop jointly as individuals grow and learn. Bandura (2006) defined self-efficacy as: 'People's judgments of their capabilities to organize and perform courses of action required to attain designated types of performances.' Numerous studies cited the positive relationship between academic self-efficacy and academic performance (Tamanneifar et al., 2013; Yokoyama, 2019; Zhao et al., 2021; Zohrevand, 2010). Honicke and Broadbent (2016) in a review, integrates 12 years of research on the relationship between academic self-efficacy and university student's academic performance, and known cognitive and motivational variables that explain this relationship. According to results, academic self-efficacy moderately correlated with academic performance. Several mediating and moderating factors were identified, including

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effort regulation, deep processing strategies and goal orientations. Given the paucity of longitudinal studies identified in this review, further research into how these variables relate over time is necessary in order to establish causality and uncover the complex interaction between academic self-efficacy, performance, and motivational and cognitive variables that impact it.

Online teaching transition caused by school lockdown during the 2019 corona virus pandemic (COVID-19) has led to a number of troubles both from the teachers' and the students' perspective. The first half of 2020 witnessed schools lockdown across 172 countries, which impacted the education of approximately 1.5 billion students/learners (Ma et al., 2021). Compared with the physical classroom teaching, teachers reported spending extra time to adapt themselves to the online teaching environment, designing methods to engage with students and knowing individual students' understanding of the teaching content (Scull et al., 2020). Moreover, it became critical for teachers to provide psychological support for students who were at a higher risk of depression due to isolation from their teachers and colleagues (Scull et al., 2020).

The specific factors of lockdown across Covid have had several effects on the cognitive and emotional outputs of the learners. Therefore, in the present study, the relationship between time management and academic self-efficacy with the academic performance of master's degree students has been studied. Findings can be helpful in designing online trainings in the future.

Material and Methods

The present research is a correlational type that was conducted among male and female students of master's degree in educational psychology and educational research of Bandar Lengeh Islamic Azad University in 2021. From the entire research population, 180 people were selected using the random cluster sampling method and answered the questions of the questionnaires. The students were in online classrooms and responded to the questionnaires, virtually. The data collection tool was academic self-efficacy and time management questionnaires. The academic performance was the grade point average(s) (GPA) of the first semester of 2021. To examine the research hypotheses, multiple regression was used in SPSS-26.

Time Management Behavior Scale: Time Management Behavior Scale (Macan et al., 1990) was used to examine students' reflections on their strategies for the time management of their academic load. Participants were asked to rate 34 statements using a 5-point scale, running from

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seldom true through to very often true. Macan et al. (1990) provided adequate evident for reliability and validity of this sale. In the present study, the reliability of this questionnaire was calculated as 0.89

The General Academic Self-Efficacy scale: The General Academic Self-Efficacy scale (Nielsen et al., 2018) was used to measure academic self-efficacy. This five-item self-report scale assess academic self-efficacy on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Akanni and Oduaran (2018) reported acceptable levels of internal consistency with a Cronbach's alpha of 0.81.

Results

Before examining the research hypothesis, the assumption of normality of variables was examined and confirmed. In Table 1, the mean and standard deviation of the time management behaviors, self-efficacy and academic performance are presented. The results of multiple regression was presented in Table 2.

Table 1

The mean and standard deviation of time management behaviors, self-efficacy and academic performance

	Mean	SD
Academic performance	16.96	2.67
Time management behaviors	16.19	2.43
Self-efficacy	19.87	2.03

Table 2. Results of multiple regression

Model	B	Std. Error	Beta	t	p	R	R^2	F	p
(Constant)	2.827	.368	-	7.682	.000				
SEFFICACY1	.197	.075	.194	2.638	.009	0.67	0.45	4.28	0.01
Time management behaviors	.219	.091	.221	2.299	.006				

Dependent Variable: Academic performance

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According to Table 2, the regression model explained the 45% of variance in Academic performance. According to the results, time management behaviors (beta = 0.221, p < 0.01) and self-efficacy (beta = 0.221, p < 0.01) associated with academic performance significantly.

Discussion

The present study was conducted with the aim of investigating the relationship between time management and academic self-efficacy with academic performance in master students. The findings showed that the model explained a significant percentage of the variance of academic performance. Based on the findings, time management and academic self-efficacy positively and significantly predicted students' academic performance in the e-learning environment. The obtained findings are consistent with previous studies (Honicke & Broadbent, 2016; Yokoyama, 2019; Zhao et al., 2021; Zohrevand, 2010).

Time management helps students to follow their academic activities in a specific schedule by prioritizing the available time. Committed and regular time management can lead to an increase in academic performance. Having a regular schedule can help the learner both in terms of motivation and information. Following a regular schedule gives the person the message that the goal is attainable. Imagining goals can increase a person's motivation (Pekrun et al., 2009; Wirthwein et al., 2013). Also, the schedule can provide useful information about the amount of progress to the individual. Time management helps the student to organize his schedule based on the distance and proximity to the goals and change the priority of his activities if necessary.

Also, high academic self-efficacy beliefs can lead to an increase in academic performance by influencing students' academic motivation. Academic self-efficacy refers to the students' beliefs and attitudes toward their capabilities to attain academic success, as well as belief in their ability to accomplish academic tasks and the successful learning of the provisions (Bandura, 2006; Yokoyama, 2019). The role of self-efficacy beliefs in academic performance is a motivational role. Therefore, public self-efficacy information sources can also increase academic self-efficacy. Based on this, it can be predicted that high academic self-efficacy will help to increase the academic performance by strengthening the individual's motivation. Generally, the findings support the role of time management and academic self-efficacy in academic performance. As in face-to-face education, in electronic education, time management and self-efficacy can be

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effective on students' academic performance. The findings provide useful implications for the design and implementation of online training courses.

Data availability statement

The original contributions presented in the study are included in the article/supplementary material; further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by ethics committee of Islamic Azad University of Bandar Lengeh.

Author contributions

AS contributed to the study conception and design, material preparation, data collection and analysis. All authors contributed to the article and approved the submitted version.

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