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Mediating Effect of Goal Acquisition on the Relationship between Personal Factor and Self-Directed Learning †

Nursyamilah Annuar [1,*], Dazmin Daud [2], Sabiroh Md Sabri [1], Nurul Labanihuda Abdull Rahman [1], Sharifah Khairol Musairah [1] and Hasyeilla Abd Mutalib [1]

[1] Faculty of Business and Management, Universiti Teknologi MARA, Cawangan Perlis, Kampus Arau, Perlis 02600, Malaysia
[2] Faculty of Business and Management, UCSI University, UCSI Heights 1 Jalan Puncak Menara Gading, Taman Connaught, Kuala Lumpur 56000, Malaysia
* Correspondence: nsyamilah@uitm.edu.my
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Abstract: This study was conducted to examine the relationship between personal factors and self-directed learning, the relationship between goal acquisition and self-directed learning, and the role of goal acquisition as a mediator in the relationship between personal and self-directed learning. Empirical studies are still lacking on the role of goal acquisition as a mediator, especially between personal relationships with self-directed learning. The study was conducted on a sample of 378 students in public universities. Hypothesis testing was performed using SEM-AMOS analysis. We found that emotion, family support, and goal acquisition have a positive and significant relationship with self-directed learning, and that goal acquisition has a significant role as a mediator between personal factors and self-directed learning. The results of this study prove that goal acquisition serves as a mediator in the relationship between personal factors and self-directed learning. These findings also indicate the importance of personal elements in influencing student excellence in self-study.

Keywords: self-directed learning; human resource development; organizational behavior

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1. Introduction

In this study, personal factors are defined as things that are dynamic and result from the individual self, consisting of psychological and physical systems that determine one's adaptation to the environment [1]. In this study, we used the Subjective Well-Being model initiated by [2]. According to [2], individuals react differently to the same situation and evaluate the situation based on previous expectations, assessments, and experiences. Subjective well-being encompasses emotional responses, domains of satisfaction, and life satisfaction [3,4]. The domain of satisfaction covers the dimensions of work, family, health, and emotions because these dimensions are seen to have a more impact on open and distance learning students. However, in this study, we tested the dimensions of family, health, and emotions only, because these dimensions are seen to have more impact. Based on the model of Subjective Well-Being, the family dimension involves an individual's ability to gain family support. Health, on the other hand, looks at the level of fear, anxiety and anger. As for the emotional dimension, it involves pleasant and unpleasant feelings. The mediating variable in this study is goal acquisition, referring to the management of human behavior, which includes what a person thinks and feels and behaviors that lead to goal achievement, such as self-reflection [5]. As for the dependent variables, this study takes into account the maturity of students in applying the process of self-directed learning. Self-directed learning is interpreted by [6] as a process in which an individual takes the initiative, with or without the help of others, to diagnose learning needs, formulate learning goals, identify resources for learning, select and implement learning strategies, and evaluate learning outcomes. Self-directed learning is an improvement in terms of the knowledge,

skills, achievement, or personal development of students who choose to use any method in any situation at any time [7–9].

Studies have found that students' self-directed learning is at a low level, especially involving students pursuing open and distance learning programs [10–13]. This is due to the burden of responsibilities that must be borne by students who work in addition to trying to achieve excellent academic performance. This lack of student maturity in this self-directed learning process invites significant losses for the student as well as the organization [14–16]. The burden that students face involves managing their time, family, and career to succeed in this self-directed learning process. From an organizational point of view, organizations suffer losses when students who are sponsored by tuition fees are unable to complete their studies within the stipulated period and are unable to contribute to organizational development [17–19]. Low self-directed learning skills will have an impact on a student's motivation [20,21], self-confidence [22], ability to control learning [23], and ability to take initiative [24] to achieve academically as well as professionally.

Studies have found that open and distance learning students have higher levels of work and study stress as compared to students of full-time learning [12]. In addition, there are also studies that have found that students experience stress not only as a result of work stress, but also due to family burdens, health problems, and an uncomfortable environment [25,26]. Students who experience high stress may fail to control their emotions [27], which in turn can involve injury as well as death [28]. There is evidence to suggest that students commit suicide as a result of academic stress [19].

Personal factors refer to a person's personality. Personality can be interpreted as behaviors that characterize a person [29]. The personal dimension is divided into five categories: work, emotions, family support, finance, and health [2]. Family and partner support, health, and emotions are the factors that determine students' behavior in self-directed learning [30–34]. Personality is also related to student emotions that influence student goal achievement [35–39]. Emotional stability helps students implement goal acquisition more effectively [21]. Students who are able to control their emotions are predicted to have high levels of goal achievement [40,41]. If students are having problems with their family or spouses, student performance in learning will be disrupted [42,43]. High family support for student learning is expected to influence student goal achievement [30–32]. Students with problems among family members have lower levels of goal achievement [42]. Similarly, good health can increase student goal achievement [30,32,33,43,44]. Physically healthy students are able to implement their goals well [16]. Conflict theory suggests that individuals with limited time and energy as well as additional roles experience stress in meeting their needs, causing even more role conflict [45,46].

Goal acquisition is considered to be a stable tendency to take personal initiative in a variety of activities and situations [47]. Goal acquisition has a positive relationship with students' self-directed learning [24,48]. Students with high goal achievement show a more self-directed attitude in their learning [49]. Students who implement goal acquisition regularly can improve their academic performance [15].

2. The Role of Goal Acquisition as a Mediator

The acquisition of goals helps individuals acquire knowledge, improve social quality, increase the onset of perseverance in performing activities, achieve better performance, and develop a sense of discipline. Goal acquisition is an incentive that forces an individual to act towards the achievement of some goal. As defined by [50], goal acquisition is interpreted as a solid target that is expected to be achieved in one's learning. Goal acquisition is a key factor in effective management of the learning process [51]. Goal acquisition also refers to the aspect of self-reflection [17].

Goal acquisition was chosen as a mediator because it is an aspect related to positive self-development outcomes and serves as a liaison for psychological aspects for a person related to external factors such as positive performance, commitment, and responsibility among students [52–54]. Studies have found that goal acquisition serves as a mediator

between other variables (such as task factors) and academic excellence variables in general [55] and self-directed learning maturity in particular [52]. Based on the theory of Subjective Well-Being, students with high life satisfaction will be able to increase their appreciation for a completed task which can then positively and directly affect the level of goal achievement [56,57].

Based on the context of this study, life satisfaction is a personal factor that consists of satisfaction in terms of emotions, family support, and health, and will directly affect the level of achievement of student goals. Meanwhile, the goal acquisition relationship is able to influence the maturity of students' self-directed learning based on the self-directed learning model by [7], which emphasizes students' responsibility for learning. Research by [50] linked Goal Acquisition Theory in describing the role of goal acquisition as a mediator in the relationship between life satisfaction and positive outcomes through responsibility for learning. Responsibility for learning can promote goal acquisition and have a positive impact on work outcomes such as job performance [15,57,58]. Research by [59] also criticizes that students with goal acquisition are confident that persistent effort will lead to positive outcomes, and confidence in learning is based on this belief.

Past researchers have noted that emotional stability [60], family support [61], and health [24] can influence goal achievement. Meanwhile, the acquisition of goals has the result of responsibility for learning, such as maturity in self-directed learning. The relationship between these variables proves that goal acquisition can play a mediating role in the relationship between personal factors and self-directed learning. However, there is still no specific study that examines the role of goal acquisition as a mediator in the relationship between personal factors and self-directed learning, especially in the field of distance education. Nevertheless, there are still past studies that use goal acquisition as a mediator of the relationship between other variables. Therefore, we propose the following hypotheses:

Hypothesis 1 (H1). *Goal acquisition has a mediating effect on the relationship between personal factors and self-directed learning*.

Hypothesis 1a (H1a). *Goal acquisition has a mediating effect on the relationship between emotional dimensions and self-directed learning*.

Hypothesis 1b (H1b). *Goal acquisition has a mediating effect on the relationship between the dimensions of family support and self-directed learning*.

Hypothesis 1c (H1c). *Goal acquisition has a mediating effect on the relationship between health dimensions and self-directed learning*.

Study Framework

We attempted to integrate personal and self-directed learning factors in addition to moderating goal acquisition. We adapted different models, concepts, and theories and integrated them into the framework of the study. These include the Personal Responsibility Orientation (PRO) model, the Subjective Well-Being (SWB) model, the Theory of Multiple Perspectives, and Goal Acquisition Theory, illustrated in Figure 1. Figure 1 shows that goal acquisition mediates the relationship between personal factors and self-directed learning. Personal factors refer to psychological and physical changes due to events that occur in the environment and affect the level of maturity of students. Individual personalities influence student behavior. The personal component refers to family support, health, and emotional support. These three factors are grounded in the Theory of Multiple Perspectives and the Subjective Well-Being model. Based on Brockett and Hiemstra's PRO model, students are responsible for their own learning and also take risks on the impact of each decision made. For students who are less satisfied with their lives, they still need to be responsible and accept the consequences of decisions made in self-directed learning. High life satisfaction in personal factors helps students to achieve a high level of self-directed learning [62].

In addition, goal acquisition mediates the relationship between personal factors and self-directed learning. Goal acquisition is a strong target that is expected to be achieved in one's learning [50]. Goal setting helps students deal with challenges in learning. Increasing the level of maturity of students' skills to learn independently is the desired result that will change or improve the skills and behaviors of individuals to continue to progress and be enthusiastic to apply self-directed learning in school or their career. The framework of the study (Figure 1) shows the links between personal factors (family support, health, and emotional) and the maturity level of students' self-directed learning skills. Goal acquisition mediates the relationship between the two types of variables.

Figure 1. Conceptual framework.

3. Research Methodology

This study is a descriptive and quantitative deductive study, the conceptual framework of which is based on the conclusions made from the literature review. The sampling method used in this study is the Non-Probability Sampling method, which applies the purposive sampling technique, or judgmental sampling. Purposive sampling is a procedure in which a group of subjects with certain characteristics are selected as study respondents [63]. The respondents of this study consisted of students enrolled in a bachelor's degree program through online distance learning platforms in public universities in Malaysia.

Power analysis categorizes the ability of a study to obtain a meaningful effect to identify the sample size required in order to provide the necessary power for an effect on scientific interest [64]. Among the software built is STATISTICA, which is a comprehensive statistics package that offers the option to calculate sample size based on power analysis for the structural equation model. Therefore, this software was used to calculate the required sample size by emphasizing the values of RMSEA = 0.08, df = 27, power goal = 0.80, and error probability $\alpha = 0.05$. As a result, the proposed minimum sample size is 275.

Instruments for self-directed learning, goal acquisition, and personal factors use a Likert scale with five answer choices scaled from 1 to 5, with 1 representing "strongly disagree" and 5 representing "strongly agree". As for the demographics of the study, the measurement item contained seven questions related to gender, age, race, academic qualification and marital status. Emotion and family support were measured using the Emotional Quotient Inventory, and health was measured using the Patient Health Questionnaire. The measurement instruments evaluated emotions (11 questions), family (9 questions), and health (8 questions). We also used the Self-Directed Learning Readiness Skills questionnaire (25 questions). The reliability of the coefficients was as follows: emotion, $\alpha = 0.876$; family, $\alpha = 0.742$; health, $\alpha = 0.848$; goal acquisition, $\alpha = 0.866$; self-directed learning, $\alpha = 0.836$. Cronbach's alpha coefficient of 0.7 and above is considered a reliable measurement [65]. Therefore, the CR values for all instruments are at a suitable level.

4. Findings

The study respondents consisted of 378 people. Males (36%) represented 136 people and females (64%) represented 242 respondents. All study data for the three variables, namely, personal factors, goal acquisition, and self-directed learning, were analyzed by structural equation modeling (SEM) analysis using IBM SPSS AMOS version 2.1 software (Armonk, NY, USA). The measurement model was run first before implementing the structural equation model [65]. Table 1 shows the results of the measurement model regarding the reliability and validity of the study instruments. The recommended level is

>0.5 [65]. A total of 14 items were dropped due to a load value of less than 0.5. However, the reliability value is at the good category level where the composite reliability value is in the range of 0.742 to 0.876.

Table 1. Cronbach's alpha values.

Construct	Instrument	No. of Items	Cronbach's Alpha Values
Self-Directed Learning Skills	PRO-SDLRS [66]	25	0.836
Emotion	*Emotional Quotient Inventory* [67]	10	0.876
Family	*Emotional Quotient Inventory* [67]	10	0.742
Health	Patient Health Questionnaire [68]	6	0.848
Goal acquisition	Learning Practices [69]	15	0.866

The structural equation model used a bootstrapping procedure of 5000. The structural equation model is used to study the model and explain the direct relationship between personal factors and self-directed learning and the indirect relationship through goal acquisition intermediaries. The results of the study after evaluating the fit of the structural model show that the data are consistent with the model: χ^2 (677) = 2075.761, p = 0.000, χ^2/df = 3.066, GFI = 0.786, CFI = 0.821, IFI = 0.822, TLI = 0.804, RMSEA = 0.074. The results show that the correspondence indices such as CFI, IFI, and TLI are very close to 0.9, which is the level of acceptance. GFI (0.786) and NFI (0.757) are also close to the acceptance criteria of 0.9. Chi-squared (χ^2/df) is below the value of 5, which is an indicator value of the acceptance of the match between the hypothesis model and the data that have been collected. The value of RMSEA is 0.074, which is a value close to the match. The results show that the direct relationships are positive and significant, complying with the set value with a significance level of $p < 0.01$. However, health showed an insignificant value. Therefore, only three study hypotheses were accepted and supported.

The maximum likelihood estimation technique was used to predict the model. The results of the path analysis hypothesis for the model structure are presented in Table 2. As illustrated in Table 2, the results show that personal factors have a significant and positive relationship with self-directed learning skills (emotion (β = 0.306, CR = 5.230, p = 0.000); family (β = 0.076, CR = 1.536, p = 0.124); health (β = 0.098, CR = 1.850, p = 0.064)). Therefore, based on the structural model, our hypothesis is supported.

Table 2. Regression weights in the direct hypothesis model.

Hypothesis Relationships	Standardized Regression Weights Beta	Unstandardized Regression Weights Estimate B	S.E.	C.R.	*p* Value
Emotion	0.306	0.221	0.042	5.230	***
Family	0.076	0.057	0.037	1.536	0.124
Health	0.098	0.053	0.029	1.850	0.064
Goal Acquisition	0.836	0.759	0.077	9.908	***

Note: If a p-value is less than 0.001, it is flagged with three stars (***).

The results of the study in Table 2 show a positive and significant relationship between goal acquisition and self-directed learning, with β = 0.836, C.R. = 9.908, and p = 0.000. Thus, the hypothesis is supported.

Next, we examined the significant and positive intermediate effect of goal acquisition on the relationship between personal factors and self-directed learning. The bootstrapping approach was used to this end. AMOS software can directly generate bootstrapped bias-corrected confidence intervals for indirect effects. Parallel to Multi-Model Analysis (AMM) to test the effect of intermediaries, the decision to test the intermediaries for each hypothesis was made by comparing the model directly opposite to the full intermediary model. The use of AMOS is also similar to Multi-Model Analysis (AMM) to test the effect of intermediaries, with structural models directly designed based on the hypothesis of a

direct relationship between personal factors and self-directed learning skills. The direct structural model is consistent with the data: χ^2 (683) = 2378.405, p = 0.000, χ^2/df = 3.482, GFI = 0.771, CFI = 0.783, IFI = 0.784, TLI = 0.764, RMSEA = 0.081. The results show that all the appropriate model indices such as GFI, CFI, IFI, and TLI are close to the level of acceptance of 0.9. Moreover, the relative chi-squared value is below the value of acceptance of 5, and RMSEA is 0.081, which is close to appropriate.

The full intermediate structure model of the study is also consistent with data where χ^2 (677) = 2075.761, p = 0.000, χ^2/df = 3.066, GFI = 0.786, CFI = 0.821, IFI = 0.822, TLI = 0.804, RMSEA = 0.074. The results of the study show that the full structure model explains 80% of the self-directed learning skills, while the direct structure model explains only 65% of the self-directed learning skills. This finding indicates that the intermediate variables proposed are added aspects to the diversity of self-directed learning skills.

The results in Table 3 show that the standardized indirect effect (SIE) for personalities with self-directed learning skills through goal acquisition was significant (emotions (β = 0.236, p = 0.000), family (β = 0.073, p = 0.033), health (β = 0.052, p = 0.139)). The results also show that the standardized regression weight (β) for the interpersonal hypothesis with self-directed learning skills in the intermediary model was decreased but significant in both the direct model and the intermediate structural model. In other words, the indirect effect of personal factors on self-directed learning skills through goal acquisition was not empty through 95% emotional bias-corrected (bias-corrected C1 = 0.154 to 0.343), family bias-corrected (bias-corrected C1 = 0.005 to 0.156), health bias-corrected (bias-corrected C1 = 0.018 to 0.132) confidence intervals. The findings of this study indicate that goal acquisition partially mediates the relationship between personal factors and self-directed learning skills. Therefore, our hypotheses are supported by the data.

Table 3. Personal factors' indirect effects on self-directed learning, with goal acquisition as a mediator.

95% CI Bootstrap BC				
Hypothesis Path	**Beta**	***p***	**LB**	**UB**
Full Model				
Emotion—self-directed learning skills	0.382	0.000		
Family—self-directed learning skills	0.115	0.124		
Health—self-directed learning skills	0.091	0.064		
Intermediary Model				
Emotion—self-directed learning skills	0.064	0.000		
Family—self-directed learning skills	−0.001	0.034		
Health—self-directed learning skills	0.048	0.095		
Standardized Indirect Effect (SIE) Emotion	0.236	0.000	0.154	0.343
Standardized Indirect Effect (SIE) Family	0.073	0.033	0.005	0.156
Standardized Indirect Effect (SIE) Health	0.052	0.139	−0.018	0.132

Note: BC = Bias-corrected confidence interval; 5000 bootstrap samples have been requested.

5. Discussion

From the results of the study, we found that all our hypotheses were supported, except for the relationship between health and self-directed learning through the mediation of goal acquisition. The findings of the study show that the two personal dimensions of emotions and family support have a positive and significant direct relationship with goal achievement. These results are in line with findings from studies [21,33,35,36] that found that emotional stability helps improve goal acquisition among ODL students. The findings suggest that emotions can influence students' reflection on learning through goal acquisition. Therefore, the working student organization and the university should give focus and attention to the emotions of ODL students. In addition, the results of this study are also in line with the findings of studies [10,30,41] that family support is a catalyst to goal achievement among ODL students. This means that family support has an impact on students' achievement of goals. The student's family must pay attention to the student's self-development by providing full support to the student achieve goals and subsequently

succeed academically and professional. However, the relationship between health and goal achievement shows an insignificant relationship despite past studies from [30,32,33] that showed significant findings. This may be due to cultural differences and the context of where this study was conducted in Malaysia, which consists of various races, and in the context of distance education.

As for the findings of the study on the relationship between goal acquisition and self-directed learning, the results are consistent with the studies by [15,57,59] which found that goal acquisition can influence the level of maturity of self-directed learning of ODL students. This indicates that when ODL students have a high level of goal achievement towards learning, it directly affects the increase in the level of maturity of learning independently. Thus, the relationships between personal aspects, goal acquisition, and self-directed learning are seen to be interrelated. These findings are also in line with the meaning of self-directed learning, which is closely related to self-development from emotional and physical aspects in order to help reduce stress due to the heavy burden of responsibility on students [26,30].

In addition, we also found an indirect relationship when the role of goal acquisition is mediated by the relationship between the three personal dimensions and self-directed learning. These findings support Goal Acquisition Theory, where goal acquisition exerts a mediating effect on the relationship between individual self-development and positive outcomes on learning [15,48,49]. Theoretically, this study shows the relationship between personal resources, namely, emotions, family support, and health, with goal acquisition and self-directed learning. The framework of this study is based on the theory of Subjective Well-Being through Goal Acquisition Theory by [50], which has been successfully tested and validated based on the findings obtained, although there are health dimensions that show an insignificant relationship due to contextual differences compared to previous studies. This indicates that family emotions and support with goal acquisition ultimately have a positive effect on the maturity of self-directed learning. This suggests that individual aspects such as emotions and seeking family support should not be set aside and become a necessity for work organizations and universities to ensure that stress due to commitment towards work and family and lack of maturity in self-directed learning among ODL students can be addressed. This is because work and study stress were found to have a relationship with the level of maturity of students' self-directed learning [19,20]. This study also proves the importance of the role of direct goal acquisition in improving self-directed learning as well as the mediating role of goal acquisition in the indirect relationship between emotional factors and family support with self-directed learning.

6. Conclusions

We found that two personal dimensions of emotion and family support have positive direct and significant relationships with self-directed learning, that goal acquisition has a positive and significant direct relationship with self-directed learning, and that goal acquisition has a significant role as a mediator in the relationship between the two dimensions of personal factors and self-directed learning. The results of this study prove that goal acquisition serves as a mediator in the relationship between personal factors and self-directed learning. These findings also indicate the importance of personal elements in influencing student excellence and maturity in self-study.

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