Relationship between Student's Self-Directed-Learning Readiness and Academic Self-Efficacy and Achievement Motivation in Students

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Abstract

Self-directed learning readiness to expand and enhance learning, This is an important goal of higher education, Besides his academic self-efficacy can be improved efficiency and Achievement Motivation, so understanding how to use these strategies by students is very important. Because the purpose this study is determination of relationship between students self-directed learning and academic self-efficacy and Achievement Motivation in Payamnoor students (2012-2013). In a correlation-descriptive study 322 bachelor students were selected from Payamnoor University of Rafsanjan (2014-2015) through a Simple random sampling. Data collection was SDL questionnaire, academic self-efficacy questionnaire and Achievement Motivation questionnaire. Data were analyzed by multiple regression, simple regression, variance analysis and T-test. The obtained findings from this research showed that there is a relation between student's Self-directed learning readiness and academic self-efficacy and academic motivation in Students University of Payamnoor. Also Independence in learning and Study skills and problem solving has the most ability for academic self-efficacy and academic motivation prediction and there was the most correlation.

According to results and that self-directed learning readiness to enhance self-efficacy and academic motivation, it is necessary to teach strategies to students.

Keywords: self-directed learning readiness, academic self-efficacy, achievement motivation, students

1. Introduction

1.1 Introduce the Problem

One of the most important characteristics learning environments is readiness for self-directed and independent learning. It's necessary learners have a high degree of self-organization and self-discipline to enter the educational environment. For this reason it is essential to investigate the factors influencing on the self-directed learning readiness of learners to improve learning programs. Learning is a purposeful process and usually is determined through behavioral activities related to information-seeking and learner consciously accepts responsibility for decisions relating to the objectives and activities (Long & Huey, 2009, pp. 1-5).

1)   Self-directed learning readiness related with students' Self-efficacy?

2)   Which one of the components of SDL can to predict academic self-efficacy?

3)   Self-directed learning readiness related with students' achievement motivation?

4)   Which one of the components of SDL can to predict academic achievement Motivation?

1.2 Explore Importance of the Problem

Because the main issue in education is learning and Education is meaningful when associated with learning in learners. Self-directed learning in education is very important, because learners who are active in learning more things to learn and academic self-efficacy and Achievement Motivation have An important role in learning, for this reason, in this study the relationship between variables was investigated.

1.3 Describe Relevant Scholarship

Self-directed learning is a teaching method that can be defined based on the learner's responsibility (Timmins, 2008). Prepare students to engage in self-directed learning has been defined as the having attitudes and abilities

necessary for self-directed learning. Self-directed

In self-directed learning (SDL), the individual takes the initiative and the responsibility for what occurs. Individuals select, manage, and assess their own learning activities, which can be pursued at any time, in any place, through any means, at any age. self-directed learning' describes a process by which individuals take the initiative, with our without the assistance of others, in diagnosing their learning needs, formulating learning goals, identify human and material resources for learning, choosing and implement appropriate learning strategies, and evaluating learning outcomes" (Knowles, 1975, p. 18). In self-directed-learning gradually Control transferred from the teacher to the learner and learners in the learning goals and how to carry out a task have greater independence. Self-directed in learning emphasizes on the role of motivation and determination learners at the beginning and continuation of efforts to achieve the goals (Nadi et al., 2011).

Also self-efficacy is one of the important psychological structures and because of it role plays in proper behavior often have been considered important in multiple areas of psychology. In fact, the enhance in self-efficacy and to identify affecting factors on it will affect in the achievement of learners. Self-efficacy is competence and ability to cope with life's challenges. Self-efficacy is the extent or strength of one's belief in one's own ability to complete tasks and reach goals (Ormrod, 2006). Bandura (2004) has defined self-efficacy as one's belief in one's ability to succeed in specific situations or accomplish a task. One's sense of self-efficacy can play a major role in how one approaches goals, tasks, and challenges (Luszczynska & Schwarzer, 2005). High self-efficacy can affect motivation in both positive and negative ways. People who have high self-efficacy to learn more trying (Hanaffin et al., 2003). People who have high self-efficacy remove obstacles from your path and standing up against problems but those who have low self-efficacy when you encounter a problem keep stop trying. Learners with high self-efficacy have stronger motivation and more perseverance. They make more effort than those with low self-efficacy (Puzziferro, 2008). However, those with low self-efficacy sometimes experience incentive to learn more about an unfamiliar subject, where someone with a high self-efficacy may not prepare as well for a task. Social-cognitive models of health behavior change cast self-efficacy as predictor, mediator, or moderator. One of the factors most commonly associated with self-efficacy in writing studies is motivation. Motivation is often divided into two categories: extrinsic and intrinsic. Motivation for the behavior can range from a motivation or unwillingness, to passive compliance, to active personal commitment. According to self-determination theory (SDT), these different motivations reflect differing degrees to which the value and regulation of the requested behavior have been internalized and integrated Internalization refers to people's "taking in" a Academic Motivation of Students (Ryan & Deci, 2000, p. 71). Deci and Ryan (2000) apply a very narrow definition of intrinsic motivation. A person is intrinsically motivated if an activity is done for itself and for the pleasure that derives from doing the activity. The development of intrinsic motivation is dependent on the degree in which the innate psychological needs of autonomy, relatedness, and competence are supported by the social environment. In turn, if behavior is not restricted by external forces, people can experience their actions as self-determined. Intrinsic motivation "refers to doing an activity for the inherent satisfaction of the activity itself" (Ryan & Deci, 2000, p. 71). In contrast extrinsic motivation is related to behavior that is not done for its own sake but for external reasons. These external reasons can be rewards or punishments: "People behave to attain a desired consequence such as tangible rewards or to avoid a threatened punishment" (Ryan & Deci, 2000, p. 236).

Motivation in education can have several effects on how students learn and how they behave towards subject matter (Ormrod, 2006). Because students are not always internally motivated, they sometimes need situated motivation, which is found in environmental conditions that the teacher creates. Motivation can be defined as the driving force behind all the actions of an individual. The influence of an individual's needs and desires both have a strong impact on the direction of their behavior. Motivation is based on your emotions and achievement-related goals. There are different forms of motivation including extrinsic, intrinsic, physiological, and achievement motivation. Individuals will satisfy their needs through different means, and are driven to succeed for varying reasons both internal and external (Elliot & Covington, 2001) Motivational researchers share the view that achievement behavior is an interaction between situational variables and the individual subject's motivation to achieve. Two motives are directly involved in the prediction of behavior, implicit and explicit. Implicit motives are spontaneous impulses to act, also known as task performances, and are aroused through incentives inherent to the task. Explicit motives are expressed through deliberate choices and more often stimulated for extrinsic reasons. Academic motivation is a student's desire (as reflected in approach, persistence, and level of interest) regarding academic subjects when the student's competence is judged against a standard of performance or excellence. Academic motivation is a subtype of the general construct of reflectance motivation, which is defined as the "need" to be successful or effective in dealing with one's environment (McGrew, 2008). A survey by Karami et al. (2014) conducted, was shown Creativity, motivation and academic self-concept to improve with

cognitive and metacognitive strategies.

2. Method

2.1 Participant (Subject) Characteristics

The research method is correlation-descriptive, the statistical society of this research consist of Bachelor's degree students studying in Payamnoor university(2036) that using Cochran formula sample of 322 subjects was determined

2.2 Sampling Procedures

322 subjects through simple random sampling was collected Information.

2.3 Data Collection Tool

To collect data in this study is used self-directed learning readiness scale (Guglielmino, 1978). The SDL scale has 58 items that after translating and evaluation from validity and reliability points of view, these items were reduced to 50 items. The questionnaire is designed to measure adults, self-directed learning readiness. SDLR Scale is a self –report questionnaire that uses a58-item likert scale. Individuals respond by indicating whether each item on the scale is: 1=almost never true of me, 2=not often true of me, 3=sometimes true of me, 4=usually true of me, 5=almost true of me. The questionnaire is designed to measure the attitudes, values and abilities of an individual relating to his/her readiness to engage in self-directed learning at the time of response. Reliability of the measurement tool is evaluated with two methods. Evaluating of reliability of this scale by test-retest method for period of two weeks with 25 male & female students resulted in the following correlation coefficients 82.7%also alpha cronbach coefficients is o.90%. To search for content validity of the questionnaire, the questionnaire was available to professors and experts' validity of the questionnaire was determined 0.90%.

Also, for academic self-efficacy, Morgan-Jankins (1999) self-efficacy scale was used. The questionnaire includes 30 items and three subscales: talent, effort, and context. The items have been designed by Likert scale with four-choice answers (from one to four). The designer of this instrument reported reliability and reliability coefficient of subscales of talent, effort, and context as follows respectively: 0.82, 0.78, 0.66, and 0.70. Karimzadeh and Nikchehreh (2009) evaluated the reliability of 0.76 for total scale and 0.66, 0.65 and 0.60 for talent, effort, and context respectively. The validity of the questionnaire was calculated by numerical sigma (0.86) based on opinion of ten professors. In order to evaluate motivation of achievement, Hermens (1977) questionnaire was used and it includes 29 items and subscales of level of ambition, promotion, effort, foresight, tendency for re-effort to do incomplete assignments, dynamic perception of time, the feeling that everything happens rapidly, paying attention to selection of a qualified friend, colleague and pattern, recognition via good performance, doing a work well. Questions have been stated as open ended sentences and there are some choices after each sentence. The four-choice questionnaire has been written to make the value of questions equal. The choices are scored in terms of intensity of achievement motivation from low to high and vice versa. Range of changes is from 29 to 116. If total score meaning the score obtained from all questions is high (higher than average), it will show high motivation and low scores (lower than average) will indicate low motivation. Reliability coefficient calculated for the questionnaire was obtained 0.88 via Cronbach method and the validity was evaluated 0.90 using numerical sigma by opinions of ten professors. In order to gather data, questionnaire was distributed among groups when attending at classes.

3. Results

Data were calculated by simple and multiple regression analysis, variance analysis and T statistical test. Concerning data analysis, mean age of students was 4.13±22.9. 190 persons (59%) were female students. 60 were married (18.6%) and 93 had a job (28.9%).

Table 1. Descriptive statistics of the score of research variables

Variables and their dimensions	Mean	Standard deviation
Preparing for self-directed learning	136.6	31.50
Independence in learning	13.7	4.070
Positive self-concept	8.03	2.501
Informed acceptance of responsibility for learning	8.63	2.858
Love of learning	27.04	6.922
Creativity	22.5	6.338
Positive view on future	8.03	2.501

Accepting learning	24.7	6.575
Skills of studying and problem solving	4.274	16.2
Academic self-efficacy	78.7	16.12
Talent	31.8	7.335
Effort	10.2	2.182
Context	34.1	7.214
Motivation of achievement	75.9	15.7

Question 1: is there relationship between self-directed learning and academic self-efficacy of students?

Table 2. Coefficients of regression model of the relation between self-directed learning and academic self-efficacy of students

Variable	R	R2	R2 adj	B estimation	Standard error	B standard estimation	T value	P value
Preparing for self-directed learning	0.383	0.147	0.144	0.196	0.02	0.383	7.42	0.001

The relationship between self-direct learning and academic self-efficacy of students was studied using bivariate linear regression. Based on results of the regression, P value calculated from the test (0.001) is less than significance level of 0.05. Therefore, H0 is rejected. As a result, linear regression model is significant meaning that there is a significant relationship between self-directed learning and self-efficacy of students. Concerning that R2 adj value (adjusted R2) is 0.144, variable of preparing for self-directed learning (0.144) explains academic self-efficacy variance of students (Table 2).

Question 2: can components of preparing for self-directed learning predict academic self-efficacy?

Table 3. Coefficients of regression model and variance analysis of the relationship between components of self-directed learning and academic self-efficacy of students

Source of changes	Sum of squares	Freedom degree	Mean squares	R	R2 adj	F value	sig
Regression	14057.64	8	1757.20				
Residual	69415.47	313	221.77	0.410	0.147	7.923	0.001
Total	83473.11	321	-				
Variable	B estimation			Standard error	β standard estimation	T value	Sig-P
Constant	51.029			3.914	-	13.036	0.001
Independency in learning	0.792			0.303	0.200	2.614	0.009
Positive self-concept	- 0.260			0.475	- 0.046	- 0.548	0.584
Informed acceptance	0.049			0.271	0.013	0.181	0.857
Responsibility for learning							
Love of learning	0.128			0.205	0.055	0.625	0.532
Creativity	0.194			0.237	0.076	0.820	0.413
Positive view on future	0.343			0.578	0.053	0.593	0.554
Accepting learning	0.284			0.222	0.116	1.279	0.202

Concerning that P value calculated from the test (0.001) is less than significance level of 0.05, H0 is rejected. As a result, linear regression model is significant meaning that there is a significant relationship between self-directed learning and self-efficacy of students. Also concerning the P value calculated in test of coefficients of regression model, H01 is rejected in 0.05 level but H_0^2, H_0^3, H_0^4, H_0^5, H_0^6, H_0^7, H_0^8 are not rejected in level of 0.05. since the amount of independency in learning is equal to 2.614 with 0.009 significance level, academic self-efficacy of students is different regarding independency in learning and since amount of β for independent learning is 0.200, academic self-efficacy of students can be predicted by independent learning but other components of self-directed learning (positive self-concept, informed acceptance, responsibility for learning, love of learning, creativity, positive view on future, accepting learning, skills of studying and problem solving) cannot significantly predict academic self-efficacy of students because their significance is higher than 0.05.

Therefore, the most important predictor of academic self-efficacy of students is independent learning (Table 3).

Question 3: is there a relationship between preparing for self-directed learning and achievement motivation of students?

Table 4. Coefficients of regression model of the relationship between preparing for self-directed learning and achievement motivation of students

Variable	R	R2	R2 adj	B estimation	Standard error	B standard estimation	T value	P value
Preparing for self-directed learning	0.459	0.211	0.209	0.229	0.025	0.459	9.250	0.001

The relationship between preparing for self-direct learning and achievement motivation of students was studied using bivariate linear regression. Based on results of the regression, P value calculated from the test (0.001) is less than significance level of 0.05. Therefore, H0 is rejected. As a result, linear regression model is significant meaning that there is a significant relationship between self-directed learning and achievement motivation of students. Concerning that R2 adj value (adjusted R2) is 0.211, variable of preparing for self-directed learning (0.211) explains variance of achievement motivation of students (Table 4).

Question 4: can components of preparing for self-directed learning predict achievement motivation?

Table 5. Coefficients of regression model and variance analysis of the relationship between components of self-directed learning and achievement motivation of students

Source of changes	Sum of squares	Freedom degree	Mean squares	R	R2 adj	F value	sig
Regression	17384.99	8	2173.12				
Residual	62053.85	313	198.25	0.468	0.199	10.96	0.001
Total	79438.84	321	-				

Variable	B estimation	Standard error	β standard estimation	T value	Sig-P
Constant	43.774	3.701	-	11.828	0.001
Independency in learning	0.113	0.286	0.029	0.394	0.694
Positive self-concept	0.146	0.449	0.027	0.325	0.746
Informed acceptance	0.485	0.256	0.132	1.896	0.059
Responsibility for learning					
Love of learning	0.315	0.194	0.139	1.629	0.104
Creativity	0.081	0.224	0.033	0.362	0.718
Positive view on future	0.420	0.547	0.067	0.768	0.443
Accepting learning	- 0.115	0.210	- 0.048	- 0.545	0.586

Concerning that P value calculated from the test (0.001) is less than significance level of 0.05, H0 is rejected. As a result, linear regression model is significant meaning that there is a significant relationship between components of preparing for self-directed learning and achievement motivation of students. Also concerning the P value calculated in test of coefficients of regression model, H_0^8 is rejected in 0.05 level but H_0^1, H_0^2, H_0^3, H_0^4, H_0^5, H_0^6, H_0^7 are not rejected in level of 0.05. since the amount of skill of studying and problem solving is equal to 2.357 with 0.019 significance level, achievement motivation of students is different regarding skill of studying and problem solving and since amount of β for skill of studying and problem solving is 0.184, achievement motivation of students can be predicted by skill of studying and problem solving but other components of self-directed learning (independency in learning, positive self-concept, informed acceptance, responsibility for learning, love of learning, creativity, positive view on future, accepting learning) cannot significantly predict achievement motivation of students because their significance is higher than 0.05. Therefore, the most important predictor of achievement motivation of students is skill of studying and problem solving (Table 5).

4. Discussion

Findings of this research indicate that there is a significant relationship between self-directed learning and academic self-efficacy and achievement motivation of Payam Noor University students. The powerful predictive

item is independency in learning for academic self-efficacy, and study and problem-solving skills for achievement motivation. These findings are in conformity with the results of researches carried out by Shannon and Allen (2010), Ferla, Valcke, and Cai (2009), Amoon (2008), Asadi et al. (2011), Noohi et al. (2012), Karami et al. (2013), Manavipoor et al. (2012), and Abaft (2008). In addition, in a research carried out by Shaker et al. (2011) on the relation of study habits and academic self-efficacy with academic achievement of the students of guidance school, third grade, it was indicated that the students' academic achievement is related with talent and effort items of academic self-efficacy variable, and, thus, applying study strategies not only results in improved academic self-efficacy, but also is effective of the learners' academic performance that way.

Also, the research (effectiveness of self-regulated education of motivational behavior on perception of self-efficiency of students with attention deficit) done by Moradi et al. (2008) indicated that education of such strategies has positive significant effects on perception of self-efficiency of students with attention deficit. Another research (the relationship between perfectionism and academic self-efficiency and goals of students' achievement) done by Davari et al. (2011) showed that academic self-efficiency has a significant contribution in prediction of goals of achievement. The research done by Ezzat et al. (2009) about studying the contribution of motivational factors in application of cognitive and meta-cognitive strategies in learning process indicated that self-efficiency can predict directly or indirectly academic achievement by affecting cognitive and meta-cognitive strategies and it was concluded that academic self-efficiency is considered as the most effective motivational factor. Also, the research done by Sharifi et al. (2013) about education of note taking skills for academic self-efficiency of students showed that academic self-efficiency of students increased significantly after education of note taking skills. Of course, results of the research showed that education of such skills associated significantly with academic self-efficiency of students in field of Health but no significant relationship was observed regarding self-efficiency in students of faculty of literature and humanities. Based on studies done by Farla, Valk, and Ki (2009), the most predictive academic performance is academic self-efficiency variable (Ferla et al., 2009). In a research on the relationship between self-efficiency and academic motivation, Rouhi et al. (2014) concluded that students' beliefs in their abilities for doing things associated with their academic motivation and improvement of self-efficiency can affect academic motivation of students. One of important variables of self-directed learning is independency in learning and based on the research results, it is the most capable variable for predicting academic self-efficiency. As cited by Gaglilmino (2005), a learner with high level of self-direction is independent and emphasizes on learning. He/she is responsible for his/her learning and considers problems as challenges rather than obstacles. He/she is able to self-control with high level of curiosity. He/she tends strongly to learning or change. He/she is very confident, innovative and can use fundamental study skills; he can organize the time and learn with proper pace. On the other hand, study skills are components that are the most predictive for achievement motivation. Study is a complex and creative activity and requires combination of methods and techniques. Study skills are a set of skills that are used in direction of learning. Such methods are different depending on goal of learning and they are critical for academic success and reinforcement of learning. Learners who fail in the learning homework will face several stressful factors such that they can result in different functional and behavioral outcomes for students. In contrast, some of learners continue their education successfully in spite of educational and academic problems. Amount of success of students in the learning homework depends on amount of strategies and skills used by them. Motivation of achievement causes students to attempt and move towards the learning. Motivation of achievement is interest and attempt expressed by the person for reaching his/her goals. Research results of Kadivar et al. (2011) indicate that students who compete with each other and use proper strategies for solving problems have high level of achievement. Many researches confirmed the role of study strategies in motivation of achievement (Harrison & Bramson 2002). Motivation of achievement plays important role in directing behavior of learner. In the research done by Farhoush and Ahmadi (2013), the relationship between learning strategies and motivation of achievement has been indicated. Motivation includes beliefs and attitudes that are effective on growth of cognitive and meta-cognitive skills (cited by Yasaminejad et al., 2013).

Since self-directed earning, has significant relationship with students' achievement motivation and self-efficacy. Teaching these strategies before the start of the period can have a significant impact on improving student performance.

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