

Studying the Mediating Role of Social Growth in the Relationship between Learning Styles and Academic Adjustment

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Abstract

This study was carried out to explore the mediating role of social growth in the relationship between learning styles and academic adjustment. The statistical population included senior high school students in Eqlid County among whom 300 students were selected as the statistical sample via multi-stage cluster sampling. The required data were collected using Kolb's learning styles inventory (1985), Whiteman's social growth questionnaire and academic adjustment questionnaire (Sinha & Singh, 1992). The tools had suitable reliability and validity. The proposed model was analyzed statistically through simultaneous regression and Baron and Kenny's suggested phases (1986). The results disclosed that active experimentation and objective experience are the strong and positive predictors of academic adjustment. Also the obtained path coefficients revealed that dimensions of responsibility and independence related to social growth variable play a mediating role among active experimentation, objective experience and academic adjustment.

Key words: Learning Styles, Social Development, Academic adjustment, Senior High School Students

Introduction

Adjustment is the most important sign of psychological health and is associated with emotional, social, and educational scopes. Indeed, academic adjustment controls learners' capability in adapting with pedagogical conditions and requirements and roles facing them in the school as a social institution (Pettus, 2006). Academic adjustment can be stated as positive attitudes towards having pedagogical purposes, completing pedagogical needs, effectiveness

of learners' attempts to reach these conditions and positive attitude towards the pedagogical environment (Pourdehghan Ardekani, 2005).

Literature Review

Learning

All people learn something new every day and achieve various experiences even if these experiences and learning are durable for a short-term. Learning means the individual's change of behavior as a result of his/her experiences and the learning psychology is related to the issue that which kinds of changes are occurred and which kinds of experiences are effective on creating different changes in the individual's behavior (Seyed Mohammadi, 1999). One of the subjects that have been considered by education researchers for several years is the methods through which students learn. Pedagogical experts believe that more success and progress is expected for the students who participate actively and interestingly in their learning processes, because sense of power and authority is increased in them and personal progress level and self-orientation are enhanced (Hartman, 1995, quoted by Homayuni, 2004).

Social growth

Social growth is evolution of social relations of the individual. It requires coordination with the social group and following its norms and traditions. Unification with the social group, understanding the mutual relations among the members and cooperation with others are other requirements of social growth. In order to reach this step of social growth, a child must change his/her interests, learn the new methods and choose new friends (Ahadi & Banijamali, 2000).

Social adjustment

There are different definitions for social adjustment. It is the individual's ability in adjusting to situations without others' supervision and leadership. This adjustment includes the behavior that helps the individual be compatible with situations with the least internal anxiety. Combs and Slebbby (1977) believe that social adjustment is synonymous with social skill. According to them, social skills are the ability to make mutual relationship with others in a specific social field and in a special manner that is acceptable in the community.

Socialization

Human being is a social creature and inheritance and environmental characteristics are effective on him whenever he is born. The social environment is influential on human being's socialization process since birth to change him/her as a biological creature into a social creature. One of the factors effective on the socialization process of human and especially children is taking part in physical activities like playing and physical exercises (Rahnema, 1995).

Social growth indexes

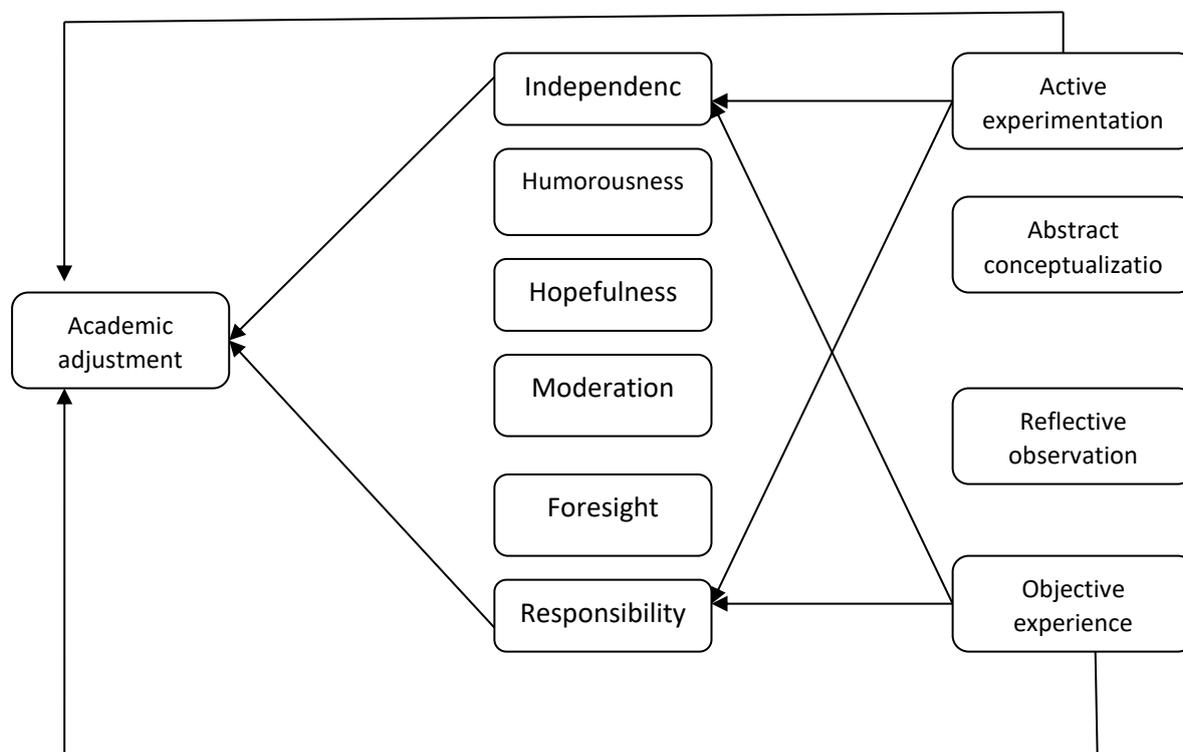
Independence

Independence is one of the first signs of social growth. It means the ability to do works without help of others. Freedom or independence is the result of two factors: First, the individual's sense of ability in directing his/her acts, i.e. no need to others to do works and

second, the family's trust in the individual. This is again due to the abilities that he/she shows. The individual will have a higher sense of independence through personal income. Independence in decision-makings is one of the most important characteristics of socially grown humans (Whitesman, 1998). Paying attention to the youth independence necessitates to help them feel their personality in their social mutual relations and can make healthy relations with others based on equal rights without any sense of inferiority and following others (Lotfabadi, 2002). Accepting the responsibility, foresight, moderation, hopefulness, optimism, and humorousness are other indexes of social growth (Whitesman, 1998).

Main research questions

1. Is there a significant relationship between learning styles (active experimentation, objective experience, reflective observation, and abstract conceptualization) and academic adjustment?
2. Is there a significant relationship between learning styles and social growth?
3. Does social growth have a significant mediating role in the relationship between learning styles and academic adjustment?



Methodology

This study was carried out using correlation method. The statistical population included 726 senior high school students (boy and girl) in Eqlid County in the academic year 2013-2014. The statistical sample contained 300 students that were selected via multi-stage cluster sampling. In this study, three questionnaires were used:

1. Kolb's learning styles inventory (1985)
2. Whitesman's social growth questionnaire
3. Academic adjustment questionnaire

Adjustment Inventory for School Students (ATSS) that was proposed by Sinha and Singh (1993) in Shankar University was used to measure academic adjustment.

Reliability was calculated using Cronbach's alpha coefficient that was equal to 0.68, 0.74, 0.60, and 0.81 for dimensions of emotional adjustment, social adjustment, academic adjustment, and total adjustment respectively. Validity was estimated using the correlation between each question and each dimension that is as follows: correlation coefficient for emotional adjustment was between 0.35 and 0.60; it was between 0.30 and 0.60 for social adjustment; and between 0.30 and 0.65 for academic adjustment that were significant at level 0.01. Data analysis methods included multiple regression method and path analysis.

Findings of the hypotheses

In the following, results of each section are presented.

Learning styles are predictors of academic adjustment.

In order to explore predictability of total score of academic adjustment by learning styles, multiple regression method was used. Thus, learning styles were regarded as exogenous variable and total score of academic adjustment was regarded as the endogenous variable. Different indexes obtained from analysis of simultaneous regression are presented in Table 1.

Table 1. Predictability of total score of academic adjustment by learning styles

Predictor variable	R	R ²	F	P	B	t	P<
Active experimentation (AE)	0.33	0.11	15.20	0.001	0.28	3.39	0.001
Abstract conceptualization (AC)					0.12	2.83	0.01
Reflective observation (RO)					0.098	1.25	n.s
Objective experience (CE)					0.29	4.35	0.0001

Given to the results, active experimentation ($p < 0.001$, $\beta = 0.28$), objective experience ($p > 0.0001$, $\beta = 0.29$) and abstract conceptualization ($p > 0.01$, $\beta = 0.12$) are the positive and significant predictors of total score of adjustment. In sum, these variables explain 11% of variance of total score of academic adjustment.

So far, predictability of the endogenous variable was explored based on the exogenous variable. Now, the process variable is predicted based on the exogenous variable.

Note: A process variable is an intermediate variable that plays a role between the exogenous and endogenous variables.

Learning styles are predictors of social growth.

In order to explore predictability of dimensions of social growth by learning styles dimensions, multiple regression method was used. Thus, learning styles dimensions were regarded as the exogenous variable and independence and responsibility were regarded as the endogenous variable. Different indexes obtained from analysis of simultaneous regression are presented in Table 2.

Table 2. Prediction of independence as one of the dimensions of social growth variable based on learning styles

Predictor variable	R	R ²	F	P	B	t	P<
Active experimentation (AE)	0.37	0.13	16.33	0.0001	0.33	4.56	0.0001
Abstract conceptualization (AC)					0.12	2.83	n.s
Reflective observation (RO)					0.098	1.25	n.s
Objective experience (OE)					0.35	4.4	0.0001

Given to the results, active experimentation ($p < 0.0001$, $\beta = 0.33$) and objective experience ($p < 0.0001$, $\beta = 0.35$) are positive and significant predictors of independence as a dimension of social growth variable. In sum, these two variables explain 13% of variance of independence dimension.

Multiple regression method was used to explore predictability of responsibility by learning styles. Different indexes obtained from analysis of simultaneous regression are presented in Table 3.

Table 3. Prediction of responsibility as another dimension of social growth variable based on learning styles

Predictor variable	R	R ²	F	P	B	t	P<
Active experimentation (AE)	0.38	0.14	17.33	0.001	0.30	2.9	0.001
Abstract conceptualization (AC)					0.12	2.83	n.s
Reflective observation (RO)					0.098	1.25	n.s
Objective experience (OE)					0.23	3.8	0.01

Given to the results, active experimentation ($p < 0.001$, $\beta = 0.30$) and objective experience ($p < 0.01$, $\beta = 0.23$) are positive and significant predictors of responsibility as a dimension of social growth variable. In sum, these two variables explain 14% of variance of the above dimension.

As it is observed, only two dimensions of independence and responsibility were regarded as endogenous variables and this is due to lack of correlation among other dimensions of social growth and learning styles. Only the above dimensions were inserted the regression model. Learning styles predict academic adjustment via the mediating role of social growth.

One of the important hypotheses under study is the effect of learning styles on academic adjustment through the mediating role of social growth. To this end, simultaneous regression was utilized to determine how the effect of learning styles on academic adjustment changes when social growth is considered. The indexes obtained from analysis of simultaneous regression are presented in Table 4.

Table 4. Predicting total score of academic adjustment based on learning styles and social growth

Predictor variable	R	R ²	F	P	B	t	P<
Active experimentation (AE)	0.38	0.14	17.33	0.001	0.14	3.02	0.01
Abstract conceptualization (AC)					0.12	2.83	n.s
Reflective observation (RO)					0.098	1.25	n.s
Objective experience (OE)					0.12	2.2	0.01
Independence					0.23	3.25	0.001
Responsibility					0.20	2.5	0.0001
Foresight					0.059	0.8	n.s
Moderation					0.23	1.01	n.s
Hopefulness					0.036	1.23	n.s
Humorousness					0.89	1.1	n.s

Given to the obtained results, active experimentation was the positive and significant predictor of total score of adjustment ($p < 0.01$, $\beta = 0.1$). Objective experience predicts total score of adjustment ($p < 0.01$, $\beta = 0.12$) positively and significantly. In sum, the whole model explains 14% of variance of total score of adjustment.

In order to examine the mediating role of social growth in the relationship between learning styles and total score of academic adjustment, the coefficients obtained in Table 1 were compared to those in Table 4. As Table 1 shows, predictability of active experimentation for academic adjustment is ($p < 0.001$, $\beta = 0.28$) and objective experience for academic adjustment is ($p < 0.0001$, $\beta = 0.29$). This is while the values were decreased in Table 4 by inserting the social growth variable in the regression equation (active experimentation ($p < 0.01$, $\beta = 0.14$) and objective experience ($p < 0.01$, $\beta = 0.15$)). As a result, independence and responsibility were regarded as mediators between learning styles and total score of adjustment. Direct and indirect effects of the current model, therefore, can be reported as follows.

Variable	Academic adjustment		
	Direct effect	Indirect effect	Total effect
Active experimentation	0.28	0.07	0.35
Abstract conceptualization	-	-	-
Reflective observation	-	-	-
Objective experience	0.29	0.05	0.34
Independence	0.23	-	0.23
Responsibility	0.20	-	0.20
Foresight	-	-	-
Moderation	-	-	-
Hopefulness	-	-	-

Humorousness	-	-	-
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Considering the above findings, the model can be depicted as below:

Figure 1. The effect of learning styles on academic adjustment via mediating role of social growth

Discussion and Conclusion

Question 1: Is there a significant relationship between learning styles (active experimentation, objective experience, reflective observation, and abstract conceptualization) and academic adjustment?

The findings revealed that learning styles (objective experience, active experimentation and abstract conceptualization) predict academic adjustment positively and significantly. Therefore, learning style according to Kolb's viewpoint is a combination of cognitive, emotional and psychological characteristics that is regarded as an index regarding that people react mutually in learning and it plays a considerable role in academic adjustment. Learning style shows differences among people who are different in understanding and acquisition of knowledge. They shape the ideas differently and think and act diversely.

Usually each person has a special style. Undoubtedly, if people study their lessons with their own style, they will cope with educational failures and problems easily given that every person has a unique style. In this way, the individual will achieve more adjustment and a better pedagogical performance.

Question 2: Is there a significant relationship between learning styles and social growth?

The results disclosed that there is a significant relationship among active experimentation and objective experience and independence and responsibility.

It is notable that social growth is proposed in evolution of individual and social relations that requires coordination in social relations and following social norms and traditions. It plays a remarkable role in pedagogical performance of students. Given that active experimentation and objective experience have a significant relation with independence and responsibility and can predict these personality styles, it can be concluded that those who have independent learning styles and undertake the responsibility of consequences of learning styles will achieve more social growth. Hence, a positive cycle will be occurred that is led to their consecutive progress and adjustment with their academic and social environment because they have independent, experience-oriented and totally personal learning styles.

Question 3: Does social growth have a significant mediating role in the relationship between learning styles and academic adjustment?

According to the results, social growth can play a mediating role between learning styles and academic adjustment so that the mediating role of social growth is explained by two dimensions, i.e. independence and responsibility. It is noteworthy that when learning styles are accompanied by personality and social characteristics such as individual independence and responsibility, a style of academic and social life is created that is totally personal and thus the individual accepts total responsibility of his/her actions as a result of such learning and social styles and becomes compatible with the new pedagogical conditions through his/her unique living style.

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