

Formulation of structural model for predicts academic progress via global self- esteem, academic self- concept and self- adjustment learning

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Abstract: The aim of this study was examination of conceptual model of structural equivalents for predict academic progress of students based variables such as global self esteem, academic self- concept, autonomous- academic motivation, self- adjustment learning strategies and social category of family. 417 one grade of high school students (226 boy and 191 girl) answered to global self-esteem questionnaire (Rozenberg, 1965), scale of academic motivation (Valernd and Colleagues, 1992) learning strategies questionnaire (Pintrich and Degrith, 1990), and self-concept questionnaire (Sarasuat, 1984). The result obtained from the structural equivalents method showed that self-concept variables and learning methods effect on academic progress directly. Global self- esteem variable via academic self- concept and learning method was effective on academic progress indirectly. Standard Coefficient of rout of autonomous academic motivation toward academic progress wasn't meaningful. Social category of family had a meaningful effect on self-esteem.

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1. Introduction

Academic progress is an important and contestable theme and concepts of pedagogic psychology. In viewpoint of many experts, the difference in academic function is not under the influence of educational and pedagogic factor, but psycho characteristic and difference in life's experiences of students is effect on ht (Bawman, 2003). Such as social behavior and learning methods (Prinrich and Degroth, 1990) academic engagement, families styles and academic motivations (Grolnick, Deci and Ryan, 2006) academic self-concept (Marsh,2006) and global self-esteem (Wondima and Bruinsma, 2006).

In this study are survived four effective individual factors on academic progress such as academic self-concept, autonomous academic s motivation, global self- esteem and self- adjustment learning strategies.

The basic question of this study is that which variables directly and which one by other variables influence on academic progress of students. The important of this study is that it tries to survey the influence of these variables at once on academic progress.

Hierarchical opinions of Marsh and Shave son (2006, 1979) is once of the sponsor catechism of this study. This researcher said that self- concept is "conception of one person from himself". In view of

Marsh and his colleagues (2006), self concept isn't considered as a unit structure but it is divided to social, corporeal and academic self –concept Structures that general self- concept is in top of it

Between self- concept dimensions the academic self- concept has much effect on academic progress of student (Marsh 2006, Sanches and Roda 2003, Shave son, Haber and Stanton 1976). Academic self –concept (comprehension and reception students about themselves) is related to learning and school environment (House 1992, Rodriguez 2009, Marsh 2006, Wondima and Bruinsma 2006).The studies showed that academic self-concept had a strong relationship with academic progress in comparison with global self- concept (Hamachek 1995, Marsh 2006).

The studies showed that academic self- concept had an effective dimension on academic progress and it has a positive relationship with it (Marsh, Byrne and Byrne and yeung 1992, Marsh and Craven 2006, Wilson 2009, Marsh and Trautwein 2006, Erikman, Hend Sart, Borken and Sahana 2010, Ireson and Hallmas 2009). Global self esteem in Sholson and his colleagues (1976) is equivalent with global self- concept.

Previous studies showed that conjunction coefficient is low between global self- esteem and academic progress (Peixoto and Almeida, 2010) but self- esteem influence on academic progress by

academic self- concept indirectly (Wondimu and Bruinsma, 2006).

Based on self- adjustment learning approach, the students are self- adjustment when they are aware of their abilities, in other words, they use strategies and resources that they can do their home works in effective way. Therefore the students plan, supervise and direct their enforcement toward learning goals (Dormitazaki and colleagues, 2009). Use of learning strategies has a relationship with academic performance of students (Pintrich, 1999). The importance of learning strategies in academic progress is approved by some specialists of this zone such as Zimerman (1990), Dormitazaki (2009), Pintrich and Degroth (1990) and Pintrich (1999). In addition in this cases, different studies approved appositve relationship between learning strategies and academic progress of students, for example you can refer to Zimerman and Martines Pons (1990), Wolters (2010), Welters and Pintrich (1998), Chang (2011), Matoga (2009), Shin and Gemon (2002) and Kosinin (2007).

Self-determination motivation theory that is a new motivational theory is origin of extensive studies and pay to identification of basic principles and under pinning of stable motivation of human (Stone, Deci and Ryan, 2008). In this point of View, the motivation structure is divided to three component include: internal motivation, external motivation and a motivation and its range start from autonomous and finish with a motivation that is designation of inability feeling and distress. (Deci and Ryan 1985, Ryan and Deci 2000, Deci and Ryan 2008, Guay, Ratelle and Chanal 2008).

Stone, Deci and Ryan (2008) declared that self-determination theory has a relationship with many areas of science such as education. They showed specially the relationship between autonomous motivation and academic successful of students it can be pointed to vansteenkist, Simons, Lens, Sonens and Matos (2005), Guay and colleagues (2008), Grolinck, Ryan and Deci (1991), Guay, Ratel Roy and Lytalin (2010), Black and Deci (2000), Agub (2010) and Wondimu and Bruinsma (2006). Of course some of studies didn't approve the positive relationship between autonomous motivation and academic progress. (Chung, Chen, Jong Jang, 2010, Baker 2004).

Many studies about the relationship between independence variables of present research are done and some of them are pointed. Hein and Hagger (2007) approved the relationship between global self-esteem and autonomous academic motivation and also the relationship between self-concept and self-esteem. Wondimu and Bruinsma (2006) showed that there is a meaningful relationship between global self-esteem

and academic self-concept. Guay and colleagues (2010) showed that there is a mutual relationship between academic self-concept and autonomous motivation. Baker (2004) in his study notice that the people who have high internal motivation, they used the strategies of study Harris and Graham (1992). Zimerman and Shunk (1989) showed that there is a positive relationship between academic self-concept and learning strategies (Dormitazaki and colleagues, 2009). Finally this study try to examine the conceptual model by use of opinions and previous researches and by use of it the answers of this question are given:

1- Do the suggested model for intended society, with conceptual model have fitting?

2- Do self-adjustment learning strategies, autonomous academic motivation can have a catalytic role between global self-esteem and academic progress?

2. Material and Methods

The present study is about conjunction researches. Statistical society, Statistical model and sampling method:

The society that is studied is include of all girl and boy students that where students of first high school from Saghez. (1388-89 academic)

Based on received on statistic from education office of Saged the number was 3065 person (1719 boys and 1346 girls). The participants in study were selected by use of appropriate multi step and categorical cluster sampling method.

3.1. Measurement tools

Academic self-concept: Saraswat self-concept questionnaire (1984) is used for evaluation of academic self-concept. This questionnaire is made from 48 speeches 8 expression of this scale examine academic. Self-concept that 8 question are selected in this study. The result of confirmatory analysis showed that 2 speech of this scale retail have functional bar lower than 0/3 there for they are deleted. Stability of this scale retail reported by use of re-examination by Saraswat 0/88. Finally 6 speech questionnaire of academic self-concept is used in present study its stability is achieved by 0/77. Karnbakh alfa also confirmatory functional analysis indexes of this examination are include (CFI=0/98, GFI=0/98, AGFI=0/97, RMSEA=0/049).

The expression of this questionnaire is based on liker 5 gradational scale that is given from 1 to 5 grade.

Autonomous academic motivation: Academic motivation scale (AMS) Vallerand (1992) is used for evaluation of student's Autonomous motivation. This scale have 28 speech every speech is given a score over liker 7 gradational scale from 1 (it isn't satisfied

completely about me) to 7.(it is satisfied completely about me) this examination is made from 7 scale retail and every scale retail have 4 speech. Three scale retail evaluation three internal motivations. (Internal motivation for knowledge for accomplish mend and for stimulation).other three scale retail evaluate the kinds of external motivation (external adjustment.extirpation enter and self-acceptance motivation extirpation enter motivation and a motivation are used for evaluation of Autonomous motivation. this selection was based on Guay.Ratel.Roy and litalyn (2010) study. Also for evaluation of Autonomous rational motivation based on previous studies (such as vallerand peeltier and koestner 2008 Guay and colleagues (2010) Chung Chen and Jong Jang 2010 Hein and Hagger 2007) the following formula is used.

(Internal motivation 2+ self-acceptance motivation)

(Extirpation enters adjustment external adjustment 2+ motivation 2).

This formula show that weight +2 is green to internal motivation and +1 to self – acceptance adjustment because this two variable than this two index are bug of control motivation. Finally weight -2 allocated to a motivation because it is lowest rate of motivational autonomous. Karnbakh alfa for scales retail questionnaire (AMS) in previous studies by Guay and colleagues (2010) 0/72 to 0/91 and by Chung Chen and Jong Jang (2010) 0/77 to 0/79 and for global scale 0/78 is obtained.

Self – adjustment learning strategies: The motivation strategies for learning questionnaire (MSLQ) are used for evaluation of cognitive Self – adjustment and motivational strategies. The speeches of this questionnaire are adjusted based on likert 7 gradational (scale 1=it is satisfied completely about me) in this study two scale retail of cognitive and Self – adjustment strategies are selected. Scale retail of cognitive strategies has 13 speech and scall retail of self – adjustment strategies have9 speech. Pintrich and Degroth (1990) reported Karnbakh Alfa coefficient of cognitive strategies scale about0/83 and Self – adjustment strategies about 0/74 in this study Karnbakh Alfa coefficient for scale retail of cognitive strategies about 0/88 and for self– adjustment strategies about 0/85 and for global questionnaire 0/93 is achieved.

Global self-esteem

Global self-esteem is evaluated by use of Rosen berg (1965) Global self-esteem scale. This scale has 10 speeches that are adjusted based on likert 4 gradational scales. Its range is variable from I averse (zero score) to I agree (three score).in previous invariance studies of this scale is reported about 0/72

to 0/88 (Rosen berg 1965 Krendal 1973).the results of factional analysis showed that its 2 speech have factional bar lower that 0/30 there fore this two speech are deleted in final formulation of model. In this study Karnbakh Alfa is achieved about 0/75. Also the summary of fitting indexes of first rank of factorial model is as following: (CFI=0/99. GFI=0/99. AGFI=0/98.RMSEA=0/01).

Academic progress: For evaluation of academic progress of students the average of academic year (1388 to 1389) of students from representative school is received.

3. Results

In table1 descriptive indexes of study variables and in table 2 conjunction coefficients Matrix between them are presented.

Table 1: Descriptive indexes of study , s variables

| Variable | Mean | Err.Std | SD |
|------------------------|--------|---------|-------|
| Academic progress | 14.12 | .18 | 3.78 |
| Academic self -concept | 29.50 | .23 | 4.74 |
| Learning strategies | 102.73 | 1.22 | 24.96 |
| Global self esteem | 19 | .20 | 4.21 |

Table 2: Correlation matrix between variables

| Variable | 1 | 2 | 3 | 4 |
|---------------------|-------|-------|-------|-------|
| Academic progress | – | | | |
| Self -concept | .71** | – | | |
| Learning strategies | .81** | .64** | – | |
| Global self esteem | .26** | .40** | .32** | – |
| Academic motivation | .53** | .51** | .47** | .33** |

**p< .01

Table 2 showed that all variables have meaningful conjunction in 0/01 level. Highest conjunction is related to the relationship between learning strategic and academic progress ($r=0/259$).

Figure1. GS: glob self- esteem, ASC : academic self-concept, ACH: academic progress, LS: learning strategies.

The important fitting indexes of study's model are presented in table 3.

Table 3: Nikui indexes of structural model fitting

| CFI | AGFI | GFI | RMSEA | χ^2/df | P | df |
|-----|------|-----|-------|-------------|------|-----|
| .97 | .93 | .94 | .04 | 1.60 | .001 | 147 |

Table 3 showed that all fitting indexes are higher than 0/90 therefore this indexes show that formulated model have desirable fitting. Amount of second root of squares average of assessment error (RMSEA) was .04, with attention to this matter that amount of lower than .05 is desirable for this index therefore model in view of this idea reside in acceptable range. Amount of normal or relational

index of chi square (χ^2/df) was 1.60 with attention to this matter that this amount is in range of 1 to 3 therefore model is showed in view of this index and finally Hetler index in level .05 value of model 312 and in level .01 volume of sample 336 that volume of sample is higher than 200 in two level. With attention to this matter that volume of sample was 417 people in present study, two bet of Hetler index is achieved in formulation of this model. These indexes approved good fitting of model. There fore in table 4 are showed standard coefficients of variables effects on each other.

Table 4: Standard coefficients effects directly or indirectly and all for variables of structural model.

| predictor | dependent | direct | indirect | total |
|-----------|-----------|--------|----------|--------|
| GS | ASC | 0/43** | - | 0/43** |
| GS | LS | - | 0/35** | 0/35** |
| GS | GP | - | 0/38** | 0/38** |
| ASC | LS | 0/81** | - | 0/81** |
| ASC | GP | 0/53** | 0/34** | 0/87** |
| LS | GP | 0/40** | - | 0/40** |

GS: glob self- esteem, ASC :academic self-concept, ACH: academic progress, LS: learning strategies.GP: mean

Table 4 show that global self- esteem effect on academic self- concept directly ($p < .01$, $\beta = .43$) this coefficient mean that global self- esteem how ability to predict academic self- concept. Global self- esteem directly ($p < .05$, $\beta = .74$) and also indirectly by academic self- concept effect on autonomous academic motiuation,therefore total effect of global self- esteem on autonomous academic motivation is (.36) that is meaningful in level .01. This results show that there is meaning full structural relationship between global self- esteem and autonomous academic motivation.

In other words the students who how high self- esteems they act in academic programs autonomously.

The effect of global self-esteem on learning strategies is indirectly and by academic self concept ($P < 0.01$, $\beta = 0.35$). Also global self esteem is effect on academic progress in directly ($P < 0.01$, $\beta = 0.38$). Academic self concept and learning strategies have a catalytic role between global self- esteem and academic progress.

The coefficient course of academic self- concept to autonomous academic motivation is meaningful ($P < 0.01$, $\beta = 0.52$). The high academic self- concept is a factor for prediction of autonomous academic motivation. Also academic self- concept effect on learning strategies directly ($P < 0.01$, $\beta = 0.81$). Direct influence of academic self -concept on

academic progress ($P < 0.01$, $\beta = 0.53$). Indirect effect of it by learning strategies and autonomous motivation is ($P < 0.01$, $\beta = 0.34$) and its total effect coefficient is ($P < 0.01$, $\beta = 0.87$), therefore third hypothesis is approved.

This result show that academic self -concept have strong effect on academic progress. The students who have high academic self-concept they are successful in academic activities and they use learning strategies for their successful. The coefficient course of learning strategies to academic progress is meaningful ($P < 0.01$, $\beta = 0.40$). Therefore use of cognitive and super cognitive strategies is a factor of prediction for academic progress.

The effect of course autonomous academic motivation to academic progress wasn't meaningful ($\beta = 0.03$). This finding declares that there isn't a direct relationship between autonomous academic motivation and academic progress.

4. Discussion and Conclusion

The finding show that there is a meaningful structural relationship between family circumstance and self-esteem therefore the students who live in intermediate to high family they have better academic circumstance. Global self-esteem has ability to predict academic self concept. In other words it can say that students who have positive bar about themselves they feel high merit. This finding is correspondence with previous studies such as Wondimu and Bruinsma (2006), Kukli (2003), Rinolds (1988), Rinolds and colleagues (1980), Rabinson (2003, quotation of Windimu and Bruinsma, 2006).

The result of this study showed high effect of academic self concept on learning strategies. The students who have higher self- belief in field of academic activities they use learning strategies in lesson activities. This finding is correspondence with the result of previous studies (such as Dermitzaky and colleagues 2009, Zimmermanans Shunk 1989). About the relationship between academic self -concept and learning strategies (Paris and Paris 2001, Zimmerman 1999, quotation of Dermitzaky and colleagues 2009) declared that the students are self-adjustment whey they aware of themselves ability and strategies and necessary resources for effective function in an assignment. If the student believes that they have ability to do lesson assignment they will have much tendency to learning based strategic method.

The approved model of study showed that there is appositive and meaningful structural relationship between academic self-concept and academic progress. Academic self concept has ability to predict of progress directly and indirectly by learning strategies and autonomous academic motivation. This finding is correspondence with the

result of previous studies such as Guay and colleagues (2010), Arkaman and colleagues (2010), Irson and Hamas (2009) and Wondimu and Bruinsma (2006). The students that feel have much ability in academic function they will have achieve much successful in academic activities.

About the effect of learning strategies on academic progress, the finding related to the model showed that there is a meaningful structural relationship between this two structure and self – adjustment learning strategies is a strong factor for predict of academic progress. Furthermore learning strategies and acatalectic have important role between academic self- concept and academic progress. Therefore by educating these strategies the quality of learning and finally academic success of students can be improved.

The Standard coefficient course of autonomous academic motivation to academic progress wasn't meaningful ($\beta=0.028$). Based on evidences achieved from the model, it can be claimed that autonomous cannot predict academic progress. This finding is different from the result of studies such as Vanstin Kist and other (2005), Guay and colleagues (2008), Guay and colleagues (2010), Wondimu and Bruinsma (2006). But this finding was correspondence with some result previous studies (for example Chungchen and Jong 2010, Baker 2010). In none of structural models Chung Chen (2010) formulated them, the standard coefficient course of autonomous rational motivation to academic progress or other structure such as concepted learning and satisfaction from field wasn't meaningful. The standard coefficient course of autonomous academic motivation to academic progress wasn't meaningful and this matter declared need to examination of autonomous opinion of Deci and Ryan (2000, 1985) in eastern cultures.

Inability of autonomous motivation in prediction of academic progress is correspondence with autonomous opinions of critics. (For example Kras and Goor 2003, Morfy, Berman 2003, quotation of Chrika 2009). This researchers declare that autonomous is an important factor in culture and it is negative thing in other culture. Psychologists declare that this motivational concept is depend on western culture such as Liberia and it is individualist and don't have any condition in collectivist cultures (Chirko, 2009).

Ming Joo and Colleagues (2009), Ryan and Deci (2006), declared that cultural factors are effective on learning motivation of students, because children receive their needs values and attitudes of culture that is dominant on itself society. In some countries such as United States and European countries that breed the

individualism, also autonomous is developed but the pluralist culture is a barrier this potentiality in some countries such as Russia. This criticism (depend on cultural autonomous motivation) is designed by Markus, Molaly and Kitayama (1977).

The children learn that to be independence and autonomous in western and individualist countries, whereas the children belong to collectivist cultural should do according to social norms they are accepted by society. These researchers in collecting their discussions declare that global social system effect on autonomous.

It is necessary for education institution to ripen extensive attempts to effective reinforcement and improvement characteristics in academic progress of students. Especially in autonomous field changes should be incited in lesson content, education and up bringing of teachers. Education of instruction method and use of traditional instruction method to breed of merit and autonomous in students is necessary and it needy to planning and cost devotion.

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