

EFFECTS OF SELF-REGULATED-ASSESSMENT LEARNING STRATEGIES AS LEARNING AND INTERACTING WITH FAMILIES ON SCHOOL ACHIEVEMENT AND SELF-CONCEPT MATH GIRLS STUDENTS IN THIRD GRADE

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Abstract

The Main objective Determining the effect of training of self-regulation strategies, assessment as learning and interacting with the families on self- concept and students' academic achievement in mathematics and comparing the effectiveness of these methods with each other. The study sample consisted of all female students of third grade in the middle schools of Arak city in academic year of 2011-2012, including 171 classes accounting for over 5094 students enrolled in this city. In this study, four subjects groups (three experimental groups and one control group) were needed. Since the selected sample in each group included 31-38 subjects, and the total sample consisted of 137 female students in the third grade of middle school, the current study is considered as a semi-experimental study. Analysis of data showed that the training of assessment components as learning can increase the self-concept and academic achievement in math in female students in the third grade of middles school. Based on collected data analysis on the second research hypothesis, suggesting "training self-regulation strategies increases the self-concept and academic achievement in mathematics of female students", the second research hypothesis was also confirmed. As a conclusion, assessment as learning can have a great impact on academic achievement and self-concept of the students. In fact, this type of assessment has gone far beyond the assessment for learning, since the assessment for learning is an educational tool that not only monitors the students' learning and control to, but also increases the evaluation of learning.

Keywords: Self-Regulated-Assessment, Learning Strategies, Interacting with Families, Self-Concept, Math Girls Students, Third Grade

Introduction

From the perspective of self-psychology, self is the core of personality, and the majority of each individual personality characteristics, nature and behavioral characteristics

depends on image of the self in his mind, meaning his self -concept (Greenberg , Mishell, 1983; quoted by Ahmadi, Garosi Farshi, and Sheikh Alizadeh, 2007).

Any person has an image of self in his mind, which is called self-concept (Ghaemi, 1995). Self-concept also represents the attitude, perception and impression on an individual from his own self (Biabangard, 1994). Self- concept is a psychological notion that encompasses our sensations, evaluations and attitudes as well as descriptive issues of ourselves.

Cultural and educational advances and the number of students in each country are considered

as one of the most important factors in evaluating the advancement of societies (Sajjadi, Isa Abadi, 2010).

In Amid dictionary, progress is defined as "advance " and "winning". Accordingly, academic achievement is defined as the students speed in completing the various grades and degrees, which is measured depending on the rate their processing or lagging (Shoari Nejad, 1995). Based on this, academic achievement is divided into two parts, including low academic achievement and high academic achievement.

Low educational attainment is the lack of student success in an academic year or course, while high academic achievement is the progress of an individual in one or more academic subjects. Such a progress and achievement by is measured by standardized educational tests (Shoari Nejad, 1995).

The relationship between self-concept and academic achievement in the psychological literature has been much discussed. A number of studies show a correlation of 0.4-0.6 between self-concept and academic achievement (Brooke over, 1982; Parssa lacqua, 1982; Skalvic, 1996; quoted by Karim Zadeh, 2002).

The first and most important factor that can affect the whole process of life as well as the student's academic achievement and self- concept is the individual factor. An individual should change internally and individually to be changed in all areas as well that self-regulation strategies is one of the individual changing factors. Several definitions of self -regulation are provided. Based on Zimmerman and Shunk definition (1989), self-regulation learning includes processes that lead to the activation and maintaining of cognitive, behavioral and affective functions and activities directed towards achieving the goal.

Self-regulation means that the students have the skills of designing, controlling and directing the self-learning processes and are willingness to learn and assess the whole learning process themselves, and think about it (Beri, 1992). For this purpose, several programs have been developed in recent years that self-organizing or self-regulation can be educated to the students by using them (Egn and Cowchak, 2001; Seif, 2008). Self -regulation has three basic components, namely as cognitive strategies, meta-cognitive strategies and resource management (Pintrich and Digrot, 1990; quoted by Kajbaf, 2004).

If all of the factors influencing the students' achievement are modified and the family remains unchanged, the intended result would not be achieved. Family is the first social institution that the child is accepted in after birth, and the environment where his/her initial educational and moral foundation is established. The child will underpin future social life experiences in the family (Shariatmadari, 1996). Today's child is a member of the tomorrow community. He/she learn the first lessons of personal and social life in the family. Home and family are considered as centers capable of guaranteeing the success of a child. The parents always have most basic role and responsibility regarding the success of their children (Ghaemi, 1993). The parents are who develop the love of learning in their children, and make them realize the importance of learning. Inducing the positive insight towards education and school, the parents can build their children academic foundation. Interaction can be indeed interpreted

as mutual effects between parents, children and the teachers. In other words, interaction is the actions and reactions of parents, students and teachers with each other (Shoari Nejad, 1984).

Problem Statement

The human attitude and realization toward himself is among the various phenomena and issues with a profound impact on his behavior and life. As we have certain perceptions and attitudes towards other phenomena and humans and understand them based on our previous experiences in a different way comparing with other people, we have some interpretations of ourselves as well. These perceptions may be positive, negative, in correct or correct. Sometimes, some people have special abilities, but due to failures and accidental lack of success in the past, consider themselves as incapables. Also, some underestimate or overestimate their abilities. In either way, these assumptions and perception of self will have a strong impact on future successes and failures of people in their lives (Preky, quoted by Mohseni, 2010).

Yung based on definitions derived from the self-concept, considers the self as a potential factor in the person, which encompasses a set of sensations, feelings, thoughts, perceptions

and learned things that we are aware of. The self-concept is the one's comprehensive view of the self (Hamagek, 1997; quotes by Saadi Reese, 2008).

According to humanistic psychology, self is the central core of character (personality), which plays an important role in physical and psychological health, career, academic and identity success. In general, according to such psychologists point of view, one can say that all human's behaviors are influenced and affected by the self (Jalali and Nazari, 2010). With authentic examples, the educational psychologists have demonstrated that each student's self -concept (academic or non- academic) can provide the grounds for his academic and social success, and simultaneously is being affected by.

Mathematics is among the important courses. Mathematics is an important part of everyday life (Pavand, 1991; quoted by Batmani, 2004).

A glance at scientific systems of leading societies tells us that in every society that the theoretical sciences, including mathematics, are widespread and more common, practical and applied sciences as well as technology experience a higher level (Adel, 1988).

To improve the students work results, some changes had to be made in environmental and scholastic factors. Classroom assessment (measurement) is one of the scholastic factors. Successful measurement and its accurate understanding can affect the student's ways of studying and learning (Gulikers, Kester, krichner, Bastiaens, 2008). Accurate measurement leads to increased motivation to learn (Alonso-tapia, Parado, 2006).

Information resulting from the assessments is used to organize the students in form of an efficient class society, design and implementation of training and to monitor the student's learning process. Assessment is beyond holding usual paper and pencil tests (Ayrasiyan, Rasel, 2008; Translated by Karamati, 2011).

Assessment has a broader concept compared to examination and measurement. According to Nitko (2001, quoted by Seif, 2006), assessment is a general term and is defined as a process

used to gather the information needed to make decisions about students, curriculums, and the teaching and educational strategies.

Eggen and Kauckak (2001; Translated by Seif, 2006) have defined the classroom assessment as all the processes required to make decisions on students learning. Assessment includes the process of gathering information about learners to assist in

making decisions about their development and progress (Gulickson, 2003; Translated by Seif, 2006).

A factor that can affect academic achievement and self-concept is more interaction between parents, teachers and the students. In this study, the researchers plans to investigate the effectiveness of the training of self-regulation strategies, training of assessment as a learning process and the interacting with families on math academic achievement and self-concept of female students in the third grade of middle school in the city of Arak. We want to examine whether the training of self-regulation strategies, assessment as learning and interacting with families have any impact on increasing the students' academic achievement in mathematics and self-concept? Conducting some training courses in the areas of self-regulation issues, assessment as learning, and more interaction between parents, teachers and the students followed by performing psychological tests, academic achievement examinations in mathematics and the analysis of their results, we are to understand if the students' are received some trainings on self-regulation strategies and assessment as learning, and greater interaction is brought between students, teachers and the parents, any difference will be made in the level of mathematical academic achievement and self-concept of the students? Also, we want to know whether there are any relationships between self-regulation strategies, assessment as learning and more interaction between teachers, students and their families.

The necessity and importance of research

Nowadays, all countries and communities have been somehow affected by the information- technological revolution. Well living in such communities requires the abilities of selecting, - reasoning, decision-making and problem-solving. Education sector has a great mission and is responsible for creating such abilities in the society's individuals and provides some services to carry out its mission. One of such services is mathematics education (Samadi , 1995).

Accordingly, assessment of learning and academic achievement of students in mathematics has come to the focus of training and education centers worldwide to identify the problems and barriers to growth and doing research on curricula and causes limiting the learning and academic achievement in this subject (Asareh, 1999).

Doing effective research, the scholars have demonstrated that the different learning levels of students in equal conditions are due to the level of academic motivation and use of cognitive and meta-cognitive strategies in learning (Ansari, 2009). Different reports of scientists have illustrated that students with more awareness of these strategies and having the chance to use them, experience education and academic motivation or motivational beliefs such as sense of self-efficacy, higher intrinsic valuation and less examination anxiety and have achieved remarkable academic successes (Stovens et al., 1991; quoted by Seif, 1998).

Teachers are important factors in student learning. Teachers have an undeniable impact on student achievements. Teachers can contribute effectively to the academic achievement of the students, and as a result, to their self-conception (Reshno, 2011).

One of the newest types of assessment is assessment as learning, which has been less studied. It provides guidance and opportunities for every student to enable them monitoring and critical thinking on their learning and recognize the next steps in learning. It tries to make them independent, adaptable, flexible, and skilled self-assessment learners (Irel, Katz , 2008; Translated by Asgari et al., 2010).

Family is highly important so that the health and development of any society is depending on the development of its families. None of the social damages occurs free from the influence of family. The concept of family and its value is considered as work basis by each state and society (Sarokhani, 1998; quoting the JahanNejad, 2011).

Research objectives

- A. Main objective (General)
 - Determining the effect of training of self-regulation strategies, assessment as learning and interacting with the families on self- concept and students' academic achievement in mathematics and comparing the effectiveness of these methods with each other
- B. Specific objectives (Partial)
 - Determining the effect of training self-regulation strategies (cognitive and meta-cognitive skills) on the academic achievement in mathematics and self-concept of female students in the third grade of middle school in the city of Arak
 - Determining the impact of education of assessment components as learning on the academic achievement in mathematics and self-concept of female students in the third grade of middle school in the city of Arak
 - Determining the impact of interaction between families, teachers and students on the academic achievement in mathematics and self-concept of female students in the third grade of middle school in the city of Arak
- Comparing the effect of training self-regulation strategies (cognitive and meta-cognitive skills) on the academic achievement in mathematics and self-concept of female students in the third grade of middle school in the city of Arak

Research hypotheses

1. Teaching assessment components as learning increases the self-concept and academic achievement in mathematics of female students.
2. Training self-regulation strategies increases the self-concept and academic achievement in mathematics of female students.
3. Greater interaction between the parents, teachers and students increases the self-concept and academic achievement in mathematics of female students.

Research background

Acar and Actamis (2010) in a study entitled as "The relationship between self-regulation strategies used by teachers in teaching math and academic achievement of elementary school students" concluded that if the teachers have the knowledge on self-regulation strategies (cognitive and meta-cognitive skills, and resource management) and apply them in their teaching, they can improve the students' academic achievement in the long term.

Swalander and Taube (2007) conducted a study on 4018 students in 8 different grades. According to their results, a positive and significant relationship (56%) was obtained between the use of self-regulation strategies and learning of these students. The effectiveness of self-regulation strategies is not limited to pupils or students, but all people in the any workplace can take advantage of these strategies.

Young and Lenne (2010) in their study on drivers concluded that the drivers who already have learned such strategies were able to use distraction management more than other drivers, and had a more effective coping ability against factors resulting in drivers' distraction and accidents, and are therefore were more secure. Also, the entrepreneurs who were received cognitive self-regulation training were morally more conscious compared with other entrepreneurs and had no attention to failures and loss (Bryant, 2009). The investigators who had received such strategies had higher perception abilities and were more successful than others in the performance of their inspections (Awhoso, Weickgenannt, 2009).

Nursing students and employed nurses, in case of using these strategies while doing their tasks, can perform their duties in a better way and achieve considerable progresses (Peek, Miller, 2010).

In Amini study (2004) entitled as "The role of self-efficacy, self-regulation and self-esteem in academic achievement of students in the third grade of high school, experimental science, city of Shahrekord", the relationship of each of mentioned variables with academic achievement and individual contribution and role of each (self-efficacy, self-regulation and self-esteem) in determining academic progress was studied.

In France, Gorge Nevazeh and Jean-Paul Caron questioned the approach of performing current exams in French schools and assessments the results of the tests and conducted some research in the area. According to the findings, the teacher personality and other disruptive factors had a negative effect on academic evaluating outcomes and led to reduced reliability and validity of evaluations results (Akbari, 1996).

In a study, Flemming and Chambers (1984) assessed the teachers' competence in preparing the tests. The results showed that 80% of teacher-made questions are focused on the knowledge, understanding, perception and application. In other words, they tend to measure

the low levels of cognitive skills (quoting from DaneshPajoh, 2000).

Gulikers, Kester, Kirschner and Bastaens (2008) in their article as "The impact of applied experiences of true assessment on learning outcomes" came to the conclusion that reliable and accurate measurement and its understanding influences on students learning process and study, and if the instructions of accredited assessment are incorporated in the academic program, it would lead to a better learning process.

Rahim Zadeh (2003) in his study entitled as "Examining the causes of academic failure of students in mathematics courses in high schools in Semnan province" reports the family factors (emotional and economic conditions, education levels of the family, etc.) as well as the level of interactions between parents, teachers and the students as critical factors.

Sajjadi and Isa Abadi (2010) conducted a study entitled as "Assessment the role and impact of family functioning on school achievement in high school in city of Kamijan".

The main hypothesis of the researchers in this study was:

"The overall performance of the students' families is related to their academic achievement".

Finally, they found a significant relationship between them.

Research methodology

Study statistical population: The study sample consisted of all female students of third grade in the middle schools of Arak city in academic year of 2011-2012, including 171 classes accounting for over 5094 students enrolled in this city. For a closer similarity of the selected sample to the real students' population, the students of typical and gifted schools, who are outstanding ones and selected through entrance test from across the province, were excluded from the population of the study.

Sample and sampling method: In this study, four subjects groups (three experimental groups and one control group) were needed. Since the selected sample in each group included 31-38 subjects, and the total sample consisted of 137 female students in the third grade of middle school, the current study is considered as a semi-experimental study. The experts have suggested at least 15 subjects for each group in such research (Cohen, Manion, 2000; Delawar, 2007; quoted by Asgari, 2008).

Measuring tools: The tools used in this research are:

- A. Self -concept questionnaire (Ahluwalia)
- B. Math academic achievement test

Data analysis: In the present study, the analysis of increasing scores (the difference between the post-test and pre-test scores of the subjects) is used. Using this method neutralizes the effect of pre-test and initial differences of the subjects, and the assumption of nature-distanced data measurement scale can be more assured. To draw conclusions about each of the research hypotheses, the mean change scores for experimental and control groups were compared using multivariate analysis of variance for the differential scores, their results were discussed.

Hypotheses testing

H 1: To reduce Type I error, the Bonferrone correction and adjusted alpha instead of formal Cronbach's alpha were used. Thus, in the present study, the alpha of 0.05 was divided by the number of dependent variables, and the significance level was considered as 0.025 (0.05 / 2 =0.025). The dependent variables have a significant linear relationship, while there is no multiple collinearity relationship between the pairs of variables. Table 1 reports a summary of analysis of the multivariate ANOVA for discriminative scores used in this case.

Table 1. Summary of multivariate analysis for differential scores of self-concept and academic achievement in math

Tests	Degrees of freedom	F	Significance	Effect size	Statistical power
Pillai's trace test	7.59	22/55	001.0<P	728.0	1
Hotelling's trace test	7.59	22/55	001.0<P	728.0	1
Wilks' lambda test	7.59	22/55	001.0<P	728.0	1
Largest root test	7.59	22/55	001.0<P	728.0	1

Results in Table 1 show significant differences between the levels of education (training of assessment components as learning vs. lack of training) in dependent variables of academic achievement, self-concept, and self-concept subscales [$F_{(7,59)} = 22.55, P < 0.001, \eta^2 = 0.728$]. Thus, the first hypothesis of the research, suggesting that "teaching assessment components as learning increases the self-concept and academic achievement in mathematics of female students" is confirmed.

H 2: To reduce Type I error, the Bonferrone correction and adjusted alpha instead of formal Cronbach's alpha were used. Thus, in the present study, the alpha of 0.05 was divided by the number of dependent variables, and the significance level was considered as 0.025 (0.05 / 2 =0.025). The dependent variables have a significant linear relationship, while there is no multiple collinearity relationship between the pairs of variables. Table 2 reports a summary of analysis of the multivariate ANOVA for discriminative scores used in this case.

Table2. Summary of multivariate analysis for differential scores of self-concept and academic achievement in math

Tests	Degrees of freedom	F	Significance	Effect size	Statistical power
Pillai's trace test	61.7	570.13	001.0<P	609.0	1
Hotelling's trace test	61.7	570.13	001.0<P	609.0	1
Wilks' lambda test	61.7	570.13	001.0<P	609.0	1
Largest root test	61.7	570.13	001.0<P	609.0	1

Results in Table 2 show significant differences between the levels of education (training of self-regulation strategies vs. lack of training) in dependent variables of academic achievement, self-concept, and self-concept subscales [$F_{(7,61)} = 13.570, P < 0.001, \eta^2 = 0.609$]. Thus, the second hypothesis of the research, suggesting that "training self-regulation strategies increases the self-concept and academic achievement in mathematics of female students" is confirmed.

H 3: To reduce Type I error, the Bonferrone correction and adjusted alpha instead of formal Cronbach's alpha were used. Thus, in the present study, the alpha of 0.05 was divided by the number of dependent variables, and the significance level was considered as 0.025 ($0.05 / 2 = 0.025$). The dependent variables have a significant linear relationship, while there is no multiple collinearity relationship between the pairs of variables. Table 3 reports a summary of analysis of the multivariate ANOVA for discriminative scores used in this case.

Table3. Summary of multivariate analysis for differential scores of self-concept and academic achievement in math

Tests	Degrees of freedom	F	Significance	Effect size	Statistical power
Pillai's trace test	55.7	193.12	001.0<P	608.0	1
Hotelling's trace test	55.7	193.12	001.0<P	608.0	1
Wilks' lambda test	55.7	193.12	001.0<P	608.0	1
Largest root test	55.7	193.12	001.0<P	608.0	1

Results in Table 3 show significant differences between the levels of the independent variable (more interaction between parents, teachers, and the students vs. the lack of such interaction) in dependent variables of academic achievement, self-concept, and self-concept subscales [$F_{(7,55)} = 12.193, P < 0.001, \eta^2 = 0.608$]. Thus, the second hypothesis of the research, suggesting that "greater interaction between the parents, teachers and

students increases the self-concept and academic achievement in mathematics of female students" is confirmed.

Discussion and Conclusion

Analysis of data showed that the training of assessment components as learning can increase the self-concept and academic achievement in math in female students in the third grade of middle school. If teachers and instructors try to change their assessment practices, they can increase the rate of students' academic achievement and change their way of thinking about themselves. Due to a direct and significant relationship between academic achievement and self-concept (Jahanshah, 2002), the factors affecting one of them can affect the other one.

However, considering the high correlation between academic achievement and self-concept, one can say that the use of accurate and complete assessment leads to optimal learning and high academic achievement, and thereby, resulting in increased students' self-concept. Considering the fact that the descriptive indicators of pre-test, post-test, and deferential scores (the difference between the scores of post-test and pre-test) have reported the subjects self-concept of the control group, the mean scores of self-concept subscales had little increase in the control group post-test. Thus, the first hypothesis of the study, which suggests "teaching assessment components as learning increases the self-concept and academic achievement in mathematics of female students" is firmly approved. Based on collected data analysis on the second research hypothesis, suggesting "training self-regulation strategies increases the self-concept and academic achievement in mathematics of female students", the second research hypothesis was also confirmed. The effective use of self-regulation strategies to increase academic achievement and self-concept has been approved by numerous authors and researchers, including Young-Linee (2010), Bryant (2009), Agar, Aktamis (2010), Dor Mitzakee, Yundari, Goddas (2009), Ouhoso, Vakgenant (2009), McDonald, Palfai (2008), Coroner and Beerman (2007). Therefore, the second hypothesis of the research, suggesting that "training self-regulation strategies increases the self-concept and academic achievement in mathematics of female students" is strongly confirmed.

Analysis the data collected on the third research hypothesis, (i.e. Greater interaction between the parents, teachers and students increases the self-concept and academic achievement in mathematics of female students) demonstrated that greater interaction and communication between parents, teachers and the students' has increased the self-concept and mathematics academic achievement of female students. Therefore, the third research hypothesis was also confirmed. Hence, we can say with certainty that this hypothesis (suggesting that Greater interaction between the parents, teachers and students increases the self-concept and academic achievement in mathematics of female students) is confirmed. Based on information from the data, the impact rate of greater interaction between parents, teachers and students variable is more than the variable of self-regulation strategies learning and lower than the variable of training assessment components as learning.

As a conclusion, assessment as learning can have a great impact on academic achievement and self-concept of the students. In fact, this type of assessment has gone far beyond the assessment for learning, since the assessment for learning is an educational tool that not only monitors the students' learning and control to, but also increases the evaluation of learning. The important purpose of evaluation is to enhance the quality of learning and to make it applicable, and evaluation is an integral part of teaching. Assessment as learning has been derived from the thought that learning is not just transferring ideas from an

individual with knowledge to ones without knowledge. However, it is believed that learning is the active cognitive process of information reorganization and occurs when the learners engage with the new ideas.

Suggestions

Based on our results, it is recommended to teachers and instructors in education sector to learn the self-regulation strategies and use them in their classes and teach them to their students. Doing this, the students are become self-regulating individuals, leading to their better academic achievement, and they would be able to change their minds about themselves, and also use the strategies throughout their lives.

Changing the one and encouraging the self-esteem of individuals have the greatest impact on the society. Therefore, it is necessary to change the people's negative thoughts about themselves to achieve an ideal society. Therefore, the teachers, administrators, and the officials are recommended to work hard on students' self-concept along with training programs. However, it is necessary for the proper implementation that initially each person changes his thoughts about himself so that he can change the thoughts of others in the best way.

The education experts are recommended to understand all three objectives of assessment, differentiate the need to balance them and recognize the one to be used and why? Also, all of them should be use wisely so that by combining them together, the final goals of assessment as learning can be achieved.

The teachers can create a healthy competition between groups by grouping the students and giving them incentives points and chips as well as describes feedback to the active group and all members of the group.

As the assessment as learning plan is a new approach, it is suggested to train the components of the project the components of the projects by holding educational workgroups and in-service training programs.

Due to the large role of family on student learning and because the assessment components as learning are new concepts, the families need to be fully justified to avoid any concern and anxiety about them and to be encourage to support the program. Thus, it is recommended that monthly meetings are hold between parents, educators and the students as required so that a strong support such as family can help the implementation of the project.

References

- Ahmadi, A., Garosi Momeni, M., Sheikh Alizadeh, S., (2007); Study the factors affecting the self-esteem of students; Research- Scientific Journal of University of Tabriz, First year.
- Biabangard, E., (1999); Parents and teachers guide in family education and training; Office of Islamic Culture Publication, Tehran.
- Jalali Nazari, A., (2010); The impact of social learning model on self-esteem and self-confidence and self-assertiveness behaviors on academic achievement.
- Hasani, M., (2010); Implementation manual of descriptive-qualitative evaluation in the classroom. Tehran; Abed Publication.
- Sepasi, H., (2000); Effect of genetic tests on math academic achievement of third grade middle school students; Khuzestan education office.
- Sajjad, A., Isa Abadi, (2010); The role and impact of family performance on the academic achievement of high school students, city of Kamijan; Kamijan education office.

- Seif, A.A., (2010); Interactive teaching method as a means to foster cognitive and meta-cognitive strategies; Quarterly Management in Education; Volume 13 (pages 21- 25).
- Shoari Nejad, A.A. (1995); Psychological Foundations of Education; Tehran: Institute for Cultural Studies and Research.
- Shahraray, M., (1989); Punishment and conditions for behavior modification; Education Quarterly Journal, Winter; No. 4; Tehran.
- Sarrami, GR., (2006); Study the pattern of practical factors effective in academic achievement of students in mathematics in third grade of middle school, Tehran; based on Ghamiz study
- Genji, H., (1989); Examining the validity of scoring of teachers responsible for academic evaluation; Journal of Education, No. 15 and 16.
- Maleki, B., (2002); Evaluation of teachers' knowledge and skills in secondary schools in Markazi province based on assessment and measurement principles; Education Research Council of Kurdistan province.