# REVIEW AND EVALUATION OF CURRICULUM EVALUATION PATTERNS

# MahboubehSeyedi<sup>1</sup>

# **DrTaghiAghahosini**<sup>2</sup>

# Abstract

Educational organizations are one of the most important organizations in each country, as they are responsible for the great responsibility of education. Each educational organization needs a curriculum that can best be successful in learning to succeed. Evaluation is also one of the most important and most relevant components of curriculum planning, because no human activity can achieve a desirable outcome without continuous examination. Different aspects of education, especially the curriculum, which are pivotal and fundamental aspects, are in need of evaluation. Evaluation is a process that is performed before the development, design and implementation of the program, and after the implementation of the program. Therefore, the evaluation component has a central yet interactive role with other components and planning stages. Only through evaluation of the various stages of curriculum planning can the efficiency and effectiveness of the programs be increased, and the steps for continuous improvement of the curriculum can be taken. Therefore, in this paper, we examine the evaluation models such as goal-oriented, free-objective, siep, and so on. In addition to examining the characteristics and stages of the model, we will explain and interpret the advantages of each model.

# Keywords: appraisal .curriculum .template. educational organization

<sup>1</sup>Member of the faculty, Department of Educational Sciences, Iranshahr Branch, Islamic Azad University, Iranshahr, Iran, and Ph.D. student of Islamic Azad University of Maymeh.

<sup>2</sup>Faculty member, farhangian University Paradise shahidbahonar Isfahan, Isfahan, Iran

#### Introduction

The first formal definition of evaluation is registered in the name of Ralph Tyler. He considers evaluation as a means to determine the success rate of the program in achieving the desired educational goals. (Gay, 1991) believes that evaluation is referred to as a systematic process for collecting, analyzing and interpreting information.

The definition of curriculum evaluation is largely a function of the definition we provide from the curriculum. Nevertheless, curriculum evaluation is the process of examining the value and merit of the curriculum. Studying and evaluating the value and merit includes both the elements and aspects of the curriculum and the whole curriculum. Therefore, a broad curriculum evaluation appraisal includes all steps in the design process and curriculum design. Studying and evaluating the value and merit includes both the elements and aspects of the curriculum and the whole curriculum. Therefore, a broad curriculum evaluation appraisal includes all steps in the design process and curriculum design. Therefore, careful examination and study of all dimensions and elements of the curriculum is necessary to make the necessary modifications to the curriculum or its components based on this review. The evaluation of each component of the curriculum helps in its quality and makes it possible to make necessary corrections and revisions [1]. Perhaps the curriculum evaluation has begun since the first teacher was astonished at the consequences of learning in his student and intuitively looking for information to help him decide on future changes [2]. Evaluation is considered as one of the components and stages of curriculum planning [3]. The assessment of the legitimacy and integrity of the programs requires careful and continuous evaluation. Evaluation has a special meaning for everyone [4]. An evaluation process is a cluster of process that a person does to collect data that allows him to decide on the acceptance, modification, or removal of a problem. In appraisal applications in the curriculum, an evaluation is used to identify the strengths and weaknesses of the curriculum before its implementation and its performance after implementation. The purpose of gathering information about the strength and weakness of the curriculum is to allow the curriculum planners to re-evaluate and maintain their plans and activities, and to maintain or eventually stop them. Evaluation is the process of determining, obtaining, providing descriptive and judgmental information about the value and desirability of the objectives set for the program, the plan elaborated for the implementation of the program, the implementation of the program in

accordance with what was supposed to be implemented, and the results from the implementation of the program and the adaptation of the findings to the objectives of the program to guide the decision, serve the needs of accountability and understand the phenomenon [5].

## Purpose, importance and necessity of evaluation

Although evaluation has only one fundamental goal (to determine the value or worth of something), but its roles are very high. The main objective of the evaluation is judgment and arbitration. One goal is to determine if the goals that have already been set are fulfilled? Was the performance satisfactory or not? Therefore, it needs to be judged. Another goal is to evaluate the provision of information for decision making. Another important role is to evaluate the value of the curriculum itself. Does the curriculum meet the goals for which they have been modeled? Is the syllabus suitable for a certain group of students that is used for them? In higher education, which is one of the pillars of society, the necessity of using evaluation is quite obvious. Because, with the help of evaluation, this institution can be judged in accordance with social changes in the path of transformation and change, in this way, it can be judged in its relation to the needs of the community and its efforts to improve it. In other words, a higher education system has the necessary dynamics, an evaluation system as its sub-system must judge the underlying factors consistently and provide feedback to decision makers [6, 7]. Given that evaluation as a specialty has to deal with the value, quality, and importance, degree, or degree of circumstances of the phenomenon to be judged and continuously throughout the duration of the program to enable performance matching with the program's purpose. Therefore, performing evaluation as one of the key activities in educational technology is necessary and without it, educational goals cannot be achieved. Evaluation in its new concept is known as part of the education process and is a good means for reforming the goals, plans, and teaching methods [8].

The importance and necessity of evaluation in the planning of the curriculum can be considered from three perspectives:

1. In terms of curriculum planners: Determining the value of a curriculum is one of the important roles of evaluation. Planners need to know if the curriculum fulfills the purposes for which they are designed? Is the content well-formed of knowledge and knowledge structure of the learners?

2. In the view of professors: professors, in the planning of teaching and judgment about educational activities, have high and valid information about the readiness and academic progress of students, and the advancement of classroom activities. The evaluation of such information and data is provided to them.

3. Students: Effective evaluation helps students improve their learning. In addition to informing students about their academic achievement, they increase their accuracy and effort and promote their motivation. On the other hand, learners will know through their evaluation the positive and negative aspects of their learning activities, and will act upon their elimination [9]. Evaluation, components, and elements of the curriculum will be reviewed and criticized. It can be said that the life of the curriculum depends on the evaluation. Due to the lack of proper assessment of the curriculum, two things can happen in the field of education: firstly, the problem-wise curriculum may remain in the program for many years, and the professor will put the student under stress. In this case, the program is unjustifiably burdensome for students. Secondly, due to lack of evaluation, criticisms of the program may not be resolved. Therefore, we can say that learning justice is realized through evaluation in the curriculum [10].

Evaluation of the curriculum.

Curriculum evaluation is the process of assessing the value and competence of the curriculum. Examining and evaluating the value and merit also includes the elements and aspects of the curriculum and the entire curriculum. In our curriculum we deal with areas such as measuring needs, goals, content and methods, and implementing the program. In addition, in curriculum planning, designers, administrators (teachers) and students are in some way connected with or affected by the curriculum [11].

Today's community has other expectations from teachers as those who have a mission and who have students as tomorrow's future. In the future, we need people who can lead themselves, make decision-makers, deal with issues, solve them and think about things. In addition, it has features such as flexibility, initiative, creativity, avidity and open mind [12]. Evaluation of the syllabus has 4 processes.

-Prerequisite Evaluation or Needs Assessment: To measure the core curriculum and monitor the objectives and objectives of the curriculum from the relevant resources.

Developmental assessment or evaluation at the time of designing, compilation and development of the curriculum: The various sections of the program being studied and the mistakes and possible mismatch of the program will be addressed by the learning environment and learners.
Final evaluation: There are necessary corrections regarding the effectiveness of the program and the extent of the gap between the predicted impact and what has actually happened, based on which planning cycles are needed.

- Follow-up Evaluation: The effects of a curriculum at a particular level on how the learner works and learns in the curriculum in the next sections.

Classification of educational evaluations in the form of different approaches

Educational appraisal experts disagree on their views on how the evaluation is and how it should be done. These disagreements have led to the creation of different educational evaluation approaches. Verthens and Sanders (1987) divided these approaches into the following six categories.

Objective-oriented approach: In this approach, the overall goals and objectives are emphasized and the educational evaluation seeks to determine how far these goals have been achieved (SIP Evaluation Model) (the evaluation model of the UCLA).

Management-oriented approach: In this approach, the goal is to identify and realize the information needs of decision makers.

Consumer-oriented approach: In this approach, the main emphasis is on obtaining information on general educational products that are used by educators to choose from among different curricula, educational products, etc. These are used. (Scoreboard Assessment Model) (Free Target Evaluation Model).

Expertise-oriented approach: In an expert-led approach, the main emphasis is on direct application of expert judgment in judging the quality of education activities.

Disagreement-based approach: Specialists emphasize disagreement between the various evaluators (agree and disagree).

Naturalistic and participant-oriented approach: In this approach, values, criteria, needs, and evaluation data are emphasized, such as a pattern of excellence and educational critique.

The most popular evaluation patterns from the curriculum

- Objective-oriented pattern in curriculum evaluation
- Target-free evaluation pattern
- Sip evaluation model
- Pattern of Educational Certification and Educational Criticism [11]

Target-oriented evaluation model

This model was first introduced systematically by Ralph Tyler. In the Basic Principles of Curriculum and Education, published for the first time in 1949, he devoted a part to assessing student learning experiences. Of course, it should be noted that historically this pattern has been taken into consideration in previous decades, and especially in a study entitled "eight-year study", a model for curriculum design and evaluation has been presented and Tyler was severely affected by the ideas of the evaluation department. In the goal-oriented evaluation model, the objectives of the program are formulated first. The purpose of the development is to allow accurate examination of the objectives. After formulating the program objectives, the results from the implementation of the curriculum and its effectiveness are judged. In short, the purpose of the evaluation is to assess the extent to which the objectives of the evaluator is to assess the extent to addite the main task of the evaluator is to assess the degree of compliance of the curriculum objectives with the student's performance. In his proposed model, he can be identified for the assessment of the following steps:

- 1.Preparing curriculum goals
- 2. Classification of the objectives of the curriculum

- 3. Expression of goals in the form of behavioral
- 4. Identify the situations that give learners the opportunity to behave
- 5. Statement of the objectives of the evaluation program to the relevant personnel
- 6. Selection or compilation of appropriate measurement techniques
- 7. Collecting data on student performance
- 8. Comparison of data with behavioral goals

Advantage: Through a linear and phased process, the process of evaluation follows. The evaluators and all those involved in the evaluation at each stage are precisely aware of their duties and functions, and the curriculum objectives form the basis of their evaluation activities. It is possible to determine which of the objectives of the program has not been achieved and, while reviewing it, pursues the necessary corrective action in the program or revision of the objectives. Objection: Assesses the results of the curriculum only on the basis of performance tests. Exclusive reliance on test results is not a good criterion for judging the program. In addition, the formulation of specific objectives is a complex activity, in which the development of relevant objectives cannot always be fully integrated and finally, each program, in addition to the goals that it seeks to achieve, has other results (both positive and negative)[12].

#### Target-free evaluation pattern

Objective-free evaluation is in fact formed as a response to a target-oriented pattern in evaluation. In this template, evaluations use different methods and tools to determine if the expected objectives of the program have occurred in the scene or not? And to what extent has the program been successful in achieving its predetermined goals.

Failure on this template: It only takes into account the realization of the goals, while the implementation of any curriculum may also lead to results other than those specified. Monopolistic attention to the extent to which the objectives are achieved neglects the evaluators from the actual results of the programs. Therefore, it is necessary to pay attention to the expected results and the results not expected to occur. This template, first proposed by Michael Scrion, looks at the results of the curriculum without reference to the goals.

According to Scrion, focusing on the real results of the curriculum rather than the objectives of the program will have the advantage of avoiding the misguided bias of the program's objectives and ignoring or neglecting the implicit results of the curriculum. Instead of concentrating on goals alone, in free-to-goal evaluation, all the results are examined, and there is no difference between the predicted outcomes (goals) and the secondary outcomes. In this model, the evaluators demand that the evaluators take all the results of the curriculum with complete impartiality.

The criterion for the success of an application, not the realization of goals set by the planners, is the success of the program in meeting the needs of individuals or clients. The existence of such an attitude in the objective-free evaluation has also called it a consumer-centric consumer pattern. In this model, real needs replace the goals of the program.

Advantages: With increasing public discontent about the lack of compliance with the real needs of the community and the people, objective-based evaluation provides a framework for further reflection on the need-based programs. On the other hand, many professionals and trainers who are worried about the adverse outcomes from the implementation of some educational programs and practices will see this model wiser and more comprehensive.

Disadvantages: Target-free evaluation is more of a philosophical perspective and perspective than an evaluation model. The reason for this claim is that the fans of this template do not speak of a set of specific steps, specific structure, tools for collecting information, and reporting and all of them have been assigned to the self-evaluator, which has caused many evaluators or people involved in the evaluation to oversaw using this template because they face a huge responsibility for evaluating all the results of the program, yet they are confused and ambiguous in their duties. Assessors also resist unplanned and uncontrolled evaluations. In some cases, the evaluators do not have the facilities and the position necessary to implement this template. However, the advocates of the Target-Free Evaluation Model have focused on issues such as the importance and necessity of the independence of the evaluators, attention to the actual results of the program and the need-based assessment approach. However, in a final evaluation, this model gives us little data on the evaluation technique and its implementation mechanism, but at least the development of the visually impaired horizons has increased the awareness and evaluation awareness [11].

## Sip Evaluation Model

Stafford Blair and his colleagues at the University of Ohio, USA, and based on special studies, presented this template. The main purpose of this model is to provide the necessary data and information for decision makers. In this model, using a system approach, different curriculum dimensions are examined and during each step, there are special information that allows authorities to make the right decisions. This model takes into account four evaluation steps that in fact represent four types of evaluation:

Field evaluation Input evaluation Process evaluation Outcome evaluation

## Field evaluation

The main goal is to provide the information needed for planning. For this purpose, the environment that is supposed to be implemented is carefully considered. The basic axis of actions and activities is a needs assessment or need assessment. To this end, a desirable situation is identified through the review of available resources and information and after comparing the desired situation with the existing conditions, their needs and priorities are identified and are considered as program objectives. At this stage, feasibility is also made, conditions, resources and facilities are identified. Based on information from this stage, planning decisions are taken. Input evaluation

The main purpose is to provide the information and data needed to formulate the curriculum. In other words, here are various possibilities and programs to be considered, among them, a program that, according to conditions and facilities, fulfills the objectives set out in the underlying evaluation, is selected or formulated. The basic task of evaluating here is to provide the necessary and reliable information for planners.

Process evaluation

The main objective is to provide information about methods and implementation of the curriculum to make the necessary decisions. The task of the evaluators is to determine whether the curriculum runs on the basis of what has been set?

#### Outcome evaluation

The main goal is to provide the necessary information to decide on the effectiveness and effectiveness of the curriculum, which will make decisions about continuing or disabling the implementation of the curriculum in later stages. Based on the evaluation of the output, it is determined whether the curriculum has reached its goals or not? The result of this type of assessment is mainly used to respond to and provide specific reports to authorities or the general public. If the result of the evaluation shows that the curriculum achieves the desired goals and the actual results of the program indicate its ability to meet the needs of learners, this will support the implementation of the program and its continuity. But if the program does not succeed in achieving all its goals, it will be adjusted or stopped completely depending on the degree of success. [12]

# Pattern of Excellence and Educational Criticism

Educational excellence and educational criticism are the words put forward by Eisner and are essentially based on the use of artistic perspectives in education. From Eisner's point of view, teaching is an art and just as art critics take criticism of artwork using certain frameworks and experiences, they can criticize educational phenomena and curriculum issues. In terms of meaning, sophistication means the ability to understand the qualities and qualities of a finer element in educational phenomena, and criticism is to clarify this understanding as a critical essay or essay. For a better understanding of educational competence and educational criticism, we will discuss its aspects and implications.

Educational excellence: In the realm of fine arts, an expert is known to have been trained in his ability to understand him through the vast experience associated with various artistic expressions and products. According to Eisner, this expertise in fine arts has expanded into tangent brushes such as sports and other social issues, with education as one of them. In the realm of education, one can acquire the necessary expertise that is sensitive to the issues of curriculum planning and

education. This, on the one hand, requires careful consideration of curriculum issues and educational phenomena and, on the other hand, compares aspects that are present in other subjects, this approach helps to refine and develop his clean mind and recognize him and gain a set of ideas.

Educational criticism: A set of activities that an educator carries out on educational issues is generally personal and personal in a way that is not understandable to others. However, it is imperative to express what everyone understands. In this way, art criticizes is the art of expressing what an expert knows about education. In critical articles, educational critics use two forms of expression. The first form of expression is called the so-called metaphorical method. In this way, the critic is convinced of the artistic, literary, simile, and exciting nature of what he understood from the careful examination of curriculum and education issues. In other cases, the critic uses an explicit, clear-cut approach. Usually in educational critique, a combination of these two methods is used, and what determines the quality and composition of the way of expression in a critical article are the characteristics of what the target audience is and what talent and inclination the critic have?

Structural Dimensions in Educational Criticism

Three critical dimensions have been identified for educational criticism:

Descriptive

Commentary

Evaluation

These dimensions are essentially appropriate for analysis, and each dimension is appropriate and relevant in a particular way. Description: The critic tries to depict the features and characteristics of educational issues or curriculum development. Here, the critical task of the critic is to change the reader's perceptions of critique in a way that changes or rebuilds who can experience different aspects of issues or topics and understand and understand those areas that others neglected. Typically, description is best described using a metaphorical way of expression. In the commentary, the critic tries to make sense of what is described in the description stage. For this purpose, the problem is dealt with extensively. In general, it attempts to clarify the fundamental and profound structure of educational issues and phenomena and, therefore, to interpret the

problem by linking it to some specific social issues. In the evaluation phase of the task, the critic is to evaluate explicitly the desired aspects in accordance with the special educational criteria accepted.

# The process of educational criticism

Critics rarely make a flow of criticism that consists of a set of hypotheses to be tested or predefined questions to be answered. In addition, they do not follow precise and specific research methods. Steps: When the educational critic encounters the phenomena for the first time, there are some uncertainties, for example, the quality of issues and issues still do not have a specific structure and pattern. In the second stage, the relationships between different phenomena are gradually being understood by the critic and a general pattern and structure are developed experimentally. In the third stage, the structure becomes brighter, so that the critic can be ordered by the various phenomena that surround him. In the fourth stage, the structure of the subject leads to the flow of research and critique, while the structure itself becomes clearer. In the fifth stage, a context is provided to allow the critique to be properly judged. Opponents of this approach believe that critique of education is highly subjective and its findings are highly suspect because it lacks a strong methodological basis and is more subject to the views and opinions of the critic. On the contrary, advocates of this approach argue that value judgments exist in all forms of research and evaluation [13].

The other models presented to explain the place of assessment in employee in-service training are Kirk Patrick's model. The main emphasis of this model is on assessing the effectiveness of the in-service training program. In this regard, all efforts have been made to finalize the evaluation and follow up of training courses and this pattern has been implemented in numerous organizations such as Barclays Bank. In this model, which is a major part of the final patterns or effects, Patrick's level is as follows:

Level 1 Reaction (Reaction) Level 2 Learning, Level 3 Behavior and Level 4 Results. This model puts into the first three levels.

Reaction Evaluation (Reaction) is to investigate the reactions of interns immediately after the end of the course.

Learning Assessment: This is to measure participants' learning rates typically by exam at the end of the course.

Behavior Evaluation (Behavior Change) is the measurement of the amount of changes in job behavior as a learning skill of new knowledge and skills in the course. To the first two levels, the evaluation of the effectiveness of the Kirkpatrick model is called a hot evaluation (since the distance is after the end of the course), and to the other two levels, it is called "cold" evaluation (because it runs sometime after the end of the period) [14].

# A general category of evaluation patterns from the curriculum

In this categorization, evaluation patterns from the curriculum can be classified into two general categories of quantitative and qualitative. If we consider the evaluation patterns on one axis, so that at the end of the spectrum, the patterns are quite small, and at the other end of the model are perfectly qualitative, other evaluation patterns can be placed between them. Accordingly, Wertan and Sands (1987) divided the evaluation patterns into 6 categories, which are as follows:

- 1. Targeted Goals
- 2. Management-oriented patterns
- 3. Consumer-oriented patterns
- 4. An Expert-Based Model
- 5. A model based on advocacy
- 6. A nature oriented and participatory model

In this categorization, the validation model, which is one of the oldest evaluation models, has not been considered separately, but is considered as a model based on expert opinion. In addition, in the consumer-oriented patterns of models, scoring patterns and output estimation systems are included, while these categories can be categorized as target-free patterns. In addition, in the consumer-oriented patterns of models, scoring patterns and output estimation systems are included, while these categories can be categorized as target-free patterns. In addition, in the consumer-oriented patterns of models, scoring patterns and output estimation systems are included, while these categories can be categorized as target-free patterns.

Horda's classification (1996) of evaluation patterns from the curriculum

-Functional patterns

-Implementation patterns

-Critical patterns

# Functional pattern

The patterns in this subset usually measure the program in comparison to the predefined ideals and are based on the assumption that there is a tangible truth about the value of the curriculum that can be revealed through evaluation. The evaluation will determine whether the program should continue with the current form or not. Few of these patterns encourage evaluators to evaluate the context or process. The Tyler Pattern, Yafam 1988, Stanhoush 1970, Stafford Blizzard 1971 are from this category.

# Execution pattern

This model is based on the views of humanism and the idealist ethical principles, and they regard each valuation as having a unique texture of individuals and their beliefs and practices such as the 1975 Steak Patterns, Parlett and Hamilton 1972, Interactive Ethnography Models, Feterman 1982, Elliott and Johnson 1994.

# Critical pattern

The basis of this model is the idea of learning communities as self-evaluating and thinking entities that can set their own standards. In the ideal conditions, people involved in the program initiate and direct the evaluation process. Select criteria for evaluation, collect and interpret data, and apply evaluation periodically to improve the program. The Commission and Hughes model 1979, Marshall and Peter 1985, Melrose 1994 fall into this category.

In a brief overview of the presented content, it can be concluded that the use of both quantitative and qualitative models in the evaluation of the operation helps to validate the findings and valuation can be controlled or reduced by using different patterns of evaluation and deploying tools and resources at different stages of the evaluation, while using the positive features of each of the two categories of model, to control the weaknesses of the patterns and their measurement tools. Green, Caracillary and Graham (1989) regard these types of designs as hybrid designs. Combination designs are composed of at least a quantitative method and a qualitative method without any of these two approaches associated with a particular research paradigm. In a hybrid approach, with the belief that the variety of techniques and methods likely to increase the credibility of the findings, it is possible to use a triangulation method in a general sense to study a study with several methods (case study, investigation, surveying, etc.), several tools (various interviewing techniques, observation, questionnaires, tests, etc.), multiple participants (students, teachers, administrators, parents, etc.) and several methods of analyzing information (statistical and interpretative), , thereby increasing the likelihood of obtaining valid, reliable, and acceptable results [16].

#### Conclusion

Educational organizations are one of the most important organizations in each country that can be evaluated by improving the effectiveness and effectiveness of its programs. Evaluation of the curriculum has 4 processes: evaluation before planning or needs assessment. Developmental evaluation or evaluation at the time of design, development and curriculum development. Final evaluation. Follow-up evaluation. Different educational evaluation approaches, including management-based approach, goal-based approach, expert-based approach, expert-based approach, consumer-based approach, and participatory-based approach. Curriculum evaluation models include quantitative and qualitative model, Hordsa model, goal-oriented, goal-free model, sample evaluation model and educational excellence and educational critique which are among the most important and most popular evaluation models. In the end, we conclude that the findings from the combined patterns are more comprehensive, more reliable, and more consistent with the discovery of quantitative or qualitative patterns. A hybrid approach helps to strengthen data collection tools, modify or extend the evaluation plan, and better understand the evaluator of the findings. In this approach, the acceptance of the findings and results of the study increases with different groups (audiences, consumers and experts).

#### References

[1] Fathi and Ejargah, koruosh (2011). Principles of Curriculum Planning, Iran Zamin Publishing.

[2] Short, Edmondi (2008). The Methodology of Curriculum Studies, MehrMohammadi Mahmoud, Translator. Tehran, samt publication.

[3] Abbas Zadegan, Seyed Mohammad (1997). Principles and Concepts in Curriculum Planning, Tehran, Sure Publications.

[4] Maleki, Hassan (2015). Curriculum, Practice Guide. Mashhad, Payamandishe Publication.]

[5] omstein c . HunkinsF .(1996 ) Curriculum foundation , principles and issues . London

[6] Khorshidi, Abbas (2006). Educational Evaluation, Publisher: Yaserron.

[7] John Gallon, Silver. William M., Alexander. Arthur J. Lewis (2001). Translator GholamrezaKhoyeNejad, Publisher: Astan Quds Razavi. Mashhad .

[8] Experts from the Office of International Cooperation in Education (2000). Evaluation Dialogue in Education, Ministry of Education. International Cooperation Office.

[9] Ebrahimi, Ali (2008). Curriculum Development (New Strategies), Publisher: Fakrano Tehran.

[10] Maleki, Hassan (2015). Fundamentals of Secondary Educational Planning, Publisher: Samt. Tehran.

[11] Fathi and Ejargah, koruosh (2011). Principles of Curriculum Planning, Iran Zamin Publishing.

[12] Vali Pour, Ahmad Naderi, Ezatollah, Shri'atmadari, Ali, SeifNaraghi, Maryam (2008). Knowledge level of middle and upper secondary school teachers on the basics of curriculum planning and learning principles. New dissertation on the topic of thought in education. The third year. 4.

[13] Maleki, Hassan. MohammadiMehr, Mojgan (2009). Evaluation process of curriculum. Fourth year. Number 2.

[14]RezazadehBahadoran, Hamid Reza. KhosraviBabadi, Ali Akbar., Haghighi Sara (2011) The Effect of In-Service Training on the Performance of Employees of Islamic Azad University, South Tehran Branch Based on the Model of Kirk Patrick, Faculty of Paramedical Sciences of the Army of the Islamic Republic of Iran Second year, No. 1, pp. 11-22

[15] BazarganHarandi, Abbas (2013). Educational Evaluation, Organization for the Study and Compilation of Humanities Books of Universities (Samt), Tehran.

[16] Kimanash, Alireza (2013). Educational Evaluation Methods (Educational Science),Publishing: Payame Noor University.