Objective-based internal evaluation in educational programs in Universities of Medical Sciences

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ABSTRACT

The Planning and Evaluation programs in higher education have been established for quality improvement and the main purpose of internal evaluation is to encourage the staff to feel responsible for educational quality.

Internal evaluation plan have welcomed in Iran and faculty members in educational programs have started to perform this plan since 1995. The received results of the evaluation programs to registration office of evaluation and supervision console have been assessed. We report and discuss the views, present a definition, and recommend a practical paradigm for performing a scientific and systematic evaluation.

Keywords *INTERNAL EVALUATION, QUALITY, HIGHER EDUCATION*

Introduction

Quality improvement has been a major consideration for many years; however, the concern is increasing throughout the world and establishing new criteria has been studied. Evaluation and performance control is necessary for having successful productions and services of any program in contemporary society. Quality assurance and improvement become a major focus of political and administrative attention in different industries to satisfy customers. The planning and evaluation services are organized for quality assurance and they provide critical information to policymakers. The governant policies in higher education is also dominated by a discourse of quality assur- ance which assumes the approval and accre- ditation of academic activity (1).

The planning and evaluation programs in higher education have been established for about two decades except in the United State, which has a longer record. In 1980 in Europe, the higher education departments went through a substantial reconfiguration, which has affected the effectiveness and efficiency of services. Recently, some of the Asian countries have also organized to evaluate the educational quality (2).

Recent decades have seen several changes in medical education. This is quite logical since education reflects the changing condition of economy, society, politics, and culture. Consequently, society expectations from the health and medical system have changed. Accordingly, medical education has been subject to many great changes toward more effective and guiding evaluation programs. In spite of good background reputation, there is some evidence that medical education in Iran is not up to date with the change processes and it is inadequate for managing the current society problems. The medical education curriculum does not exhibit a suitable and organized policy, rationalism has not met in the programs structure, and curricula do not adequately respond to this shift. It seems that formalized approaches are necessary to describe the present situation and suggest the possible adaptation process for these changes. Performing an efficient and systematic evaluation can hopefully reform this critical situation.

Because of not having a modern and scientific organized system and not having enough evaluation actions in the universities, establishment of internal evaluation should be wise by accurate perception of the present situation and by cultivation the positive attitude toward evaluation. The internal evaluation actions that have been done in educational groups in Supervision and Evaluation Office were in this direction with considering the mentioned characteristics in the past five years.

Different quality methods descriptions are as follows:

Quality of evaluation: a concept presentation
The context of quality of evaluation is still unclear; however, some of the concepts better meet the requirements of higher education. Harvey & Green classification of quality in "Guide for quality assurance: procedures and operational aspects of European higher education organization" (1998) is:

Excellence quality is the traditional academic concept that quality is the excellent way for improvement. This has been used as a framework by policymakers in universities in any subjects about evaluation quality of higher education.

Zero errors quality can determine the detail of characteristics of products in industries with massive production. Standard measurements of similar products can predict the final compatibility, but it is not expected that students act as similar products in higher education.

Fitness for purpose quality is the most important concept in the literature and states that a practical definition should always be specific. For example, an educational course may be favorable for preparing the educators but not for preparing the other professions. This concept emphasizes on meeting the costumers' expectations. However, the real meaning of costumer is not fully defined in higher education.

Transformation quality's main attention is on students and claims that students' attitude and goals are changing during the education.

Threshold quality includes regulations of norms and known standards, and program quality depends on acquiring these norms and standards. Nevertheless, the least standards and norms of quality are commonly practiced in most of higher educational systems.

Enhancement quality is continuous betterment of the degree of compliance of a process or its outcome with a predetermined set of criteria, which are presumed essential to the ultimate value it provides. The constant improvement of quality of universities curriculum can best be achieved by the universities staff.

Overall the following definitions can be suggested as the most acceptable:
- quality in higher education depends on specific purposes,
- the purposes should meet the higher educational system's needs,
- it is justified that different costumers have different expectations,
- students are one of the most important groups of costumers, and
- the greater the educational bulk, the more variable the students' requirements.

It can be concluded that different quality evaluation concept can result in different outcomes. So, it is sensible to choose the appropriate view for having the optimal satisfaction. In the "systematic collection, analysis, review and interpretation of data in order to determine the possibility of achieving purposes", the first evaluations are done on general principles of the Quality Control and Evaluation Office, which are policy and structure determinants of evaluation.

Policymakers consider different levels of evaluation:

1) **Purposes** The evaluation purposes can be effective both on improvement of quality and control accreditation and investment.
2) **Types** There are two types of evaluation: institution-based and program-based. Institution-based evaluation emphasizes on financial and academic management, evaluation of activities, and priorities. However, program-based evaluation emphasizes on learning and teaching process.
3) **Scope** It is more meaningful in institution-based evaluation that assesses if evaluation covers all the aspects or only covers specific aspects.
4) **Boundries** It determines organizational and management bonds between evaluation units and the head section of institution. It also determines if any of the units should be evaluated and compared.
5) **Cost** Evaluation costs for providing human and financial resources, and obviously the number of units and their availability to resources and practical abilities are determinants for cost.
6) **Method** It refers to internal and external evaluation (3).

In internal evaluation, educational groups are the main target for advancing educational quality by focusing on learning and teaching process. Because medical education standards are not compiled yet, quality is still determined relative to purposes.

In order to cultivate evaluation; first, educational groups were selected by considering their situation, armaments, and limitations of medical education system. As a result, it is expected that evaluation becomes part of the programs that give a certificate. For understanding internal evaluation concepts of basic purposes (quality improvement, evaluation cultivation), fitness for purpose quality, internal dimension (self-evaluation), and external dimension (external experts activities) should be considered.

Internal evaluation phases in departments of educational programs

Internal evaluation process is performed by the evaluation unit staff. The main goal of internal evaluation is to encourage the staff to feel responsible for improving quality. The following are some reasons for the importance of internal evaluation:

1) professionals in each unit are thoroughly aware of current activities,
2) executives can reform a system by adopting necessary changes,
3) if executives acquire a sense of ownership, they will have a positive attitude toward evaluation as their own activities,
4) staff achieve innovative views and self-awareness of their activities, and
5) quality improvement will happen (guideline for quality assurance 1998).

After teaching internal evaluation process to faculty members and establishing evaluation committees, the purpose of internal evaluation is compiled.

In the first paradigm, internal and external processes involve seven elements: managements and organization, faculty members, students, educational courses, learning and teaching process, environment, and facilities and equipments. For example, for evaluation of faculty members; arrangement and distribution; scientific, educational, and clinical characteristics; educational activities; expansion policy; and consultation is the evaluation elements.

For each of these elements criteria and desirable conditions are determined by considering the purpose of groups. After determining the criterion for each element, the desirable condition is defined and the necessary equipments for data collection are indicated. Then data are collected by appropriate tools, such as questionnaires, checklists, interview, file and recording assessment. Next, the data are analyzed and assessed for finding the strong and weak points and their reasons. Finally, practical solutions for eliminating weak points are suggested and future plans and its timetable are presented. These suggestions should be logical and concluded from the results of evaluation. The report of internal evaluation is presented and can give a clear image of the group condition.

Internal evaluation phases in a department of educational programs are:
Phase one teaching internal evaluation process to faculty members
Phase two establishing an internal evaluation committee in educational groups
Phase three compiling the program purposes
Phase four determining evaluation criteria and desirable conditions
Phase five compiling data collection tools
Phase six analyzing data
Phase seven discussing and concluding
Phase eight presenting suggestions and planning activities
Phase nine preparing internal evaluation report
Phase ten follow up

By providing continual suggestions educational group step toward desirable end result that is improvement of education quality.

Presenting the internal evaluation results

Internal evaluation is a descriptive-analytical process as it describes the present condition and analyzes the strong and weak points of educational units that cover different aspects of educational system. It should perform continuously and long-term because only in long-term can the strong and weak points become clear; also, it is better that it is performed in a defined framework (4).

Through internal evaluation in educational groups, potential abilities can be recognized and the necessary condition for self-repair of group activities becomes available. Moreover, this kind of evaluation makes a chance of acquiring a culture of distinct higher educational activities and makes possible to have answers for executives and policymakers (2).

There are 34 public medical univer- sities (consisting of two independent medical universities) in Iran that have welcomed internal evaluation plans in at least one of their education-

al units and have tried to perform this plan. However, these plans involve more than one educational unit and at the moment 150 educational groups have some activities of internal evaluation. Among them, 1083 university faculty members are cooperating with these plans. Final assessment reports of the finished plans are in the Registration Office of Supervision Council, and with the available reports of plans in progression, a total of 120 reports are available as a documented deed of evaluation plans. As the first phase of internal evaluation, explanatory workshops were held for faculty members, and with complementary workshops, a total of 53 workshops were held with the aid of domain staff.

Table 1 shows number of educational groups and number of faculty members' participation in internal evaluation plans in medical universities. The main clinical groups were internal medicine pediatric, gynecology, and surgery that had the main proportion of internal evaluation plans and number of faculty members' participation were more in these groups compare to the other educational groups that performed the internal evaluation plans. Considering that the most important purposes of the internal evaluation plans is to encourage faculty members to participate and understand their own situation, it can be concluded from the results and the other groups and programs ntentions that internal evaluation plans were successful for reaching this purpose. Internet evaluation was performed in 151 educational groups and 1083 faculty members participated.

Table 2 shows the rate of desirable condition of different elements in educational groups that completely performed internal evaluation plans. Three elements of learners; learning and teaching process; and environment, facilities and logistics were evaluated as "not desirable" 11.11%, 7.14%, and 15.38%, respectively. The other elements were evaluated "relatively desirable" and "desirable".

Environment, facilities, and logistics; and management and organization had the highest percentage rate and learners had the lowest percentage rate.

It can be interpreted from Table 2 that accreditation of internal evaluation results can be confirmed by external evaluation as a complementary tool. It can be assumed that because of not being completely confident about the final results, the responders did not choose "undesirable" for some elements. Thus, by completing the

circle of evaluation and improvement of quality these ambiguity will gradually fade and evaluations will be performed with more confidence and less worry.

Because environment, facilities, and logistics had the least desirable rating, they can be the first priority for future plan and the same priorities can be considered for other elements of evaluation.

Similarity of "specific purposes occurrence" and "compilation" ratings suggested that probably the evaluation plan was mostly based on a correct and complete translation of purposes for preparing the obligated regulation and the paradigm of evaluation plan and it is reaching toward a thorough assessing of system.

Faculty members can interpret and use these analyses for improving the quality of their group.

The 50% rate of "relatively desirable" for "compilation" element seeks serious attention of executives to improve quality.

Discussion

There are several reports especially after 1982 that mentioned medical education need to be changed with innovative paradigm. The main problems pointed out in these reports were weakness of medical staff skills of health system and changing society requirements. In addition, in traditional educational programs there is no feedback from society to affect educational program quality (5).

In Iran, higher educational system and especially medical education have the same problem and reform in policies for improving higher education and social accountability is discussed in policymakers' gatherings. Accordingly, in 1995 internal evaluation plans have started in departments of educational programs of medical universities first as a pilot plan in six experimental groups and then grows into 150 educational groups in 2001.

The results of 50% "desirable" for "educational group" and 50% "desirable" for "compilation" elements indicates that quality is not satisfactory.

The first step for achieving desirable quality is to understand the present condition. Since 1995 from the beginning of these plans, it has been attempted to receive faculty members' feedback and to assess results for planning a more adaptable paradigm for improving quality.

TABLE 1 NUMBER OF GROUPS AND RATE OF FACULTY MEMBERS' PARTICIPATION IN EDUCATIONAL PROGRAM EVALUATION

Educational Groups			Number	Total Number	Faculty Members' Participation
Medical Universities	Main Clinical Groups	Internal Medicine	23	80	576
		Pediatrics	21		
		Obstetrics & Gynecology	18		
		Surgery	18		
	Other Clinical Groups	Dermatology	2	34	190
		Community Medicine	3		
		Orthopedic	2		
		Psychiatry	4		
		Anesthesiology	3		
		Radiology	2		
		Pathology	3		
		Urology	6		
		Infectious Diseases	2		
		ENT	2		
		Neurology	3		
		Ophthalmology	2		
	Basic Sciences Groups	Nutrition	1	27	141
		Microbiology	5		
		Health Sciences	7		
		Pharmacology	2		
		Anatomy	6		
		Biochemistry	2		
		Physiology	4		
Other Universities		Midwifery	4	10	176
		Nursery	4		
		Dentistry	2		
TOTAL				151	1083

Following positive results has followed after internal evaluation:

1) **Persuading faculty members for participation** The large number of faculty members' participation (1083) from 151 educational groups, as a first and most important result of internal evaluation is very important and it shows the willingness and positive attitude of faculty members to a systematic and scientific evaluation. This outcome is a result of more than 50 explanatory and practical workshops of evaluation in medical universities. Faculty members become familiar with the problems of their group, so they become interested in participating in activities for improving quality.

2) **Familiarity of faculty members with the new aspects of evaluation** Several explanatory and teaching programs about the new aspects of evaluation with a scientific and systematic frame have been performed for faculty members. As a result, their attitude toward the new approaches of evaluation and improvement of quality has become positive.

3) **Compilation of educational groups' purposes** One of the important benefits of internal evaluation is compilation purposes of executive educational groups in the way of improving the educational quality. In more

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TABLE 2 PERCENTAGES OF INTERNAL EVALUATION RESULTS IN EDUCATIONAL GROUPS

	Elements usage	Desirable	Relatively Desirable	Not desirable
Management & Organization	88.88	53.33	46.67	
Faculty members	72.22	69.23	30.77	
Learners	72.22	55.56	33.33	11.11
Educational courses	38.89	50.00	50.00	
Teaching-learning processes	83.33	64.29	28.57	7.14
Environment, facilities, logistics	88.89	30.77	53.85	15.38
Performing of Special purposes	27.78	50.00	50.00	
Students	16.67	50.00	50.00	
Total	55.56	50.00	50.00	

than 150 educational groups specific beha- havior purposes have compiled that can be effective on learners' education. A basic knowledge of objectives has introduced to faculty members and students since without compilation of purposes (general, detail) the objectives and aim of learners would not be clear.

4) **Beginning of scientific and systematic evaluation activities in universities:** literature and background review, and international experience suggest that internal and external evaluations are milestone of any successful evaluation in the world. Therefore, in Iran after assessment of onditions and facilities in the country and situation of medical education, the new internal evaluation with attitude of improving quality of education has started in the universities. This is a new horizon of a scientific and systematic evaluation that has changed the traditional and unscientific way of evaluation.

5) **Participation of faculty members in planning group programs:** one of the benefits of internal evaluation is providing a positive change for improvement in educational group programs by faculty members participation. Activation of faculty members for solving problems of educational groups is a starting point for improvement of educational quality and internal evaluation make their broad activities possible.

6) **Deport to higher level of administration:** presenting the documented data can make changes of system and improvement of programs possible. In internal evaluation after analysis and discussion about strong and weak points, practical suggestions in different levels such as group, college, university, and community staff are presented. The suggestions deport to higher level of administration and programmers and as a documented resource are used for future plans.

7) **Determining and eliminating weak points to improve quality:** finally by analyzing and comparing present situation with desirable situation, the ultimate target can be determined. Evaluation processes is completed by executive reports of their activities for eliminating weak points and reaching the desirable situation. Follow up is an important stage after giving the evaluation report for eliminating the weak points and strengthening the strong points. Consequently, these processes fulfill purposes of group and pave the way to educational quality improvement.

Recommendations

Considering that internal evaluation processes is performed in its origin organization and by assessing the received reports to registration of evaluation and supervision console, our group recommend following plans for recovering paradigm of evaluation and performing scientific and systematic evaluation:

- establish a uniform internal evaluation methodology,
- design external evaluation on the basis of internal evaluation,
- fit internal evaluation with the structure of medical education groups, and
- perform program-based evaluation for obtaining data beyond group level.

References

1. Frazer MJ. Issues of quality: higher education in Europe. 1995;Vol. XX, No.S,1-2:13-7.
2. Bazarghan A, Fat-h-abadi J, Einollahi B. Favorable view of internal evaluation for continuous improvement of educational groups quality in medical universities in Tehran. Psychology and Training Journal 2000 Fall-Summer;New ed. 5th year No.2.
3. Kristoferson D. Quality assurance guidance: procedures and operational aspects of European higher education organization. 1988.
4. Operand M. Quality assurance and institutional, accreditation in Eastern and Central European higher education systems, procedures, and operational aspects, final higher education in Europe. 1995 Vol.XX, No.S,1-2.
5. Elementary medical education international standards projects. WFME 2001.