Abstract

Introduction: Self evaluation is a process that defines and collects required data to judge about decision making issues at educational system on whether the educational department is fit to educate students? The objective of this study was determining the quality of the structural elements of the department of Communicable Diseases & determining the strengths, weaknesses, opportunities and threats to improve the quality of activities in the department under research.

Materials and Methods: The employed method was Mixed methods (qualitative & quantitative research), on the basis of 10 procedural steps and within 8 sections dealing with evaluated factors; such as 1) organizational and management structure 2) scientific board members 3) students 4) Manpower 5) Space of educational research and health care 6) Equipment 7) curriculum 8) satisfaction of graduates, which were studied using 61 criteria and 172 indicators. Five-point Likert Scale was used for the responses in the questionnaire (1 - 1.75 = undesirable, to 4.2 - 5 completely desirable). Finally the data were analyzed using descriptive statistics indices and the assessment software of the Educational Development Center of TUMS. The instruments used in this method included assessment software, interview, observation and self-prepared questionnaire which consisted of 7 questionnaires and 2 check lists. Finding: The results of the research showed that general average of 8 investigating sections was 56.9% as a rather desirable research work. Conclusions: Therefore, it was concluded that function of the educational management in that group was directly in line with evaluation process, but continuing the process of evaluation seems necessary.
Keywords
Self Evaluation, Department of Communicable Diseases, Faculty of Medicine, Tehran University of Medical Sciences, Educational Management

1. Introduction
The issue of quality in higher education has attracted a lot of attention [1]. Quality improvement has earned competitive advantages for organizations like higher education which attracted a lot of interested researchers to this area [2]. The system of quality in higher education requires a systematic evaluation of all of its different aspects. Different patterns of evaluation reveal the strengths and weaknesses of the programs and facilitate the informed decisions [3]. The educational activities of each country can be considered as an investment by one generation for the other. The main purpose of this investment is human development. In this regard, the evaluation of educational organizations, programs, staff and their services can have an effective role in improving the quality of education [4].

Farzianpour believes that establishing a system of process evaluation in institutions and their programs is considered as a routine. That’s why various methods of evaluation for accurate assessment of performance in higher education were developed [5]. Regardless of rules and regulations related to performance evaluation in countries and the limitations set for it, the necessity of the assessment of performance in countries, the manager’s actions and decisions and the performance of institutions seems obvious. In situations where governments are faced with the increasing economic and social demands of people because of deficient availability, meeting demand and achieving goals and objectives for development, and making balance between demand and community resource require a comprehensive and ongoing evaluation and monitoring from which the higher education is not an exception.

Regarding the significance of the issue, it is worth mentioning that the Islamic Republic of Iran Constitution emphasized on utilizing sciences and technology, and also training experts based on the needs for the development and improvement of the country’s economy [6]. Also in the Code of the fourth economic, social, and cultural development plan, Article 49, the ongoing evaluation of universities, higher education centers, and governmental and private research centers by the ministries of science, research and technology, and health with the collaboration of scientific institutes is emphasized [7] [8]. In this regard the accrediting council of higher education has recognized a system of accreditation as having the following stage [9]:

1) Internal/Self evaluation: The plan and/or the report on the institute’s performance are compiled with the contribution of the members.
2) Peer review: The self-evaluation report is reviewed by the faculty members and their peers in the same profession and their comments and suggestions will be released.
3) Site visit: An outside organization or agent sends the visiting team. The self-evaluation report of the institute is the main source for the visiting team.
4) Judgment by accrediting organization: The intended plan of an organization or an institute is judged by the agents or the boards of the same institute or organization. This judgment is done based on three levels of: not accepted, conditional accrediting and accrediting.
5) Ongoing external review: Institution or plans are reviewed continuously within the range of 5 to 10 years and in some cases even less. It should be mentioned that the internal self evaluation report is reviewed just as before.

Considering the fact that there are controversies over the stages of accreditation and that there has been a thorough review in the related literature, one can infer the consensus and strong emphasis on internal and external evaluation from most of the texts in literature [1] [9]-[11], while an increasing number of universities in the world have accepted the self-evaluation method as their first step [12].

In internal evaluation, the aim is that those involved in planning should obtain more information on the objectives, and the issue concerning their achievements, then evaluate the ways to meet those objectives in order to improve the quality in future.

The evaluation and accreditation plan of the universities of medical sciences, have been approved in the gov-
ernment’s third five year development plan of Iran. In this regard, both the Ministry of Health and Higher Education’s priorities have been the objective oriented and the internal evaluation. Since 1996 the internal evaluation has started based on the objectives and in 2000 the external evaluation has been conducted in some of the universities of medical sciences [1]. Concerning what has just been mentioned, the internal evaluation in the Communicable Diseases Department has started as an approved plan by TUMS Development Center in order to reveal the strengths and weaknesses, also threats and opportunities in addition to evaluating the quality.

2. Material and Method

This research is a qualitative research. In order to gather the data, texts, dissertations, research plans, journals, documents and more important the internet were studied. The instruments used were note cards and questionnaires. The efficiency of the department was studied based on the internal self evaluation. For this purpose, predetermined indices with relative modifications were used.

This study was conducted with the collaboration of the head of the department, faculty members (N = 16), all of the students (residents, PhD and M.S. students N = 22) and the graduates N = 50. Through a pilot study the initial rates of the areas under research were first determined by the opinion poll carried out among all the faculty members, then through proper tests, unrelated data were identified and omitted and the final rates were extracted. In this evaluation 8 areas of 1) organizational and management structure 2) scientific board members 3) students 4) Manpower 5) Space of educational research and health care 6) Equipment 7) curriculum 8) satisfaction of graduates were studied using 61 criteria and 172 indicators. Five-point Likert Scale was used for the responses in the questionnaire (1 - 1.75 = undesirable, to 4.2 - 5 completely desirable). Finally the data were analyzed using descriptive statistics indices and the assessment software of the Educational Development Center of TUMS. The instruments used in this method included assessment software, interview, observation and self-prepared questionnaire which consisted of 7 questionnaires and 2 check lists.

The questionnaires were prepared separately for the subjects including the evaluation committee, head of the department, the faculty members, students and the graduates. TUMS Development Center and the Ministries of Health and Education have confirmed the reliability and validity of the items in the questionnaire performed by internal evaluation software [1]. The educational evaluation was performed based on the following 10 steps and in 8 areas [1].

Step 1: To acquaint scientific board members about evaluation educational management Process.
Step 2: To envelop committees on evaluation in educational and remedial courses and explain about it to members.
Step 3: To compile objectives (educational remedial and research objectives).
Step 4: To define evaluation factors and related criterion.
Step 5: To define and compile appropriate indicators for evaluation of factors.
Step 6: To specify the required data for judging about each one of the factors.
Step 7: To select and compile-needed tolls for collecting data.
Step 8: To collect data.
Step 9: To analyze data, discussion and making conclusion.
Step 10: To prepare a report and represent suggestion.

Data Analysis Method

Data description, abundant collections, preparing abundant tables, percentages, x², regressions and variance analysis were used as follows:

1) Fax program was used for inputting data to computer and editing them.
2) All data were analyzed using software SPSS 9, 10 and descriptive and statistically method such and absolute abundant, calculation and geometrical average and percentage, x² and statistical regression assessment.
3) For providing and designing graphs software HG-3 was used.

To identify strengths and weaknesses in 8 areas under study which were as follows. Data results less than 50% were undesirable; Data results between 50% - 75% were relatively desirable; Data results more than 75% were desirable.
3. Results

Findings of the research concerning the degree of desirability of the eight factors were as organizational and management structure (69%), scientific board members (77.2%), students (55%), Manpower (55%), Space of educational research and health care (35%), Equipment (52%), curriculum (72%), satisfaction of graduates (40%). The scores are displayed in Table 1 and Figure 1. Based on SWOT analysis the results were as follows. As Shown in Box 1, Box 2 educational evaluation council on educational group of Communicable Diseases was developed educational strategies based on special objectives and educational indicators based on criteria. Average results from educational evaluation at educational group were represented at (Figure 1). Strengths and weaknesses, opportunities and threats educational were analyzed on the basis of SWOTs pattern at the educational group (Box 3).

4. Discussion

Educational evaluation is an essential and inseparable component of any organizational functions particularly the organizations such as medical education, remedy and hygiene which is Para medicine coordinator planner and operator as well as variable range of remedial and hygienic services in the country [9] It is a process, which deals with collecting data and judging about educational activity promotion [9] [10]. Given some principles related to educational measurement and data collecting it could be well understand [9] [11] [12]. The strengths,

<table>
<thead>
<tr>
<th>Evaluated Factors</th>
<th>Degree of Desirability</th>
<th>Desirability Continuum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organizational land Management Structure</td>
<td>69%</td>
<td>Rather Desirable</td>
</tr>
<tr>
<td>Scientific Board Members</td>
<td>77.2%</td>
<td>Desirable</td>
</tr>
<tr>
<td>Students</td>
<td>55%</td>
<td>Rather Desirable</td>
</tr>
<tr>
<td>Manpower</td>
<td>55%</td>
<td>Rather Desirable</td>
</tr>
<tr>
<td>Space of Educational Research and Health Care</td>
<td>35%</td>
<td>Undesirable</td>
</tr>
<tr>
<td>Equipment</td>
<td>52%</td>
<td>Rather Desirable</td>
</tr>
<tr>
<td>Curriculum</td>
<td>72%</td>
<td>Rather Desirable</td>
</tr>
<tr>
<td>Satisfaction of Graduates</td>
<td>40%</td>
<td>Undesirable</td>
</tr>
</tbody>
</table>

Table 1. The degree and continuum of desirability of factors which were evaluated in department of Communicable Diseases, Faculty of Medicine, Tehran University of Medical Science.

![Figure 1](image_url)
### Box 1. Educational strategies based on special objectives.

<table>
<thead>
<tr>
<th>Special objectives</th>
<th>Educational strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Improving and promotion of quality level and remedial hygienic research and educational program development conforming to society needs at university level.</td>
<td>1) Internal evaluation about educational programs quality</td>
</tr>
<tr>
<td>2) Increasing the number of scientific board members and specialists in educational groups.</td>
<td>2) Present permanent system reviews in order to performance of desirable internal evaluation.</td>
</tr>
<tr>
<td>3) Knowledge development and achieving modern technologies.</td>
<td>3) Developing scientific relations with other universities and domestic and foreign authorized centers.</td>
</tr>
<tr>
<td>4) Training efficient human resources at remedial hygienic research and educational courses.</td>
<td>4) Promotion of short time educational courses qualitatively.</td>
</tr>
<tr>
<td>5) Promotion of scientific board members, facilities, equipment conditions and educational resources in laboratories and so on in this purpose, strategies were developed for above mentioned special objectives.</td>
<td>5) Promotion of remedial-hygienic research and educational materials and conditions qualitatively.</td>
</tr>
</tbody>
</table>

### Box 2. Indicators based on criteria.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>Management organizational structure, remedial research, service and educational performance function description, internal and external activities of members planning, management authorities.</td>
</tr>
<tr>
<td>Scientific Board</td>
<td>Scientific board distribution, operational, remedial, hygienic research and educational activity information and experience.</td>
</tr>
<tr>
<td>Learners</td>
<td>Educational improving.</td>
</tr>
<tr>
<td>Learning Teaching Process</td>
<td>Applying educational technology by scientific board, educational improving, teaching methods and graduates.</td>
</tr>
<tr>
<td>Educational Courses and Curriculum</td>
<td>Educational courses quality, conforming courses to objectives, group courses content, conforming courses to mission, objectives, facilities and program evaluation.</td>
</tr>
<tr>
<td>Graduates</td>
<td>Capability, identification, relation between learners and their educational group after completing education, occupational future (destination) keeping education, management and planning service receivers’ comments about learners occupation capabilities.</td>
</tr>
<tr>
<td>Equipment</td>
<td>Service remedial hygienic research and educational resources.</td>
</tr>
<tr>
<td>Space, facilities, laboratory, library, computer, visual and audio Radiology, clinic, office and pavilion and…</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Research activities, study opportunities research programs compiling, group, gathering, text magazine research plans…</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Management, scientific board and learners satisfaction with all educational operational remedial hygienic and research aspects.</td>
</tr>
</tbody>
</table>

### Box 3. SWOTs at educational group.

| O) Health Care, research and educational validity of university | S) Management & Organizing, Scientific board members, experienced and powerful experts, Students, manpower curriculum development |
| T) Powerful Scientific board retirement | W) Scientific board welfare, modern Technology, spaces of educational, research and health care equipment, satisfaction of graduates |

Weakness, opportunities and threats points of this study were respectively Faculty board members, high sensitivity and apprehension concerning planning, organizing, defining and developing organizational goals Contribution of all members to performing the activities of the department, the students low satisfaction with the faculty board members compared with other criteria, The faculty’s manager’s diligent effort concerning proving educational and research sources and inputs for the department and Powerful Scientific board retirement.

Previous studies in educational evaluation showed average of the function of educational evaluation in basic sciences groups and clinical groups were respectively 76.4% and 86.6% while grand average of the function of clinical groups and basic sciences groups was 80.5% [13].

Farzianpour et al. in educational evaluation of in department of health care management in faculty of allied medical sciences Tehran University of Medical Sciences in TUMS stated that with internal evaluation an attempt can be made in eliminating the existing weaknesses and help setting an efficient educational system [14].
In the most developing countries the number students has increased and per head budget of university education has decreased it is expected that higher education system will operate more against decreased resources [15]. Farzianpour et al., in TUMS, recommended that the internal evaluation based on the international standards especially the international standards of WFME is a method of accreditation of universities in the world [9]. Farzianpour et al., in TUMS, stated that the evaluation of different aspects of educational programs in the departments of clinical and basic sciences seems necessary because management equipped with observation and control devices for the educational programs is required [12].

So it is necessary that medical education system structure in our country meets some educational quality and is changed due to existed shortages in educational programs and for meeting society needs [12].

One of the methods, which can be helpful in identifying strengths and weaknesses in an educational system, is educational evaluation [15].

Occupational capabilities and graduates efficiency in medical sciences fields depend on the level of achieving objectives in educational programs in order to present remedial, hygienic services, research and educational programs, for promotion of individual and society health level [9] [11].

And if educational programs haven’t developed and performed correctly, it can cause irreparable damages and economic, cultural and social serious effects on individual and graduates as well as university management and the validity [12] [15].

On the other hand given government wide investment on human resources, financial. And physical sources to develop medical education centers it seems necessary to evaluate different aspects of educational programs in medical groups [9].

So it is necessary to equip the management with control and supervision tools according to educational programs. If educational management has an effective and helpful system for evaluation then it will have an active and dynamic nature [1] [3]-[5].

On the other hand, identifying and analyzing problems and issues in educational system can be considered an important step to improve university educational system and consequently being ready to perform remedial, hygienic and medical development programs in the country [9].

4.1. Conclusion

The results of the research showed that general averages of 8 investigating Sections were 56.9% as a rather desirable research work. Therefore, it was concluded that function of the educational management in that group was directly in line with evaluation process, but continuing the process of evaluation seems necessary.

4.2. Suggestions

1) Development educational, research, Spaces of educational, Research and Health care in Communicable Diseases group;
2) Modern technology for Laboratories;
3) Scientific board welfare;
4) Revise for Curriculum development.

4.3. Ethical Considerations

Ethical issues (Including plagiarism, Informed Consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

Acknowledgements

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References


**Abbreviations**

TUMS: Tehran University of Medical Sciences;  
EDC: Educational Development Center;  
SWOTs: Strength, Weak, Opportunities, Treats.
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