Application of CIPP model for evaluating the medical records education course at master of science level at Iranian medical sciences universities

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Abstract

The data attempting to determine the acceptability level of context, inputs, processes, and outputs of the Medical Records Education Course at Master of Science Level at four Iranian Medical Sciences Universities have been gathered through the questionnaires that were developed by the researcher based on the CIPP evaluation model. As a result of the research it is found that all areas of context, input, process, and output are placed in relatively acceptable category. The results of the study indicate that the continuous planning evaluation of medical records groups results in a better analysis of strong and weak points of the plans and improves their qualities level.

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1. Introduction

The goal of evaluation is assessing education quality of universities' programs including input, process, and output and identifying it's weak and strong aspects in order to achieve educative system's goals and improving quality (Fitzpatrick, Sanders, & Worthon, 2004; Ministry of Health, Treatment, And Medical Education, 2001; Mohamadzadeh, 2003; Yarmohammadian, 2004). In a higher education institution is considered as a system, for planning of higher education development, evaluation must be used in order to determine needs and goal setting, and design programs and current activities to achieve goals (Birenbaum, 1992; Glasman & Heck, 1996; Yarmohammadian, Bahrami, & Foroughi Abhari, 2008). Application of analytical methods (evaluations) in desiring higher education system activities is important because higher education has covered a significant percentage of population and it has imposed massive costs to the economy of the country, so if they fail to achieve their goals, in addition to wasting the costs, unpleasant consequences of training non-skilled and non-efficient manpower will follow (Bazargan, 1999; Foroughi Abhari, Yarmohammadian, & Toroqi, 2004; Komeh, 1992). In this study, between
evaluation patterns, CIPP evaluation model "which is one of the most effective model of systematic pattern", (Eseryl, 2002, P 93-98) is used as theoretical basics of this research. CIPP evaluation model is a comprehensive framework to conduct evaluation of programs, projects, products, institutions and systems (Stufflebeam, 2007). It, based on a systematic approach and attention to context; input; available recourses; processes and results, could help managers and planners categorize priority needs and also to serve available resources to the best type of activity with continuous monitoring of program (Stufflebeam, 2002; Stufflebeam & Nevo, 1993).

Evolution of medical records or health information management profession should be started from universities. Educational assembly of health information management association states that today's graduates of medical records programs must be critical, creative, and innovative thinkers; and solvent issues and they must be able to use available services and technologies to support operation and decisions- making within the organizations. In order to achieve this goal, we must contemplate in some academic programs seriously (Ball, 1999; Halacher, 2000; Sheikhiha, Oveisi, Heydari, & Eghbal, 2009).

This study conducted to gain knowledge about the amount of achievement of educational objectives Medical Records Education Master's Degree. It is clear that identifying the strengths and weaknesses of this course will help the authorities to correct the weaknesses of the course and try to stabilize and reinforce the strengths which eventually end to promote the quality of this educational course.

The research aimed to find out the acceptable level of goals, inputs, processes, and outputs of medical records education course at master of sciences level based on four types of evaluation in CIPP model.

2. Research method

This is an applied and evaluative study conducted in 2010 at four Iranian universities of medical sciences which were executive of advanced graduate study in medical records education field. Statistical population are consist of five sub- populations including directorates, faculty members, students, graduates and library staff in four medical sciences universities which total 140 people and sampling was done as a census. In order to collect data we use five separate questionnaires, based on factors in four area of CIPP evaluation model, including two parts of demographic information and multiple choice questions that are divided into five grade including so high, high, average, low and very low, and based on likert scale rating 1- 5 digits are used for them,. Thus, if the score of a question is between 1 to 2.33, it will be undesirable situation, if the score of a question is between 2.33 to 3.66 it will be relatively acceptable situation, and if the score is between 3.66 to 5, the condition will be evaluate as acceptable. Face and content validity are used for measuring the validity of the research. The accuracy of the questions, topic, and research goals are validated by experts of the field. Cronbach’s Alfa coefficient formula is used to determine directorates, faculty members, students, graduates, and library staff reliability which estimated at 0.74, 0.93, 0.89, 0.95, and 0.80, respectively. Collected data are analyzed by SPSS software. In data analysis, descriptive statistics (mean, frequency, percentage and standard deviation) and statistical tests such as Pearson, Spearman Correlation and T- test are used.

In this study first, the context and objectives of the course are evaluated and then, the education system indicators are determined, by using facilitate decision- making model of CIPP. These factors are including: input (directorates, faculty members, students, curriculum, budget, educational facilities); process (activities of directorates; students and library staff, academic- research and teaching- learning activities of faculty members) and output (graduates' attributes and educative performance of the course).

3. Results

For evaluation of this educational course in total, 15 factors with 161 indicators are evaluated. In the context of the course 2 factors of human recourses professionals and academic services which are required for the society with 20 indicators; in the input area 6 factors of directorates, faculty members, students, curriculum, budget, and educational facilities with 52 indicators; in the process area 5 factors of activities of directorates; students and library staff, and academic- research and teaching- learning activities of faculty members with 65 indicators; and in the output area 2 factors of attributes and performance of graduates and education course with 24 indicators are evaluated.
A) Course's objectives: The results of field and context of educational course is conducted by assessing of training goals and regional needs to human resources specialist and academic professionalism services in four medical sciences universities, show score of 3.20 in total, which is indicating the relatively acceptable situation for context of the course.

B) Input of the course: The results that relate to this part is conducted by assessing inputs of this course show score of 3.43 in total, which is indicating relatively acceptable situation for input of the course.

C) Process of the course: The results that relate to this part is conducted by assessing processes of education, show score of 3.19 in total, which is indicating relatively acceptable situation for process of the course.

D) Output of the course: The results that relate to this part is conducted by assessing processes of educational course, show score of 3.38 in total, which is indicating relatively acceptable situation for output of the course.

Spearman correlation test shows that there is a significant inverse relationship between the academic rank of faculty members and the score of the context in human resources specialist required for local community (r = -0.415, Pvalue = 0.049). This means that whatever the higher rank of the faculty members is, the less they believe in the necessity of these goals. Pearson correlation test shows that there is a significant inverse relationship between the teaching background of the faculty members and their academic-research and teaching-learning activities (r = -0.457, Pvalue = 0.049), and (r= -0.540, Pvalue = 0.028). This means that whatever teacher have more experiences, they have less belief in evaluative indicators in these fields.

Areas of the evaluation in the CIPP model, scores and the conditions of them in four universities are shown separately, in the table 1.

| Component of CIPP model | Medical sciences universities of | Tehran | Iran | Shahid behashti | Esfahan | Total |
|------------------------|--------------------------------|--------|------|-----------------|---------|-------|
| context                | 4.19(acceptable)               | 3.5(Relatively acceptable) | 3.98(acceptable) | 3.55(Relatively acceptable) | 3.20(Relatively acceptable) |
| input                  | 3.08(Relatively acceptable)    | 4.47(acceptable) | 2.95(Completely acceptable) | 3.17 (Relatively acceptable) | 3.43(Completely acceptable) |
| process                | 3.33(Completely acceptable)    | 3(Completely acceptable) | 3.37(Completely acceptable) | 3.16(Completely acceptable) | 3.19(Completely acceptable) |
| output                 | 3.47(Completely acceptable)    | 3.28(Completely acceptable) | 3.43(Completely acceptable) | 2.97(Completely acceptable) | 3.38(Completely acceptable) |
| Total                  | 3.43(Completely acceptable)    | 3.04(Completely acceptable) | 3.38(Completely acceptable) | 3.19 (Relatively acceptable) | 3.27(Completely acceptable) |

4. Discussion

Reviewing the findings represent weaknesses in the areas of input, process and output of the Medical Records Education Course at Master of Science Level at Iran’s Medical Sciences Universities. In the input filed, weaknesses are in the curriculum, budget, and facilities. Weaknesses factors are in the curriculum fitness with the approval outline, previous lesson requirement, career interests and abilities of students, expectations and needs of students, progress of science and technology, specified size and time; and the rate of providing course’s goals by curriculum; clarity of curriculum goals; and the rate of relationship and sequence between curriculum.
Weaknesses of the budget factors are in the fitness of budget with the educative and research needs, extracurricular activities, per capita of students and faculty members and library needs. Weaknesses of the facilities factors are in the fitness of facilities with educative and research needs, fitness of library resources, number of computers, human resources of library specialist, fitness of library space with number of students and faculty members.

In the process filed, weaknesses are in activities of students, directorates and library staff. Weaknesses of the students' activities are in the amount of extracurricular and research activities, students' activities for improving the library, participating in solving problems of medical records group, active participation in class, using of complementary resources, relationship with directorates, and satisfaction of students from their performance. Weaknesses of directorates' activities are in the following areas: directorates' activities in establishing educative courses for faculty members and presenting new educational projects, evaluation of faculty members' activities, and providing context for participation of students in group's decision-making. Weaknesses of library staff's activities are in the following areas: responsible activities in updating resources, organizing the library, presenting non-printed resources, providing training for client to benefit from library's resources, gaining from inter library safekeeping, communicating with medical records specialists in order to provide needed resources, and fitness of numbers of the books and journals with number of students, fitness of library space with standards, and fitness of available time to access resources.

In the output field, weaknesses are in the characteristics and performance of the educational course including: graduates' satisfaction from their field, their satisfaction from the relationship between curriculum and career's needs, and their satisfaction from performance of medical records educational groups; the amount of realization curriculum's goals, attention of course to interest and needs of graduates, fitness of education with today's knowledge and sciences' abilities of graduates, capabilities of the course in increasing innovation in the field.

Other researchers conducted about evaluation in this field of study are mentioned in the following:
The finding of "comparative study of the curriculum in master's of medical records in several selected countries, modelling for Iran" by Ranandeh Kalankesh (2001) indicates that for comparison of curriculum with today's knowledge and answering to career's needs of specialists we must get pattern from Australian and American curriculums.

Findings of Mahmoudi's research (2004), "evaluation of educational program in master degree of medical records, viewpoints of medical records graduates", indicates that the quality of educational program from view of realization goals of approval higher council of planning and goals of higher education, is weak and needs to be improved.

Mehrabi (2006) in her research, "the study of medical records department personnel's educational needs from the view of these department employees in Tehran, Iran, and Shahid Beheshti universities of medical sciences", concludes that the current educational course, do not meet educational needs of medical records personnel.

All these studies and their results are fit with findings of this study and all indicate that for promotion the quality of education, course's review and revise, especially in curriculum, are necessary.

Ebily and Hodavandi (2005) are evaluating educational courses of institutions which rendered educational services to Irankhodro Company by using CIPP model and their results indicates that the quality of input is acceptable and the quality of process and output in those institutions are relatively acceptable.

Salehi (2004) in his study evaluates Karodanesh Institutions in Tehran by using CIPP model.

Saberian and et al (2008) in their study titled "the pattern for internal evaluation of nursing school" conduct internal evaluation of internal and surgical educational course in nursing group, by using CIPP model. In total, this group gain 2.8 points and were placed in satisfactory category.

At York University researchers compile a framework for evaluation of nursing's educational programs, by using CIPP model (Singh, 2004).

5. Conclusion and Recommendation

The main advantage of a course's evaluation is that with a systematic attitude to evaluation, weaknesses and strengths of these courses will be cleared. So evaluation of these courses can help decision-makers and politics, in macro level, to take correct and expert actions.

According to the results of this study the following cases are recommended: revising required changing in the course's curriculum according to interests of students, career needs, and today's knowledge; reviewing and revising library, information resources, and their manager's activities and necessity reforming according to numbers of students and faculty members; increasing delicate budget and educational resources; increasing the motivation of
students in performing educative and research activities by necessary reforms and developing of suitable strategies; taking an action for employing human resources specialists in their field of study coordinating with the ministry; and providing the context of more scientific research activities for students.

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