
An interdisciplinary summer school in medical education, medical ethics, creativity and management

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Abstract

The most important mission of a university is training students for their job roles.. Owing to the urgent need for general education of students, and curriculum overload during ordinary semesters, particularly at medical schools, it is necessary to plan some intensive courses to present the required topics to students. In this connection, the purpose of the present study was to evaluate the success rate of Shiraz first interdisciplinary summer school in achieving its educational objectives.

The topics were divided into four general categories: medical education, medical ethics, management, and creativity with some subcategories for each topic. Totally, there were 83 specific topics discussed. 50 hours were devoted to the medical education topics, 26 hours to ethics, 24 hours to management and 10 hours to creativity.

Different teaching methods such as lecturing, small group, problem-based learning were employed. A 360 degree assessment (multisource feedback) was used for assessing the students' viewpoints, lecturers, and EDC (Education Development Center) faculty members. The rate of achieving the objectives was evaluated through a final test, submission of a project, supervision of group activities and the students' self-assessment.

A total of 63 students from 13 universities in Iran participated in this program. Regarding the education sufficiency, the students ranked medical education first, followed by creativity, management and medical ethics, respectively. The results of 360 degree assessment showed that more than 90% of the participants evaluated the program as very good or excellent. In addition, in an overall evaluation of the program in which the participants rated the program from zero to twenty, the mean was found to be 18.97 with a standard deviation of 1.18.

Due to the magnitude of new developments in the world and the efficacy of this program, similar programs are recommended. It is now necessary that (EDC's) all over the country employ experienced manpower and required resources.

Key Words: summer school, medical education, medical ethics, management, creativity

Introduction

Numerous objectives have been defined for universities including education of students, training future specialists, and fostering the students to achieve their potentials.

In today's world where 'capability' is no longer defined in terms of capital, and raw materials but in terms of knowledge, creativity, and production of science, universities should provide the ground for training independent and creative students, familiarize them with modern sciences, present subjects helping them through the rough paths and deal with variable and unpredictable conditions.

On the other hand, stakeholders in the labor market are looking for graduates with creativity, innovation and capability of solving problems and managing change (Arefi et al 2005). Experts believe university education should together with specialized education consider skills such as problem solving, decision making and train and educate students so they can

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make the best use of their potential in society (Jevon, F. R., & Turner, H. D. 1972, Savin-Baden, M. 2000).

In today's world, many accredited universities such as Harvard, Yale, and Cambridge offer courses such as mathematics, chemistry, and physics as prerequisite courses in medicine. (Arefi et al 2005)

The necessity of attention to general education of students, achievement of the most up to date knowledge, and extensive educational programs with a heavy volume of specialized courses, especially in the medical field, necessitates the planning of short-term training courses to meet the educational requirements of students.

Considering all these factors, the Education Development Center at Shiraz University of Medical Sciences took action to design an interdisciplinary summer school in 4 axes of medical education, creativity, management and medical ethics in August 2008.

Methodology:

This study was designed with the objective of promoting scientific and practical capabilities of medical and dental students. To achieve this goal, expert committees in each of the different educational subgroups were set up. Each committee went through the pertinent topics and after a thorough discussion the most relevant and significant topics were selected to be taught to the students.

Meanwhile, the committees looked for relevant sources and comparable programs elsewhere to get more insight about planning the course. Finally, a common form was designed to codify the structure of each educational program and submitted it to the educational directors. The courses were also designed electronically and online so that any course could simultaneously be attended by participants from other universities inside or outside Iran. On the whole 83 topics were selected to be taught in the program. The subjects were prioritized based on the existing resources. A policy making committee consisting of experts in each area was formed to organize the aforementioned activities. Some further subcommittees were also formed under the supervision of the policy making committee to perform the assigned duties. Finally, the topics were classified into four major categories: medical education, medical

ethics, management, and creativity. These four major categories were further narrowed down into 83 topics to be discussed. 50 hours was allocated to medical education, 26 hours to ethics, 24 hours to management, and 10 hours to creativity.

The teaching methods included lectures, teamwork in small groups, and problem-based learning. There was no difference between the teaching methods used to discuss the topics. The achievement rate of the educational objectives was evaluated by means of a final test, submission of a project, supervision of group activities and self-assessment by the attending students. For the evaluation of the program a 360-degree assessment was used. The validity of the assessment forms was checked by experts and the reliability was found to be 0.9, performing a pilot study. Concerning the participants, a total of 63 students from 13 universities of medical sciences across the country attended the program in August 2008 in the Education Development Center, Shiraz University of Medical Sciences.

Findings

There were 32 females and 31 males with the age range of 18 to 23 and a mean of 22.3. Regarding their major, 43 students (68.2%) were studying medicine, and 20 (32.8%) were studying dentistry, 31 students were studying at Shiraz University of Medical Sciences and 32 at other universities.

The students found medical education topics to be the most effective followed by creativity, management and ethics. The students' points of view on the educational status of each of the subcategories are shown in Figures 1 to 4. The results of the final test indicated that medical education topics scored highest followed by management, creativity, and medical ethics. Table 1 shows the mean and standard deviation of the scores obtained by the students in subcategories in each area. The results of the 360-degree assessment by the student executive committee of the congress, the faculty members in the center and lecturers indicated that over 90% of them rated the achievement of the educational objectives from very good to excellent. Furthermore, in the general evaluation of the program executives and lecturers were asked to allocate a score from 0 to 20, the mean score being 18.97 with a standard deviation of 1.18.

Figure 1: The Participants' Viewpoints on Medical Education Topics

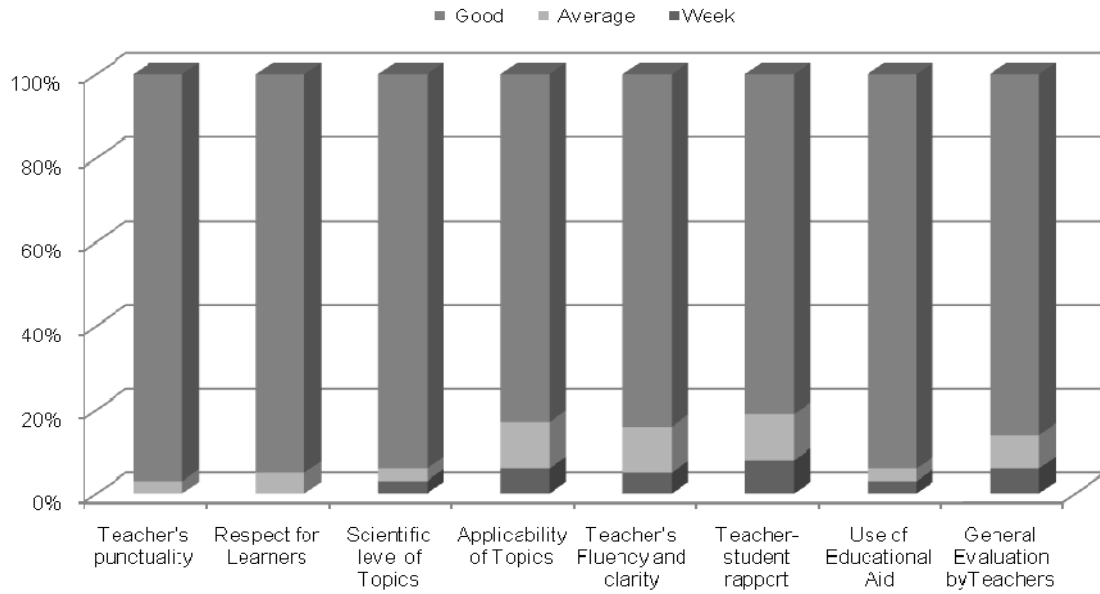


Figure 2: The Participants' Viewpoints on Talent & Creativity Topics

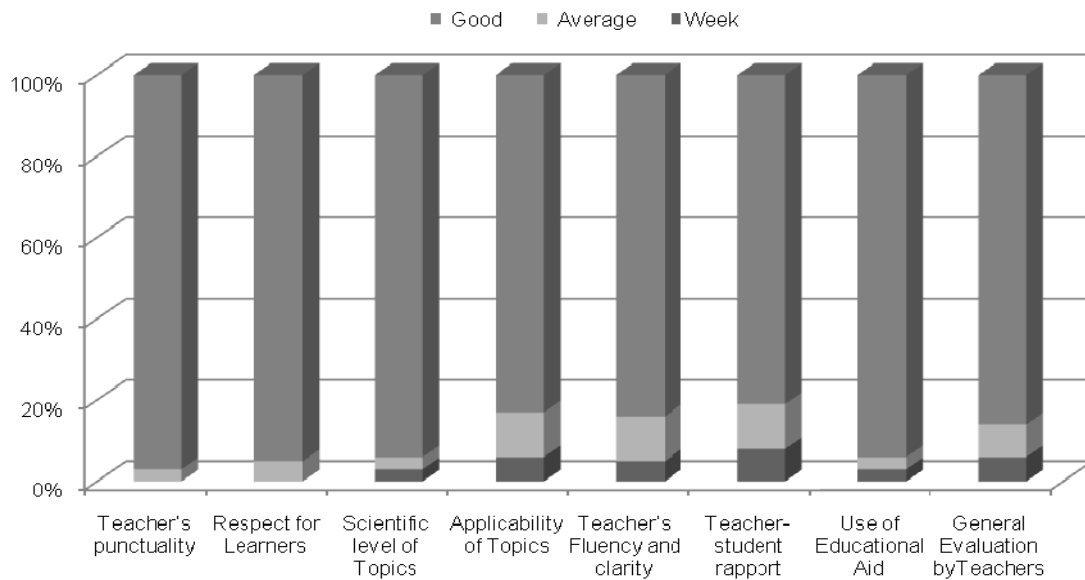


Figure 3: The Participants' Viewpoints on Management Topics

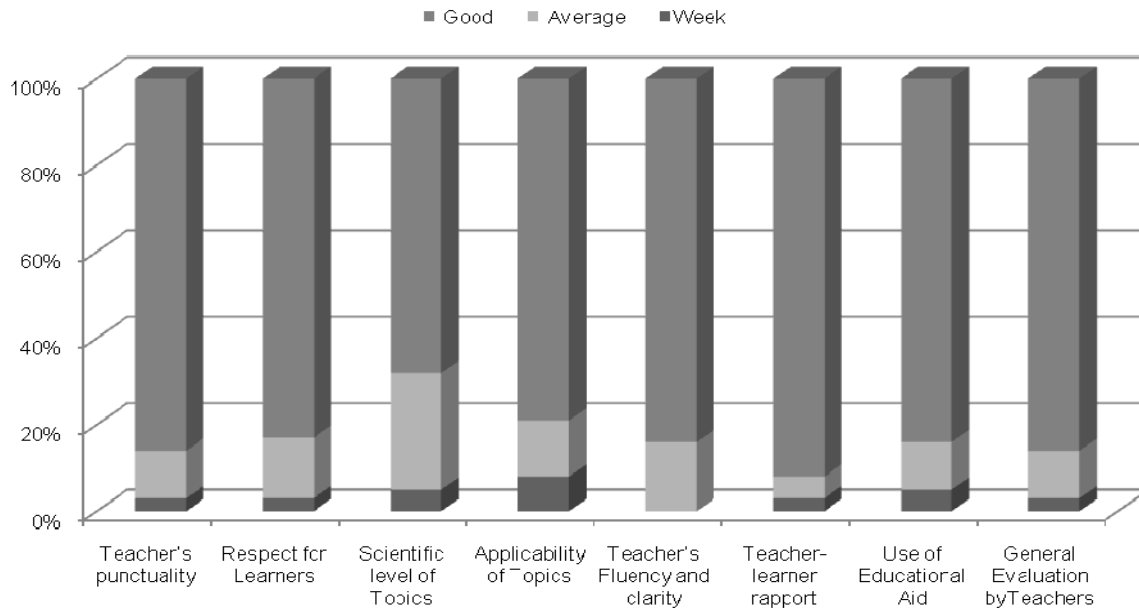


Figure 4: The Participants' Viewpoints on Professional Ethics Topics

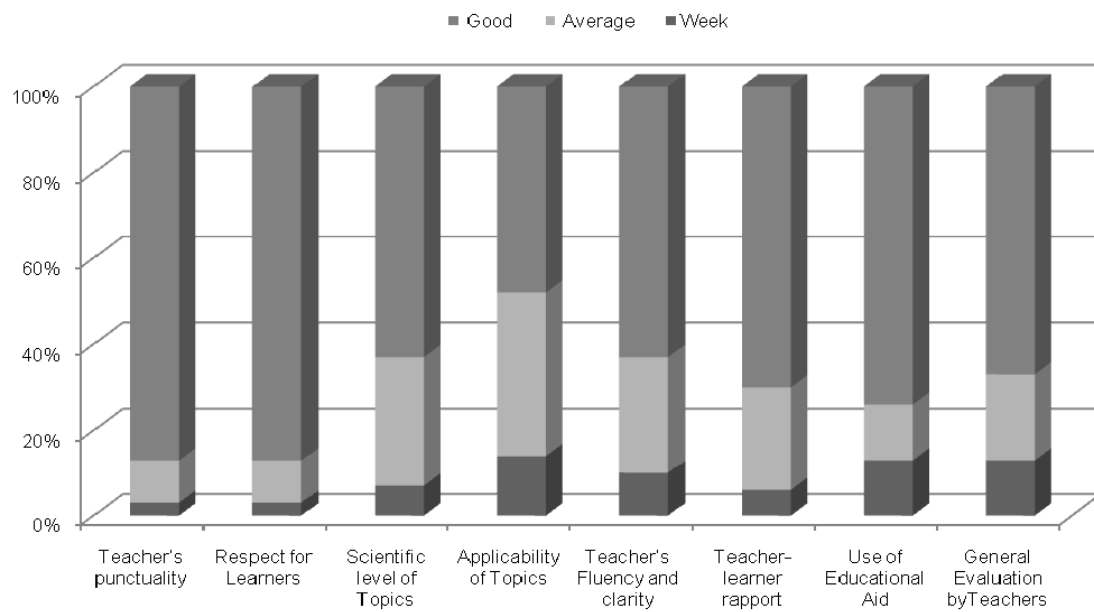


Table 1: Mean and standard deviation of the students' final grades in important topics of interdisciplinary summer school in August 2008 in Shiraz.

Subject	Area	Mean out of 100	Standard Deviation
Six hats of thinking	Talent & Creativity	80.2	9.7
Brain storming	Management	87.7	10.2
Evidence based medicine	Medical Education	90.7	9.1
Communications skills and medical ethics	Medical Ethics	68.6	22.4
Human nature	Medical Ethics	70.4	21.2
Problem-solving methods and cost-effectiveness estimation	Management	75.7	7.6
Project practicability	Management	81.6	15.3
Seven practical steps of genius and creativity	talent & Creativity	79.3	13.4
Principles and fundamentals of evaluation	Medical Education	83.4	9.1
New teaching methodology	Medical Education	91.2	6.3
Lesson planning	Medical Education	87.8	12.1
Study skills	Medical Education	92.3	8.4
Educational media	Medical Education	85.4	9.5
Philosophy of medicine	Medical Ethics	75.5	20.1
Session management and education leadership	Management	80.2	17.2
Problem-based education	Medical Education	97.3	6.2

Discussion

In America, 12 medical schools offer educational topics in medicine and dentistry in a six-week summer program. Yale University is one the most well-known universities in this connection. In this program, medical education, clinical education, and communication skills are taught to students in a six-week period. The objective of the program was to further motivate medical and dental students.

The main topics in such programs include problem solving, communication skills, critical thinking, time management, early patient contact, education management and medicine in the 21st century. The topics are presented through seminars, small groups training workshops and journal club sessions (Yale Summer Medical & Dental Education Program).

A similar program was presented in Duke University where the main purpose of the program was to help students with educational

problems and motivate them. Every interested student had the opportunity to attend (SMDEP-Dukes, Summer Medical and Dental Education Program)

Summer school programs on specific topics are offered in some universities. For example, an oncology course was offered to medical students in one American university, resulting in students' satisfaction and achievement of educational objectives (Vrie, J.D et al 2002). Another three-week summer school, appreciated by most of the participants, was allocated to radiology subjects.(Anonymous 2007)

In most of the reports, although there has been no formal evaluation of the success of such programs, the students' satisfaction has implied that the programs have been successful in achieving their objectives.

Regarding the assessment of our program, the results of the opinion poll and also the final examination revealed that the educational status of the program was satisfactory.

Assessment of the students' satisfaction rate showed that in all 4 topics, the materials discussed were satisfying to the participants, although the students were more satisfied with medical education topics followed by creativity, management and medical ethics, respectively. The results of the final exam showed the same trend, i.e. the students scored the best in medical education topics followed by scores in management, creativity and medical ethics. The higher scores in management can be attributed to the simplicity of its content in comparison to that of creativity. However, regarding the achievement of the objectives, students rated achievement in creativity higher than that in management.

The professional ethics was ranked lowest in both efficiency and scores of the final test. This result may show that teaching ethics needs additional methods such as more role modeling than workshops.

The 360-degree assessment was also employed to evaluate the program. All the performers, participants and executives of the program were assessed. The advantage of this type of assessment has been proven in many studies. (Whitehouse, A. et al 2007, Brinkman, W.B., et al, (2007, Violato, C et al 2008). The results of 360 degree assessment revealed that regarding the scientific level and applicability of the topics, the program was quite satisfactory.

Conclusion

Based on the results of this study, the EDC of Shiraz University of Medical Sciences has had a proper role in teaching key subjects. With respect to the effectiveness of this program it necessitates to persistently offer such educational programs to meet new expectations.

In this regard, it is required that programmers of Medical Education Development Centers all over the country make efforts to equip themselves with required facilities and rich contents for such programs.

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