

External evaluation of the “an action research in changing the curriculum and teaching and learning methods”

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Abstract

Purpose: The present article aims at an external evaluation of the action research in changing the curriculum and teaching and learning methods conducted during the years 2000-2001 in Shaheed Beheshti UMSHS.

Material and method: 384 students and 35 lecturers participated in the study. a questionnaire was designed to measure the participants opinions regarding usefulness of the active methods proposed

by the action research, and also the appropriateness and adequacy of the facilities and auxiliary educational equipments. The criteria used to evaluate the usefulness of the program were student's presence and active participation in the class, learning retention, self-confidence, motivation, satisfaction, being active, feeling responsibility, group discussion and attractiveness of the program. . The participants answered the questions based on four choices: very much, much, moderate and less. The class behaviours of 20 lecturers were observed

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and recorded based on a checklist containing 9 items.

Findings: 8% of the students stated that the program was less successful, 57% as moderately successful, 33% as highly successful and 2% as very highly successful. Only 32.3% of the students stated that the facilities were adequate. 29 out of 34 faculty members believed that active methods implemented in the University were useful. 24 out of 34 faculty members stated that educational facilities were adequately provided. There were significant differences between the opinions of the faculty members and students.

Conclusion: The majority of the students did not believe in the usefulness of the classes because they were not briefed about the importance of active methods in education. Another reason for their dissatisfaction might be because of the load of work in active methods as compared with lecture based methods. Students were not satisfied with the educational physical environment and overloaded classes. This needs further scrutiny by the authorities since it has been reported in other similar studies. In general the action research was successful based on the faculty members opinions.

Introduction

The present article is the external evaluation of the action research carried out in Shaheed Beheshti University of Medical Sciences and Health Services in Tehran during 1999-2000. The result of the internal evaluation of the action research was published by Mirzabeygi et al in Volume 1 of this journal in 2001. This action research, the first of its kind in Iran, was a large-scale research in which more than 680 students and 42 faculty members

participated, and in consequence deserves more scrutiny into its efficacy and effectiveness.

The action research was prompted by two studies conducted by Sadri Ardakani (1997) and Mirzabeygi (1998) which highlighted the drawbacks and barriers in the educational system of the university. Mirzabeygi et al (2001) argue that in order to overcome those barriers, the staff should be more oriented toward active methods in education, developing skills in writing lesson plans, using educational facilities and bridging the gap between basic sciences and clinical sciences to motivate the students. Thus, the action research aimed at developing certain skills among faculty members to facilitate a shift from traditional methods to more innovative methods of teaching. The faculty members were trained through educational workshops, skills learning sessions, feedback and evaluation consulting sessions, collective decision-making and exchange of views at all stages of the project and briefing sessions for a number of the students. While being trained, the faculty members conducted 20% of their normal classes based on active teaching/learning methods.

The internal evaluation of the action research report indicated that the method was successful in changing the faculty members attitudes and behaviour, bringing about closer relation between the lecturers and students, and resulted in the increase in using auxiliary teaching materials and equipment. The recommendations proposed briefing sessions for students to familiarise them with learning skills, using appropriate evaluation methods in assessing the students' active participation in class and granting extra benefits for faculty members who design and apply

active methods, auxiliary equipment and so on.

The present study evaluates this action research to find out whether the research project has been successful in its aims and objectives. This evaluation was conducted in two stages: surveying the views and opinions of the students and lecturers, evaluating through observation.

The major questions of the study are whether the action research was successful. If that was the case, how successful has it been and what have been the drawbacks or barriers.

Material & method

This is a descriptive study. The number of participants in the study, with 50% positive evaluation, 95% confidence coefficient and 5% standard error, was 384 students who were randomly selected. All 35 lecturers who participated in the action research and conducted 20% of their classes using active methods were selected for the study. A 17-item questionnaire was designed, of which 11 items questioned the usefulness of the active methods and 6 items questioned the appropriateness and adequacy of the facilities and auxiliary educational equipment.

The criteria used to evaluate the usefulness of the program were student presence and active participation in the class, learning, long-term learning, self-confidence, motivation, satisfaction, being active, feeling responsibility, group discussion and attractiveness of the program. The criteria used to evaluate the appropriateness and adequacy of the facilities were physical environment, auxiliary educational materials and equipment, further study references, class hours, time spent for study and doing

homework and number of students participating in active methods. The participants answered the questions based on four choices: very much, much, moderate and little. The choices 'very much' and 'much' were defined as the effectiveness of the program and adequacy of the facilities; and the choices 'moderate' and 'little' were defined as signalling the inefficiency of the program and inadequacy of the facilities.

The classroom behaviour of 20 lecturers was observed and recorded based on a checklist containing 9 items which was designed to check the method. These covered the educational objectives, students participation in the group discussions, co-operation and consultation among students themselves, the teacher's role, the link between the educational materials and clinical sciences, the method of motivating students, variety of methods used in the class, the method of utilizing the auxiliary educational facilities, and feedback to students. The checklist was designed based on four modes of evaluation: 'very good', 'good', 'moderate' and 'poor'. The lecturers who received at least two thirds of the total scores were considered to be successful in implementing active methods. The relation between the students' and lecturers' personal information and the success rate in the program were classified and descriptively defined.

Findings

There were 384 students participating in the study of which 188 were male and 196 were female, all between the ages of 17-34. There were 16% students in the first year of their study, 43% in the second year, 38% in the third year and 3% in the fourth year.

The students' responses to the questions regarding the usefulness of the methods were as follows: 8% of the students stated that the program was less successful, 57% as moderately successful, 33% as highly successful and 2% as very highly successful. Thus, there were only 135 out of 384 students who believed in the success of the program.

Regarding the adequacy of the educational facilities, 5 students believed it was inadequate, 63 as moderately adequate, 31 students as adequate and one student as quite adequate. Thus 32.3 % of the participants fall into the last two categories regarding the adequacy of the facilities.

One of the lecturers had left the country, so he was omitted from the list. Thus there were 34 faculty members, 18 male and 16 female, between the ages of 31-77. 19 of them were the holders of PhD degrees, 11 had both an MD and a PhD and 4 were holders of an MSc. 29 out of 34 faculty members believed that active methods implemented in the University were useful. 24 out of 34 faculty members stated that the educational facilities were adequate.

A comparison between the faculty members' opinions and students' opinions regarding the facilities and active methods used in the action research indicates significant differences between them. While 64.8% of the students believed active methods were not useful, 83% of the faculty members believed the opposite. Regarding the facilities, 67.6% of the students believed that the facilities were not adequate while 70.6% of the faculty members believed they were adequate. Again, the difference was significant.

The questionnaire was followed by open-ended question seeking the participants' opinions regarding the pros and cons of

using active methods in university. Only 88 students responded to this question, where 7 students agreed with the concept of active methods and believed that active methods increased students' self-confidence, cooperation, responsibility and working with the others, 30 students completely disagreed with that and 24 believed that the method had not been properly carried out by the faculty members and/or students. 11 students believed that the facilities were not adequate, the physical environment was poor, classes were overcrowded and the class hours were not sufficient to finish each topic to a satisfactory degree.

There were 20 faculty members who were observed while they were teaching in the classes based on the active methods. 8 of the faculty members were female and 12 were male. They were between the ages of 32-56. 7 of them graduated outside Iran. 14 of them conducted the classes based on active methods correctly as confirmed by the checklist. The lecturers who were educated outside Iran, those who were younger and also females were better in conducting classes that had active learning.

Discussion

The results indicated that most students did not agree with the active methods. Huang and Carrol (1994) found out that students did not like to do further reading suggesting that students tend to stick to old methods which need less activities. Richardson and Birge in Kentucky university divided the students into two groups assigning them either to traditional methods or lecture based methods accompanied by 25% of the classes based on group discussion. The students, while indicating that there were no differences between the lecturers, preferred the classes with group discussion. Modell

(1996) believes that the students and faculty members should be briefed about the change and that their attitudes toward active methods changed before the classes. It should be noted that the students in the present study were not briefed about the active methods and their benefits while the faculty members were prepared through different briefing classes. This might be the reason the students were not in favour of active methods of learning. Kopelman (1997) states that one of the active methods is the use of seminars which has the potential for activating the students in the class. Kopelman states that normally the seminars end in short lectures. This was more disadvantaged by seminars presented by students who were not qualified as their teachers. Most of the students suggested that the facilities were more not adequate. This provided more support for Sadre's study (1997). He stated that most of the problems as stated by the students were inappropriate room temperature in classes, and insufficiently resourced library especially with regard to the physical environment. Niyati (1978) argued that the students believed the libraries were not sufficiently resourced. Kolark et al, in their study, stated that the students believed that the student-centred classes took about twice as long as the lecture-based classes to accomplish their aims.

In the open ended question the students stated that the facilities were not adequate, physical environment was poor, classes were overcrowded and the class hours were not enough to finish each topic appropriately. Model argues that optimum class size should be 15 students, to provide the ground for the interaction between the students and the lecturers.

The fact that the lecturers were in nearly complete agreement with active methods

for teaching and learning has been because of the briefing sessions before the classes. The same type of agreement has also been reported in the Perac et al's study (1998), where the faculty members agreed about the use of Problem Based Learning in the classes.

It is recommended that since certain departments such as anatomy department need specialized facilities, the faculty needs to be more efficient in providing the appropriate facilities.

One of the limitations of the study is that the observation of lecturers was based on the checklist used in the study which needs further refinement.

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