

## The Effect of educational workshops on appropriate design of lesson plan & application of different levels of cognitive domain in faculty staff of (Shaheed Sadooghi's) Yazd University of medical sciences. In 2000-2001: an Iranian experience

Solatini Arabshahi S.K.,MD<sup>1</sup>; Karimi H.,MSc<sup>2</sup>; Ghaderi A.,MSc<sup>3</sup>,

<sup>1</sup> Associate professor of internal medicine. (E.D.C) Iran University of medical Sciences

<sup>2</sup>Instructor of nursing. Yazd University of medical Sciences

<sup>3</sup>Instructor in management & medical informatics faculty (IUMS)

### ABSTRACT

**Background:** Lesson plan plays an important role in structuring the activity of the teacher and hence facilitates learning. It seems that our faculty members don't have enough knowledge about appropriate lesson planning.

**Purpose:** The objective of this study was to determine if the educational workshops could improve the design of the lesson plan.

**Methods:** 251 lesson plans from 235 faculty members were evaluated before and after the workshops, arranged to pave the way for appropriate design of lesson plan and application of cognitive domains action verbs according to bloom's taxonomy of cognitive domain and Indiana university lesson plan format.

**Results:** Before workshops, 20.9% of the staffs' lesson plans designed correctly, 12% designed incorrectly and 67.1% of the staff didn't have lesson plan. After the workshops correct designs increased to 49.3%, incorrect design 17.4% and lack of lesson plans decreased to 34.3% . correct application of action verbs before the workshops showed 51.5% which dropped to 31.7% after workshops.

**Conclusion:** Lesson planning workshops have considerable effect on the level of cognitive domain (in terms of bloom's taxonomy) and also improve the abilities of staffs in appropriate design and format of lesson plans.

**Keywords:** EDUCATION WORKSHOPS, LESSON PLAN, BLOOM'S TAXONOMY, COGNITIVE DOMAIN.

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### Introduction

Education is a complex process that makes learning easy, which can be as a printed paper, a TV program or even a picture. The teaching is an event which takes place by interaction of student and the teacher. A teacher has an important role in learning.(1)

The main characteristic of a successful education is to understand the learner's need at the first step and planning to meet them at the second step. Here are some benefits of lesson plan.

- Lesson plan is a method which helps teacher to go in the above goals.
- Lesson plan is actually a program which applies theoretical foundations in practices & teaching.
- Lesson plan gives a logical sequence to teaching.
- Lesson plan gives the power to teacher and student to foresight of future problems.

- Lesson plan helps the teacher to choose the content and method of teaching.
  - Lesson plan makes the evaluation of teaching easier.
  - Lesson plan completed the cycle to education.
- One of the current problems of today's education is the lack of knowledge about pre-teaching skills. So the following problems come often. (2)
- 1- Incorrect usage of timetable in teaching.
  - 2- Few coverage of the defined content of the course at the end of course.
  - 3- In correct use of equipments and audio visual aids.
  - 4- In adequate development of learners in the social & personal field.
  - 5- UN attached to the education goals.

Researchers in education during their studies emphasized the role of the educational objective and stressed that: Judgment about successful program should be based on the extent of the objective achievement attained by the learner.(3)

A lesson plan should have content, objectives, method of teaching and the evaluation(4).

Andrew believed in 5 characteristics in a standard teaching and on designing lesson plan for a good teaching. From his point of view a good teaching is a logical process, structured, with objectives and strategies for teaching and evaluation plan.(5)

In 1962 Glazer presented a general instructional model in which the teacher's instructional activities was systematically sequenced and formatted. (6)

Dewey believed in forecasting and sequencing in educational objectives.(7) Because of the importance of the objectives in 3 main domains of cognitive, psychomotor and effectives, many studies were done. Bloom<sup>1</sup> presented a taxonomy for cognitive domain which is still popular. (8).

"Soltani" in his study showed that 75.5% of staffs and 66.5% of medical students believed that lesson plan is an important instrument for an effective teaching, and should presented in the beginning of the teaching. (9).

The results of a research in Bushehr medical university showed that the most university showed that the most important advantages of study plan are:

- Defining of the educational program.
- Quality improvement of teaching.
- Better usage of teaching aids.

They also concluded that from the viewpoint of faculty members the most important part of preparing lesson plan is objectives, method of teaching, reference and method of evaluation.(10)

Majidi & et al in Gilan university found that most of faculty members have a positive attitude toward lesson plan (11).

Irby showed that : clarity, rending a lesson plan, interest in teaching and learner, good communication with the students are among the best characteristics of a good clinical teacher. (12)

## Material & method

This study was Qusai-experimental comparative study. The study sample consist all the faculty members of (Shaheed Sadooghi) Yazd University of medical sciences whom sent their lesson plans before and after the workshop (235 faculty members).

Those (68 lesson plan) who hadn't sent the lesson plan before the workshop were excluded from the study.

The lesson plan workshops were 5 hours a day in 14 courses with the same teachers and program. The program consists of Bloom's taxonomy, definition of educational objectives, methods of teaching, preparing content, different methods of evaluation, timing and selecting the proper teaching aid. (audiovisual)

"Bloom's taxonomy and Indiana university lesson plan format" were used for the evaluation of lesson plans in all the index 3 score of correct, incorrect and non written were used.

Data analysis was done by McNemars.

## Results

Comparison between all components of the lesson plans before and after the workshop showed that all the indexes changed, ( $P < 0.001$ ).

Before the workshops the most common problem was writing the introduction, (92%) and timing chart (90%). After the workshop these percentages in order decline to 50% and 72.9%. (See fig.1,2,3 and table).

## Discussion

This study reveals that educational workshops for designing the lesson plan will increase the technical mastery of staff.

As the results show, after the workshops all components of a lesson plan format increase significantly. This is compatible with the study conducted in "Tehran University of Medical Sciences" which revealed the same result (13) before the workshops staff appreciate the objectives as the most important component of lesson plan, but the strategies and evaluating neglected.

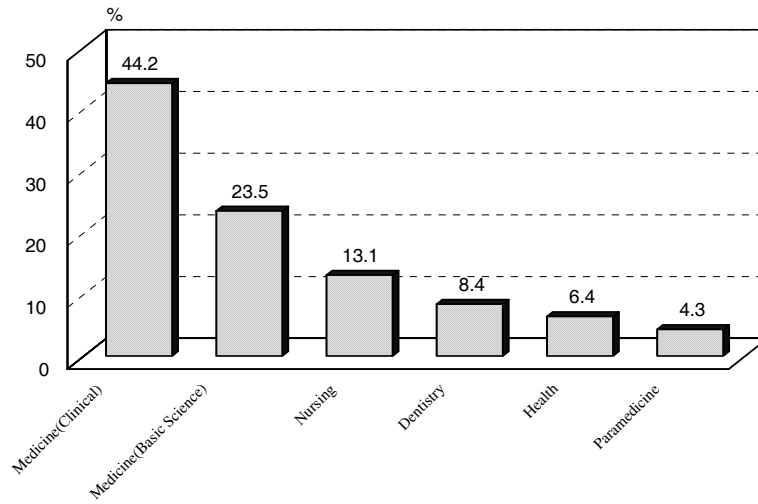
This defect corrected after the workshops were held.

The ability of staffs in converting a general objective to an action (specific behaviour) verb also increased. As "Newble" said before writing an objective, the teacher should be familiar with phrases and pertinent verbs. (14) In writing the objectives one should consider the categories of learning domains (cognitive psychomotor-attitude). (15)

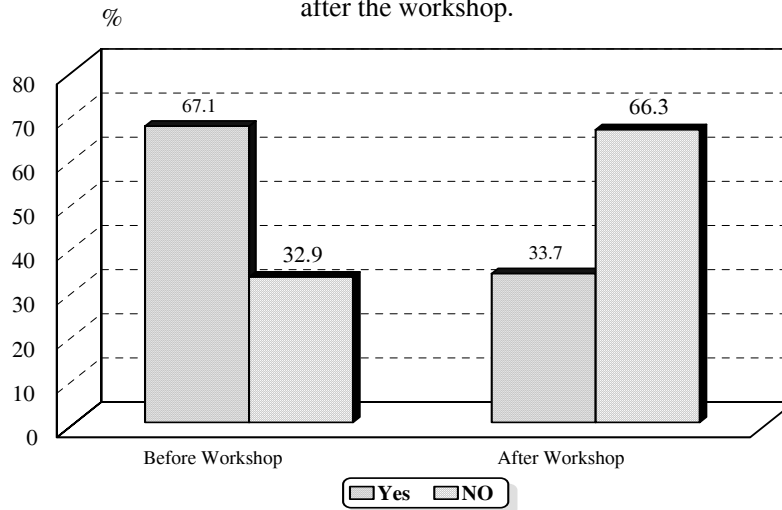
Educational workshops could influence the knowledge of the staff in applying the upper steps (levels) of cognitive domain as what happened in our study. (16)

<sup>1</sup> - 6 step of cognitive domain: recall. Comprehension. Interpretation. Analysis. Synthesis Judgment.

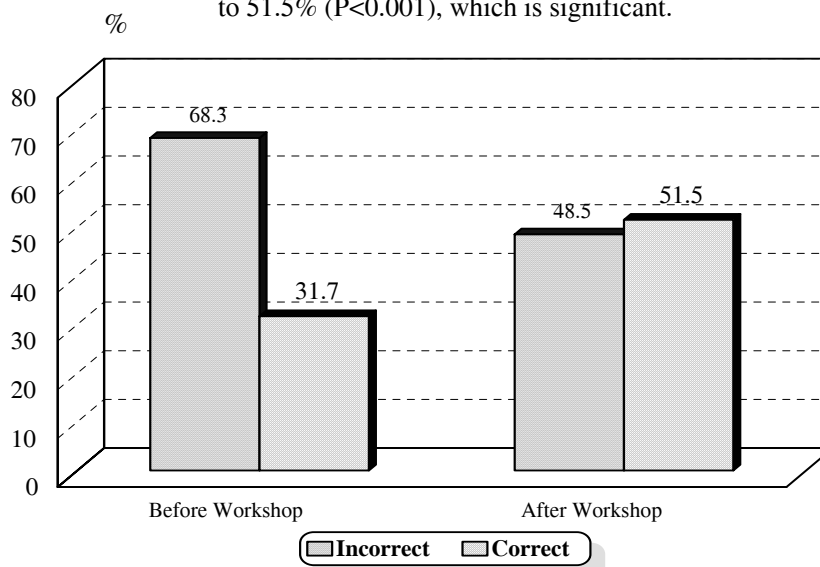
**FIGURE 1.** Showed that medical school got the most of lesson plans.



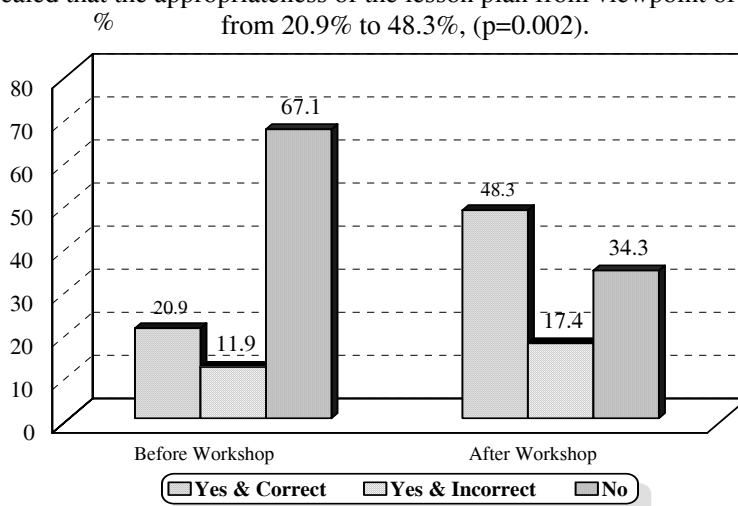
**FIGURE 2.** Showed that the ratio of completed lesson plan to in complete lesson plan components reversed after the workshop.



**FIGURE 3.** Show that correct application of action verbs of different levels of cognitive domain from 31.7% to 51.5% ( $P < 0.001$ ), which is significant.



**FIGURE 4.** revealed that the appropriateness of the lesson plan from viewpoint of components increased from 20.9% to 48.3%, (p=0.002).



**TABLE .** The results of different levels of cognitive domain revealed that the objectives were written in the level of application.

STEPS			
COGNITIVE DOMAIN LEVEL	BEFORE W/S	AFTER W/S	P-VALUE
Knowledge	183 (72.9)	241 (96)	<0.0001
Comprehension	141 (26.3)	210 (83.7)	<0.0001
Application	62 (24.7)	142 (56.6)	<0.0001
Analysis	9 (3.6)	41 (16.3)	<0.0001
Synthesis	3 (1.2)	12 (7.8)	<0.01
Evaluation	0 (0)	0 (0)	-

Before the workshop, analysis step was only 37%. After the workshop it increased to 16.3% (P<0.01), which is significant.

Teaching method is another important component of a lesson plan which shapes the interaction between the teacher and the student. (17-18) a study in Shiraz University students described (lecture-Round – Small group discussion and workshops and bedside teaching) as 5 best teaching methods.(19)

Brad show believed that those who are competent for teaching methods are better teachers. (20)

The result of our study reveals a significant relationship before and after the workshops in term of audio visual aids, designed and wrote in the lesson plans. Because these instruments facilitate learning. (21)

"Saberian" in Semnan University revealed that the staffs were not familiar with lesson plan so they could not design the action verbs and the objectives. (22)

### Recommendation

Based on our study and other colleagues in the country were suggest that:

- 1- Educational workshops held periodically and regularly at the medical universities to stress on lesson planning.
- 2- More stringent and well designed researches done to cover the limitation & biases faced in this study.

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