



Teaching and Learning in Higher Education

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Introduction

The book provides guidance to an Educational Institute about:

- The purposes of higher education.
- The course objectives and their relationship to instructional and evaluation methods
- Various modes of instruction and pedagogical strategies

Planning courses and curricula

Due to the rapid increase in knowledge, the courses are getting longer, especially the theoretical part which does not leave time for thinking and creativity. Therefore, there is a need to develop courses that give the subject's principles, followed by specialized courses. Also, there is a need to integrate curricula because fragmented ones make it difficult for the student to grasp. Therefore, teaching methods cannot be separated from curricula and they should be designed accordingly and should vary (simulated exercise - group discussion - problem-based learning).

The psychology of learning

Students are more satisfied and encouraged when they learn independently. Some psychologists think students should study the whole, while others think *learning* should be in steps. Learning is dependent on the characteristics of their nervous system, whether inherited or acquired. Perception and personalities affect learning. There are two types of students regarding their perception: the synthetic (do not focus on details) and analytic (solve problems).

There are also personality differences like extroverts (sociable - discussing) and introverts (shy - irritable).

Objectives in specific fields

A better learning process in an educational institute has to have a clear specific plan for short and long-term goals. The goal is to graduate as a physician or engineer later in life, which is lengthy. This learning process can be made easy if the teachers set clear objectives and methods to achieve them. The learner should be aware of those objectives to establish benchmarks against which to measure his or her progress. There are short, intermediate, and long-term objectives. The first two are responsible for changing student behavior, while the last type is for planning courses. The objectives could be categorized as knowledge (recall, comprehension, application, analysis, synthesis, and evaluation) or skills. In that way, the learning becomes memorizing and broadened to include solving problems and creativity.

Advantages and disadvantages of the lecturing method

Lectures are well-known traditional available, economical methods of teaching. However, it can be a successful teaching method if other methods accompany it. For the lecture to be an effective teaching method, it has to have clear objectives and well prepared, organized material; its content should be relevant, applicable, and not very or less detailed. The lecture can be fortified with visual and auditory aids like drawings (simple, brief labels, bold font) and large models because those aids lead to better retention. Modified

short lecture followed by questions and group discussion can give both the teacher and students feedback about the weak points they did not understand. Despite that, some people consider spoon-feeding and a lack of originality.

Teaching small groups

It became the more common teaching method due to a large number of students and the need to maintain rapport between the students and their teachers. This method carries many advantages like knowing the areas of difficulties students have, training students to solve problems and make decisions, exposing students to other points of view, changing their attitude towards other group members, and enhancing their oral skills. However, in some cases, professors are confronted either with shy or talkative students, which may affect the learning process. The experienced professor can deal with that by buzzing the shy students while asking the dominating ones to take notes for group use.

Practical and laboratory teaching

Skills are acquired through the practical sessions, but they need a good knowledge background for better performance. Observation, detection of findings, evaluation of results in medicine and getting solutions for malfunctioning in engineering are examples of practical skills. Some difficulties may be faced like irrelevant experiments, old equipment, many students, small numbers of laboratory tutors, and short periods of time. Open-ended experiments and research projects are newly designed as laboratory courses which can vary from one year to 3 years. The responsibility of tutors is to use the equipment, plan the experiment, and organize the groups. Tutors should not tell the students too much or too little for them not to lose interest.

Instructions without teachers: Some new techniques in teaching

New techniques start with the tapes to learn foreign languages, then programmed learning (linear or branched) in medicine and engineering. The program stresses the crucial parts that should be learned effectively. It also gives a chance to students to learn from their incorrect answers through complex branching steps. These programs are proven effective for expert teachers and save time. When computers emerged, they acted as permanent records for students' errors. Moreover, with the development of games and

simulation systems, teaching got better because simulation teaching imitates the actual circumstances of the situation we want the students to deal with by making decisions and noticing their consequences. Charts also help students by giving them the factors they should consider while making a medical diagnosis or legal decision.

Independent study

Independent study encourages students to think and learn independently, but unfortunately, professors do not give extra marks during the assessment. Most of the students have problems with reading, such as the inability to read fast and ignoring the book index. Reading speed varies according to the subject's difficulty and whether or not the student is accustomed to reading. Students also find it challenging to take notes during lectures, especially if the lecturer is going fast, because this hinders their communication and understanding. Professors should help students plan their time by setting up goals AND give feedback on students' learning. Independent study is promoted by slides, film loops, and programmed tapes.

Evaluation of learning and teaching

Exams aim to give feedback to the student and the teacher, but sometimes the marking is not reliable due to the fatigue of the professors, their reaction to lousy student handwriting, or personality differences. Hence, the need for objective exams like multiple-choice tests because they cover most of the syllabus, are corrected fast, and are reliable.

Critique of the book

The book covered topics usually studied in the first part of the diploma, strengthening them and giving an idea about topics yet to come in the second part.

In some chapters of the book, the author speaks about specific points; that would be preferable if she concisely covered them.

In chapter 5 (teaching small groups), the author dealt well with the problems and difficulties that may face the tutor and afford solutions.

In most of the chapters, the author only demonstrated the research results without mentioning her opinion from her practical point of view; It would be preferable if she did mention it.

Points from the book applicable in teaching activities

Follow the objective way in planning the curricula and the exams (methods of assessments) to be reliable.

The modified lecture (short lecture followed by questions and group discussion) is taught in small groups, especially in practical sessions.

Giving more marks to independent study gives students an excellent chance to accept other skills, e.g., using the library to skim books.

Giving the students the freedom to choose the title of their research projects will make them more passionate and enthusiastic.

Name of the book: Teaching and learning in higher education

Author: James Beard, Ruth M & Hartley

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