

Educational Psychology: Helps with the Problems of Teaching

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Abstract—Educational Psychology provides part of the help needed to solve educational problems, especially those of teaching. Such problems arise in all the pre-instructional, instructional and post-instructional phases of the teacher's work. The uses of Educational Psychology fall into five categories: educational objectives, characteristics and development of students, nature of the learning process, teaching methods, and evaluation of learning. Educational Psychology deals with ways of stating classifying and using objectives in teaching. The focus of research in Educational Psychology can be seen in three main kinds of variables- objectives, student characteristics, and teaching methods. The choices of teaching methods should be influenced by the nature of the objectives to be obtained and the nature of the students that one of teaching. Educational Psychology works toward providing the knowledge on which to base wise choices of this kind.

Keywords: Educational Psychology, Educational Objectives, Characteristics and Development of Students, Learning Process, Teaching Methods, Evaluation.

1. INTRODUCTION

History of educational psychology is as old as the process of education on earth. A large number of eminent scholars and scientists have contributed to development of educational psychology from time to time. The development of educational psychology can be traced back from time Greek philosophers in the west. In 4th B.C. Plato and Aristotle developed a system of education and its relation to psychological principles. They wrote on various aspects of education such as types of education for different kinds of people, education of character, the profession of teaching and methods of teaching, nature of learning, the influence of home in education etc. Rousseau attempted to base education on the principles of human development. He prepared a detailed scheme of education in his famous book "Emile". J.M. Cattell made great contribution in the area of individual differences and mental testing. Alfred Binet, the first psychologist who contributed by devising first widely used individual intelligence scale. Scientific educational psychology, in the beginning of the present century drew the attention of a number of psychologists who devoted their researches to special areas within psychology which had impact on education. E.L. Thorndike, C.H. Judd, L.M. Terman etc. they worked in specific areas of educational

psychology. The Systems of psychology Behaviorism, Psychoanalysis and Gestalt Psychology were developed in the beginning of the present century. Educational psychology is a continuously growing discipline adding new dimensions to its field of study. The field of educational psychology is becoming more complex in modern days encompassing total behavior of human beings in educational situations.

Educational psychology serves teachers and educators in general by providing help in dealing with these problems. Sometimes the help provided by educational psychology leads directly to the solution of a problem. More often it is only a part of the basis for a solution. In other words, educational psychology serves as a foundational discipline in education just as the physical sciences serve engineering. The engineer designing a bridge or a refinery needs knowledge of physics and chemistry, of course, but must also have aesthetic, economic and political understanding. Similarly, teachers must combine insights from educational psychology with philosophical reasoning about what is good for the student and for society, with sociological awareness of community dynamics, economic analysis of costs, and political knowledge about the connections between government and education. So a teacher might combine psychological knowledge about probable effects of teachers' expectations on the achievement of boys and girls in an auto mechanics course with (1) philosophical ideas about the nature of equality (2) economic information about job markets for women and about the costs of training mechanics (3) the community's climate of opinion on female mechanics (4) the politics of school board issues for financial support of school shop facilities.

Educational psychology can provide some insight into most aspects of educational practice. It offers important ideas about learning and influences on learning in families, business, industry and community life. It also bears on educational activities. But educational psychology and hence this paper, is most concerned with the teaching and learning processes in classrooms. More precisely, we shall deal primarily with problems that arise in the process of teaching. In doing so, we shall be giving you what teachers say they want: what "can be applied somewhat directly to help meet daily classroom

needs... discipline and classroom control, teaching methods and skills, differences among learners....” (Isakson & Ellsworth, 1979).

2. EDUCATIONAL OBJECTIVES: DEVELOPING A ROAD MAP FOR INSTRUCTION

Educational psychology contributes solutions in a variety of ways to the problem of setting objectives. It deals with the terms in which objectives should be stated, that is, with whether they should be stated as goals of the school, of the teacher, or of the learner. Most educational psychologists hold that objectives should tell what students should be able to do and what they will do if given an opportunity. Knowing why objectives are seen in these way, rather than in terms of teacher behaviors or school characteristics, is of interest if one is attempting to understand educational psychology.

Educational psychologists have developed ways of classifying objectives. These classification schemes will vastly improve your sophistication in thinking about alternative objectives and your way of defining them. We shall also look at ways of stating objectives so that they are most useful in measuring the degree to which learners have attained the objectives.

3. USE OF EDUCATIONAL PSYCHOLOGY IN PROBLEM-SOLVING

Let us turn briefly to the ways in which educational psychology can help teachers to solve the various problems of teaching. We have grouped these problems under five headings. These headings fit together in the model of instruction shown in Figure.

Table 1: Phases

Before instruction	Before and during instruction	instruction	after instruction
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Characteristics of students- what are your students like? (we shall use the term students to refer to learners at all levels, from nursery school to adult education). What can they already do before you begin to teach them? The characteristics and behaviors acquired by students before entering your class will surely affect what they are ready to learn and how they will learn it. So a second major contribution of educational psychology (first is objectives) is to help the teacher take into account the pre-teaching characteristics and behaviors of students. Such factors should affect the choice of objectives and learning procedures.

What characteristics or kind of individual differences –such as age, sex, intelligence, previous achievement of certain kinds, social class and ethnic background- should the educator take into account, for what reasons and in what way? Some students are ready to develop skills in using the protractor for

measuring angles. Others are not that far along still need to learn exactly what an angle is. Still other have already acquired the skill and will only be bored if the class discusses it again. The way in which various characteristics or differences between individual are determined or shaped are important. For example, to what extent are differences in intelligence determined by differences in heredity and to what extent by differences in environment? And how do the answer to these questions affect whether the government should spend money on special educational programs for low-achieving students?

In short, educational psychology can contribute to your understanding of the way in which student characteristics are defined, organized and determined as well as the ways in which they affect learning.

4. THE NATURE OF THE LEARNING PROCESS

How does learning go on? This is obviously basic to the teacher’s work. Teachers ought to be fully aware of their views about the nature of learning. Some conception of the learning process underlies how each of us tries to influence others, whether we are teaching students, raising children, persuading voters, or selling products to customers. That conception is particularly important for teachers. We shall therefore look at major theories of learning in present day psychology, with the purpose of giving you some useful approaches to the improvement of learning.

The various conceptions of learning that fit these different kinds of things to be learned are discussed. And since learning of any kind occurs best when we are dealing with motivated students, the concept of motivation must be well understood. One particularly influential conception of learning and motivation is reinforcement theory or operant conditioning theory given by B.F. Skinner

5. TEACHING METHODS

How should I teach? Having considered educational objectives, student characteristics and the learning process, we examine teaching methods. These are the procedures by which students can be helped to move from their initial ways of behaving to those that have been set up as objectives. Some teaching methods- lecturing, group discussion, independent study, have been used for many years. Other approaches, such as the humanistic, have been reemphasized only fairly recently. Still others use modern technology-films, tape recorders, television and programmed instruction (via programmed textbooks, teaching machines and computer-assisted devices).

6. THE EVALUATION OF LEARNING

How well has the student learned? Some evaluation can take place while the teaching is going on, to check whether teachers and students are making progress toward their

objectives. Or evaluation can be delayed until a large segment of teaching- that of a week, a month, or a year- has been completed. In fact, with some material it is often wise to evaluate before starting to teach in order to estimate the level of achievement that students already possess. You will need to find out whether they can add before you teach them to multiply. You must make sure they understand the meaning of velocity before they go ahead to acceleration. Teachers ought to know how to use what educational psychology can offer for all three kinds of evaluation: the pre-instructional, instructional and post-instructional phases.

Some kinds of evaluation are best made with tests or other devices drawn up by the teacher themselves: others require standardized tests or procedures developed by outsiders. Educational psychologists have developed ideas useful in determining when each kind of instrument is more appropriate, how the instrument should be made or selected and how it should be administered and interpreted.

7. CONCLUSION

On the one hand, it allows instructors to cover the traditional wide range of topics that have been judged by educational psychologists as useful. On the other hand, it provides sufficient time for students to understand those ideas and to learn how to use them in classrooms. The major problem here is one of numbers. Many teacher-education programs prescribe virtually credit-hours) that students will take. The proposal to add another course to the sequence will probably not be looked upon fondly by administrators or faculty. That leaves only one other possibility, and we would urge educational psychology faculty to give it serious consideration. We do teach will coincide more closely with

what we should teach. The focus of research in Educational Psychology can be seen in three main kinds of variables- objectives, student characteristics, and teaching methods. The choices of teaching methods should be influenced by the nature of the objectives to be obtained and the nature of the students that one of teaching. Educational Psychology works toward providing the knowledge on which to base wise choices of this kind.

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