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AN INTRODUCTION TO
**Educational
Psychology**

E. Stones



AN INTRODUCTION TO
Educational Psychology

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AN INTRODUCTION TO
EDUCATIONAL PSYCHOLOGY

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What This Book is About

This book attempts to introduce students of education to the elements of educational psychology. It also relates as closely as possible the findings of research to classroom practice. It does not attempt, however, to provide teachers with ready-made classroom techniques. Each teacher develops his own classroom techniques. On the other hand the general principles for good teaching are discussed and concrete examples given where appropriate.

In order to make clear the fundamental processes involved in psychological development, the book starts with a study of the way in which the young child adapts its behaviour to its environment. This study involves a brief consideration of some of the key aspects of physical development, mainly the central nervous system. At the same time we consider the way physical growth and psychological development are influenced by the experience of the individual.

The discussion of development is followed by an examination of the processes of learning. Lower animals are considered, as well as man, since their much simpler behaviour helps to show more clearly the basic aspects of learning which man has in common with other animals.

In the discussion of learning the general aim has been to present an integrated view of the main features of conditioning theory without attempting to go into detailed discussion of the distinctions between the various views on the subject. This has meant a certain amount of oversimplification but the reader who wishes to explore the matter further will find more precise and detailed exposition of the subject in the references given and in other standard works on the subject.

Learning characteristic of man is considered next. The view is taken that the great difference between learning in man and the

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other animals, stems from man's life as a social being. In particular, it is argued, language is of fundamental importance in human learning since the use of language is crucial in the development of thought.

The way in which children form ideas about the world is discussed next and particular attention is paid here to the work of Piaget. A study is also made of the categories of thinking which are likely to be of most use to children.

We then examine the processes whereby the child acquires complex habits of thought through his use of language and we see how language deficiency holds back the development of the child's thinking.

The processes of learning so far considered are now related to specific classroom subjects, and suggestions are made to help the student to apply his knowledge of these processes to the classroom. Here we also discuss the application of programmed learning to the classroom and consider the psychological principles of programming and the use of teaching machines.

A section is devoted to the tests which a teacher might use in the classroom. The weaknesses of some traditional methods of testing and marking are discussed, and suggestions made to help the teacher avoid these weaknesses. Intelligence testing is given special attention and the changing views on the nature of intelligence are explained. Suggestions are made to the teacher about ways in which he can profitably use the various types of tests including intelligence tests.

Since the majority of teachers will at some time have children in their classes who, for various reasons, are less able than the other children, we discuss the causes of backwardness and its diagnosis. We also consider the way in which the teacher can help children to overcome their disability, and what he can do to get expert help for the more difficult problems.

Children are greatly affected by the social groups to which they belong and we therefore examine the effect of group influences on the child. Particular attention is given to the influence of the class and the school on the child's learning and emotional stability.

WHAT THIS BOOK IS ABOUT

The final chapter deals with the teacher's work. It attempts to bring together the key aspects of educational psychology that the teacher needs to consider in his work in the classroom.

A note on the organization of the book

The salient points of each chapter are brought together in a summary which may be used by the reader to obtain a preliminary overview of the content of the chapter, and as an aid to revision.

References are given in brackets in the body of the text and are restricted to those which students may be reasonably expected to be able to follow up. The references are collected at the end of the book in numerical order as they appear in the text.

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CHAPTER 1

The Foundations of Learning

Viki was a chimpanzee reared in the household of two American psychologists, C. and K. Hayes. They adopted her a few days after birth and reared her as far as was possible as they would have reared a human child. If Viki's development seemed to be deficient in any way as compared with human development, she was given special training. As a result of this unusual environment the chimpanzee developed more affinity with human babies than with other chimpanzees. She became capable of activity quite beyond the capacity of similar animals reared in more orthodox environments. She learned to dust, to wash dishes, to sharpen pencils, to paint furniture, and she could cope with psychological tests intended for children of her age so long as language was not involved. In many respects Viki made the same progress as a child of the same age; the most important difference was in language development where Viki made very little progress. The reason for this is probably that the brain of the chimpanzee is deficient in those areas which in humans we call the speech centres.

Viki was reared in an environment which for a chimp was extremely stimulating. She was continually being faced with problems to solve and she was given assistance where she had difficulty. In contrast chimpanzees in zoos have comparatively unstimulating environments and consequently develop much more limited abilities. The reverse is the usual case with children. The home itself generally provides a rich environment and the exceptional case is the child who is reared in an environment comparable to that of the chimpanzee reared in the zoo. The few existing reports which deal with such cases indicate that when the environment is grossly deficient in stimulation, the development of the child is correspondingly retarded.

One such report was made by R. A. Spitz in 1945 on the physical and psychological development of a number of children reared in a foundling home [1]. Their ages ranged from two to four years. Of twenty-one children five were totally unable to walk and only five could walk unassisted. Twelve could not feed themselves with a spoon, and only one could dress himself; none of the children was toilet trained. Six were unable to talk and only one could use sentences. Most of the children had the physical appearance of children about half their age. It should be stressed here that the children in the home were in no way maltreated. They had had excellent medical care, adequate diet, and had not been exposed to any injury or infection. The only abnormal thing in their life histories was the lack of social stimulation in the first years of life.

An extreme case of lack of social stimulation gave rise to one of the earliest attempts to apply scientific principles to the analysis, prediction, and modification of behaviour in man. Late in the eighteenth century a 'wild boy' of twelve was captured in a French forest. He was naked, walked on all fours, made unintelligible sounds, ate like an animal, and bit those who attempted to handle him. He was given to a French physician, J. M. G. Itard, to attempt to educate him. Itard thought that the child's gross deficiency was probably caused by his prolonged isolation from society. He analysed the boy's learning disabilities by a series of experiments and attempted to remedy them by a systematic programme of teaching. He was only moderately successful, one of the difficulties being that the boy probably suffered from some form of brain damage. But he did make some important progress, and his work foreshadows much modern work in education and psychology.

These investigations and experiments raise questions of fundamental importance for the teacher and the student of education. The key question is probably *to what extent can children be trained, and to what extent are physical factors which we are unable to control likely to frustrate our efforts?* The Hayeses produced behaviour in a chimpanzee quite out of proportion to the normal development of such animals. They failed to train Viki to use