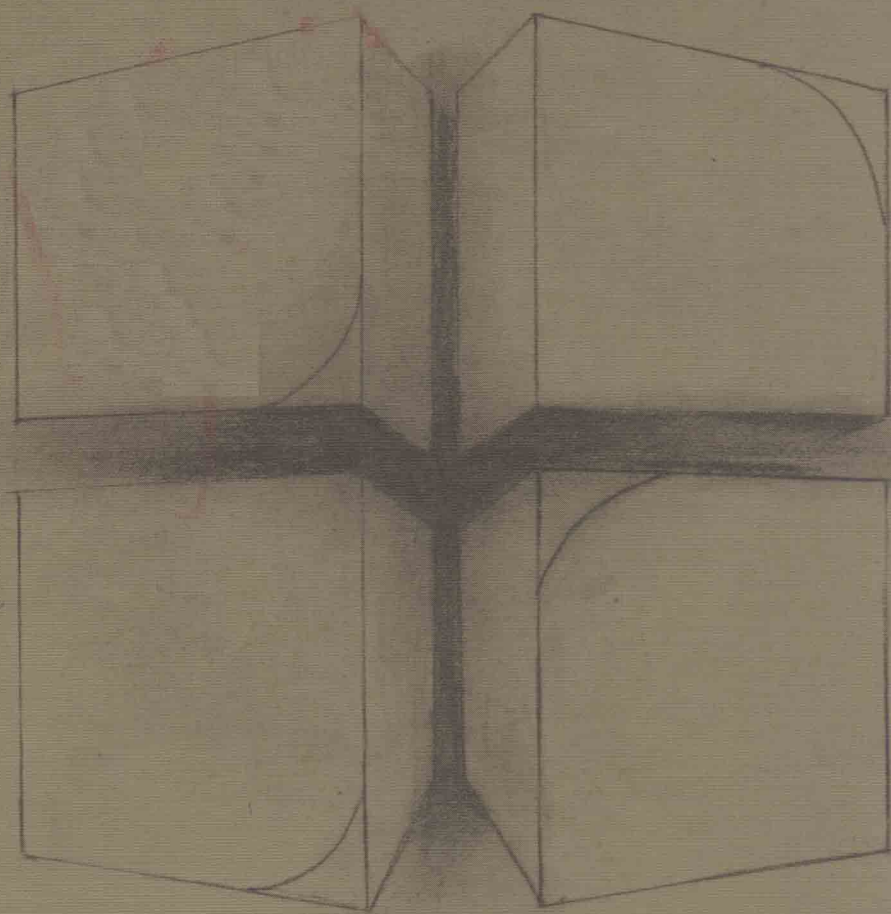


Educational Psychology

Second Edition

WALTER B. KOLESNIK



Educational Psychology

WALTER B. KOLESNIK
University of Detroit

SECOND EDITION

McGRAW-HILL BOOK COMPANY
NEW YORK, ST. LOUIS, SAN FRANCISCO, DÜSSELDORF
LONDON, MEXICO, PANAMA, SYDNEY, TORONTO

Educational Psychology

Copyright © 1963, 1970 by McGraw-Hill, Inc. All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher.

Library of Congress Catalog Card Number 70-95812
35303

4 5 6 7 8 9 0 MAMM 7 9 8 7 6 5 4 3 2 1 0

This book was set in Primer by Monotype Composition Company, Inc., and printed on permanent paper and bound by The Maple Press Company. The designer was Richard Paul Kluga; the drawings were done by B. Handelman Associates, Inc., The editors were Nat LaMar and Helen Greenberg. Paul B. Poss supervised the production.

Preface

The purpose of this book is to contribute to the preparation of effective elementary and high school teachers by broadening and deepening their understanding of the learner and the learning process. It attempts to achieve this purpose by explaining, interpreting, and evaluating the theories, concepts, principles, and research findings of educational psychology which I believe are especially relevant to the work of the classroom. Since the subject matter of educational psychology is not rigidly defined, the author of a textbook in this area has a certain leeway with respect to material that should or must be included. I have selected material from the field that I think will be of most interest and value to undergraduate students as I have come to know them after fifteen years of teaching this subject.

Those who are familiar with the 1963 edition of my book will recognize that although this is a thorough revision, it follows substantially the same organizational pattern as the earlier text. Chapters 6 and 7 and Chapters 15 and 16 of the earlier edition have been reorganized and combined into Chapters 6 and 14, respectively, of this version. Chapter 2 of the original, dealing with statistics, has been condensed and placed in the Appendix. Chapter 5 of this second edition is brand new. All other chapters have been updated and rewritten.

In order to call attention to its distinctive flavor and orientation, I considered calling this revision *A Humanistic Psychology of Education*. I decided against doing so because the word *humanistic* holds varying meanings for different people, and might therefore be misleading in this context. Besides, I do not regard myself as a dyed-in-the-wool humanistic psychologist, nor does the entire book by any means necessarily reflect the thinking of other psychologists who consider themselves humanistic. But the book does bring forward these convictions: The human being who is studied in psychology cannot be understood in terms of measurable, observable behavior alone. He is a unique, unified person, a purposeful individual who adapts to his environment as he perceives it in order to achieve his goals. He has the capacity for self-determination and he is in search of values that can and will give his existence meaning. Finally, he is motivated by a desire to live the richest, fullest, most rewarding life that he is capable of, and it is the function of his teachers to help him do so.

WALTER B. KOLESNIK

Contents

PREFACE vii

AN INTRODUCTION TO EDUCATIONAL PSYCHOLOGY

Teachers' Professional Problems	1
The Development of Educational Psychology	5
Methods and Sources of Data	15
Reference Books, Journals, and Books of Readings	24
Summary	27
Activities	28
Supplementary Readings	28

THE EFFECTIVE TEACHER 30

Teachers' Roles	30
Teacher Evaluation	33
Qualities of Successful Teachers	39
The Teacher as an Individual	46
Summary	53
Activities	53
Supplementary Readings	54

THE CHILD'S DEVELOPMENT 56

Means of Studying Human Development	57
Principles of Human Development	59
Differences in Human Development	69

Summary	78
Activities	79
Supplementary Readings	80

CHILDREN AND ADOLESCENTS 81

The Preschool Child	82
The Child in the Primary Grades	86
The Child in the Elementary Grades	91
The Junior High School Student	94
The High School Student	99
Summary	106
Activities	106
Supplementary Readings	107

SEX DIFFERENCES AND SOCIAL CLASS 109

Sex Differences	109
Social Class Differences	122
Summary	133
Activities	134
Supplementary Readings	134

MENTAL ABILITIES 136

The Nature of Intelligence	136
The Measurement of Mental Abilities	142
Interpreting the Results of Ability Tests	151
Heredity, Environment, and Mental Ability	159
Summary	165
Activities	166
Supplementary Readings	166

DIFFERENCES IN SCHOLASTIC APTITUDE 168

The Range of Mental Abilities	168
Provisions for Individual Differences	180
Summary	191
Activities	191
Supplementary Readings	192

8 THEORIES OF LEARNING 194

An Overview of Learning Theories	194
Association Theories	196
Field Theories	202
Classroom Implications of Learning Theories	209
Summary	214
Activities	214
Supplementary Readings	215

EFFICIENT LEARNING 216

Retention and Forgetting	216
Study Habits and Skills	224
Guidance and Reinforcement	232
Summary	239
Activities	239
Supplementary Readings	240

TRANSFER OF LEARNING 241

Transfer and Formal Discipline	241
Theories of Transfer	247
Teaching for Transfer	251
Summary	261
Activities	261
Supplementary Readings	262

THINKING AND CONCEPT FORMATION 263

The Nature of Thinking	263
The Nature of Concepts	274
Summary	283
Activities	283
Supplementary Readings	284

THE IMPROVEMENT OF STUDENTS' THINKING 286

Factors Affecting Thinking	286
Thinking in the Classroom	295
Errors in Thinking	303

Summary	310
Activities	310
Supplementary Reading	311

13 MOTIVATION 312

The Nature of Motivation	312
Interest	321
Incentives	324
Summary	335
Activities	335
Supplementary Readings	336

14 MEASURING THE OUTCOMES OF LEARNING 337

Tests as Instructional Aids	337
Reporting Pupil Progress	342
Criteria of Good Achievement Tests	346
Teacher-made Tests	350
Standardized Tests	361
Summary	363
Activities	364
Supplementary Readings	364

15 HUMAN RELATIONS IN THE CLASSROOM 366

Learning as a Social Process	366
Learning Through Group Methods	375
Social Relations in the Classroom	382
Summary	389
Activities	390
Supplementary Readings	391

16 THE PUPIL'S MENTAL HEALTH 392

Personal Adjustment	392
Psychological Mechanisms	405
Mental Illness	412
Summary	417
Activities	417
Supplementary Readings	418

17	MENTAL HEALTH AND THE SCHOOL	419
	Personal Adjustment and Scholastic Achievement	419
	Recognizing Personality Problems	424
	Helping Pupils With Their Problems	431
	Mental Health of Teachers	438
	Summary	441
	Activities	441
	Supplementary Readings	442
18	BEHAVIOR PROBLEMS AND CLASSROOM CONTROL	444
	Discipline and Misbehavior	445
	The Prevention of Misbehavior	453
	Corrective Measures	458
	Summary	467
	Activities	467
	Supplementary Readings	468
	CHARACTER AND ATTITUDE FORMATION	470
	Character Development	470
	The Development of Attitudes	484
	Summary	494
	Activities	494
	Supplementary Readings	495
	APPENDIX: STATISTICAL CONCEPTS	496
	NAME INDEX	509
	SUBJECT INDEX	517

An Introduction to Educational Psychology

The purpose of a course in educational psychology is not to give specific, definitive answers to questions about methods of teaching or techniques of dealing with children, nor is it to arm the prospective teacher in advance with prepackaged solutions to the many practical problems that she is likely to encounter in her classroom. Its purpose, rather, is to introduce her to psychological theories and research findings about learners and the learning process, and to a method of thinking psychologically, that may help her answer her own questions, reach her own conclusions, and solve her own problems.¹

We shall begin this chapter with a survey of some of the professional problems of teachers. Then we shall see the kinds of attempts that were made to solve these problems in the past and shall trace the development of educational psychology as a science. Next, we shall consider the nature and methods of educational psychology today and shall conclude with a brief reference to sources of further information in this area.

TEACHERS' PROFESSIONAL PROBLEMS

However well she may know the subject matter she is assigned to teach, however her personality may be suited to teaching, however many education courses she may have taken, the teacher is likely to find that certain problems, certain difficulties, certain stumbling blocks keep arising in

¹ Throughout this book, solely for purposes of clarity and consistency, feminine pronouns are used to refer to teachers, and masculine pronouns to students. There is, of course, no implication of anything feminine about teaching—or masculine about learning.

connection with the practice of her profession. The beginning teacher should realize that these problems confront others besides herself and that even the most experienced teachers still have to contend with them. She should recognize that there are no simple rules to guide her in the solution of many of these problems and no cure-alls that will fit every particular situation. She should also understand that there are honest differences of opinion as to how these problems should be handled when they arise and how some of them might be avoided. The prospective teacher should at least be aware of what some of these problems are so as to anticipate them and prepare herself accordingly.

Differences among Students

Many of the teacher's problems arise from the fact that no two of her students are exactly alike. In every class some will be brighter, older, physically bigger, more highly motivated, better adjusted socially, more stable emotionally, neater, healthier, or more responsible than others. They will probably come from widely different national, religious, social, economic, or cultural backgrounds and will differ among themselves in their interests, aspirations, and needs. All of these and other differences affect the manner in which each member of the class learns. Something that appeals to one student might leave another totally unimpressed; a technique that yields gratifying results with some may be a dismal failure with others; an explanation that is readily understood by the majority might be meaningless or confusing to the rest of the group. Yet each of these students is entitled to the best education he is capable of—and the teacher, presumably, is genuinely interested in helping each one of them reach his full potentialities. The problem is that she might have thirty or forty or more sets of potentialities to develop simultaneously.

Motivation

The beginning teacher who is convinced that Shakespeare's plays, for example, are utterly fascinating should not be surprised to discover that some of her students may not share her enthusiasm. One member of the class is bound to point out that he intends to become a chemist or an automobile mechanic and to ask why he is required to study "this stuff." He will want to know what good it will do him. Before they can be expected to exert themselves, students must somehow be made to want to learn, to see the value of their subject matter. Once their interest is aroused, there may be no holding them, but first the interest must be aroused. As we have just noted, the fact of individual differences has a decided bearing on this problem. Some may respond to one device, others to another. Certain students—let us face it—will apparently not respond to any. Yet part of the teacher's task is to continue to seek ways and means of capturing and holding their attention and of instilling in them the will to learn.

Methods of Instruction

Reference is sometimes made to the teacher who “knows her material” but cannot “put it across.” If this means that she is ineffectual in helping her students to learn, such a person is certainly not a good teacher. But the expression “putting it across” suggests a faulty notion of what teaching is. It seems to imply that teaching is the transplanting of knowledge from the teacher’s brains to the students’. But teaching is more than transmitting or giving or telling; it is rather leading or guiding or directing the learner toward the discovery of knowledge, the realization of truth. One of the teacher’s problems is to decide which of the many instructional methods available to her is best suited to the particular situation in which she finds herself. To make this decision wisely, she must be acquainted with a variety of possible procedures, know the uses and limitations of each, and understand the principles behind their relative effectiveness.

Evaluation

Questions such as the following go through the minds of even the more experienced teachers, keeping them awake nights when they should be resting peacefully in preparation for the next day’s teaching:

Should Hans receive a B or a C in reading? If he deserves a B, then Nils should receive an A. Nils is certainly a much better reader than Hans. But Elena is getting an A, and Nils is not so good as she. But is Elena really a better reader than Nils, or have I been unduly impressed by the fact that she looks so cute in her starched ruffly pinafore while his nose is usually running? I wonder whether that arithmetic test was too difficult. There were so many low scores, even among the better students. And that true-false test in social studies—perhaps some of the questions *were* ambiguous, as Tommy claimed. Poor Tommy. Three D’s. Maybe I should have given him a C in spelling. True, he can’t spell, but he does try hard, and he always seems to be paying attention. Was I right in taking off credit on his science project for his atrocious spelling? Science is the one subject in which he does well—but he spells it *siense*. . . .

Classroom Management

A problem that looms large in the minds of most prospective teachers is that of maintaining order in the classroom and dealing with pupil misbehavior. Without order, learning cannot take place. But there are different kinds and degrees of order. Some teachers have reputations as good disciplinarians; they succeed in getting through a school day with little or no disturbance on the part of the students. It does not necessarily follow, however, that they are good teachers. The questions that remain to be answered are these: How much and how well do students learn under these conditions, and what kinds of attitudes do they carry away? In order

to manage her classroom effectively, a teacher must have a good understanding of the reasons for pupil misbehavior, of principles for preventing such misbehavior, and of ways of correcting misbehavior when it does occur.

Mental Health

The problem of the student's social and emotional adjustment is of concern to the teacher for two main reasons. First, mental health is a good in itself. Since the child's future social and emotional development may well depend upon his experiences in the classroom, the conscientious teacher is genuinely interested in making those experiences as salutary as possible. Second, mental health is a means toward academic achievement. The child who is worried about his social relations, for example, will probably not be willing or able to put forth his best efforts to attain scholastic goals. More and more, teachers are coming to realize that the fostering of students' mental health, while not primarily and certainly not exclusively the function of the school, is a responsibility which they can and must share. Without detracting from her primary purpose and without sacrificing the quality of the students' academic work, every teacher should be on the alert for ways and means of helping to meet her charges' social and emotional needs.

Character Formation

Society has long expected that the school can and should contribute to the student's moral formation. Like his mental health, this is a responsibility which the school shares with other agencies, particularly the home and the church. The teacher, however, is in an excellent position to cooperate with these other agencies in inspiring her pupils and guiding them toward the development of attitudes, ideals, values, and beliefs which will help them lead lives in accordance with sound principles. The development of character or good citizenship involves more than the transmission of platitudes or insistence upon good behavior under the threat of punishment. The person of good character acts in the right way for the right reason—because he wants to. To help an individual child in this respect may well be the most challenging educational problem of all.

The Role of Educational Psychology

To what extent can the study of educational psychology be expected to help a teacher with problems such as those that have just been mentioned? To begin with, we must note that teaching is an art and that there is more to an art than having knowledge of a subject. Success in an art depends to a great extent on such qualities as aptitude, interest, practice, adaptability, initiative, and creativity. These cannot be gained from reading

books, taking courses, or listening to lectures. A person does not become a good teacher by reading a book on the subject any more than he becomes an expert pianist by reading a book on the techniques of playing the piano. The book can be valuable to the musician or the teacher, but alone it does not suffice. The art of teaching, like any other art, can be learned only through doing.

Knowledge of psychology, therefore, does not necessarily make a person a good teacher. Psychology certainly is not a day-to-day, step-by-step guide to teaching. It offers no foolproof cookbook methodology guaranteed to produce good results or double your money back. It does not and cannot tell a teacher that she should always do this or never do that. What works with one teacher dealing with one group of students under one set of conditions will not necessarily work with another teacher or with the same teacher under different circumstances. Educational psychology can, nevertheless, help a particular teacher decide for herself what she should do in her particular situation with her particular problems.

The study of educational psychology aims at helping a teacher formulate and clarify the objectives of the class she is teaching and evaluate some of the possible means of attaining those objectives; at helping her plan her own teaching strategies and foresee the consequences of alternative procedures that might be open to her; at bringing to her attention the results of research studies that have a bearing on the kinds of problems she faces and to familiarize her with various psychological theories that she might draw on; at acquainting her with data, concepts, principles, and generalizations that others have found useful in understanding human behavior and that she might find helpful in understanding her own students. Educational psychology aims, in short, at developing some of the insights, skills, and attitudes teachers need in order to solve their professional problems effectively and carry out their functions of guiding individual students through the learning process.

THE DEVELOPMENT OF EDUCATIONAL PSYCHOLOGY

As compared with some other sciences, educational psychology is quite young, but the problems with which it deals are very old. At least as far back as the fifth century before Christ, Greek philosophers were speculating about human behavior and development. Ever since, further theories have been advanced, and attempts have been made to apply them to the improvement of education. It was not until the latter part of the nineteenth century, however, that experimental methods were used to study the learner and the learning process. Some of the prescientific or quasi-scientific theories have withstood the rigorous demands of experimental verification and have proved their worth. Others have been modified or refuted by research reported within the past six or seven decades.

The brief survey of the historical development of educational and

psychological thought which follows is intended to indicate some of the types of problems with which philosophers, psychologists, and educators have been concerned; to describe some of the solutions to the problems which have been presented; to illustrate the fact that certain supposedly modern educational principles and procedures actually have their roots in bygone centuries; to show how the science of education came into being; and to help integrate the reader's knowledge of the history and philosophy of education with its psychology. It is, in short, presented as a background against which the topics dealt with in later chapters may be better understood.

Plato

One of the earliest systematic theories of psychology and education was advanced by Plato. Plato believed that man's senses are deceptive. At best they lead to mere opinion, never to a comprehension of reality. While all that is apprehended by the senses is illusion, ideas alone are real. Ideas are not acquired through sense experience; they are innate. Before a person was born, Plato maintained, he knew or had ideas perfectly; but when his soul became encumbered with a body, these ideas grew vague and indistinct. Learning, then, in Plato's definition, consists of recalling or trying to recapture innate ideas, and consequently teaching is a process of drawing out, rather than of pouring in. This drawing-out process is the Socratic method of basing instruction primarily on questioning and discussion rather than on lectures or demonstrations.

Plato drew a sharp distinction between mind and body, assigning to the latter by far the inferior role. The mind and the mind alone is the source of knowledge. The body contributes practically nothing toward understanding or wisdom. Only by abstract thinking, by pure reason, can truth or reality be grasped. To arrive at truth, man must elevate his mind above the sensory level to the contemplation of absolute, eternal, pre-existing ideas. To do this, he needs training. The best training for this purpose, according to Plato, is mathematics, because of the abstract nature of the subject. Plato was one of the first to suggest that mathematics be studied, not for any practical value it might have, but for the purpose of training the mind. The relationship of mind to body has been a perennial problem in psychology as well as philosophy, and the implications of one's position on this matter are bound to affect all phases of his thinking about education.

Aristotle

Aristotle assigned a much higher role to sensory experience than Plato did. According to Aristotle, sensations are the essential avenues of knowledge since there is nothing in the mind that was not first in the senses. This means that observation of concrete, particular data and reliance on

one's sensory apparatus are indispensable sources of truth. Aristotle believed that man's sensory powers are among the faculties of the soul. The soul—or the *anima* or the *psyche* or the spirit of life—he claims, has the potentiality to function in five ways. In other words, it has five faculties. The vegetative faculty is the capacity of an organism to take nourishment, grow, and reproduce. The appetitive faculty is the capacity to desire the good. The sensory faculty is the capacity to see, hear, touch, taste, and smell. The locomotive faculty is the capacity to move about. The rational faculty is the capacity to reason. It is the last faculty that distinguishes man from the lower forms of animal life. Cultivation of the intellect, therefore, is in the Aristotelian system man's greatest good and the main purpose of education.

Aristotle's concept of the soul was a cornerstone in psychology for centuries. Etymologically, the very word *psychology* means the study of the soul. But words do not have absolute meanings. They are arbitrary, conventional symbols which derive their meanings through usage. Consequently, meanings of words change. *Psychology* is one word whose meaning has changed fundamentally within the last century or so. The vast majority of psychologists today do not mean by psychology the study of the soul. They prefer to define psychology as the study of behavior and believe that human behavior can be explained adequately without recourse to a philosophical concept of a soul.

While psychology and philosophy are distinct disciplines, they are necessarily interrelated insofar as they are both concerned with the study of man and attempt to explain what man is. Historically, Aristotelian philosophy has undergirded psychological thought. From the latter part of the nineteenth century onward, as we shall see, there has been a decided trend toward widening the gulf between philosophy and psychology, limiting the latter to that which can be known about man through empirical evidence alone. More recently a countertrend has been developing in psychology which recognizes that a human person cannot be fully understood by scientific means alone and which calls for a grounding of psychology in some philosophical system. Aristotle's concept of man as a being who is more than simply material has an appeal, therefore, to an emerging group of psychologists who might not accept his ideas of the soul and its faculties but who do share his general view of human nature as having a nonmaterial dimension.

Quintilian

Quintilian, the famous Roman educator of the first century, was not particularly interested in philosophy; in fact, he was inclined to disparage it. Nor was he, in any sense, a systematic educational psychologist. But in his *Institutes of Oratory*, he expresses a number of pedagogical ideas that have a very modern ring to them. For example, he recognizes individual differences among children and urges that these be taken into account in

teaching. He also recognizes the factor of readiness, points out the desirability of small classes, stresses the importance of early childhood training, and recommends moderation in discipline. He discusses the role of play activities in learning, the use of incentives, the social value of formal schooling, and the need for friendly, competent teachers.

Quintilian arrived at his ideas on the basis of his own experience and observation. Down through the ages, through the same means, other great teachers have similarly arrived at enlightened views about the learner and the learning process. But such great teachers as Quintilian were the exceptions rather than the rule. For the most part, his theories remained theories. While they may have been accepted as such, they were not widely implemented until they came to be established on the firm foundation of sound psychological principle.

Vives and Comenius

Something remotely resembling educational psychology as we know it today began with the work of Juan Luis Vives and John Amos Comenius. Vives lived in the early sixteenth century, and Comenius about a century later. Although they differ in some respects, they both represent early attempts to place education on a psychological footing. Vives is regarded by some educational historians as the founder of educational psychology and the first modern theorist about teaching. He was, at any rate, among the first to recommend the use of experimentation, induction, and something approaching scientific observation in dealing with educational problems. Vives found much to criticize in the schools of his day. To mention just a few of his ideas for improving them, he recognized the importance of the school plant and its location; he argued for adequate teachers' salaries, teachers' meetings, and a kind of teachers' certification; he stressed the value of physical education, student planning, and student government; he recommended organization of the curriculum to fit differing intellectual capacities; and he advocated the education of women, which had been all but entirely neglected in preceding centuries.

Comenius, a bishop in the Moravian Church, attempted to devise a standardized method of teaching based on nature, whereby all children could be taught all knowledge efficiently and economically. Much concerned with order in learning, he stressed the importance of adapting instruction to the needs of the learners, maintaining their interest, showing them how the material to be learned was related to life, making learning easy and pleasant as well as thorough, and correlating the various subjects. Aware of the role of sensation in learning, he made memorable pioneering efforts in the preparation of illustrated textbooks. Believing that a teacher is at his best when instructing a large class, and devoted as he was to visual aids, Comenius would probably be among the foremost proponents of educational television if he were alive today.