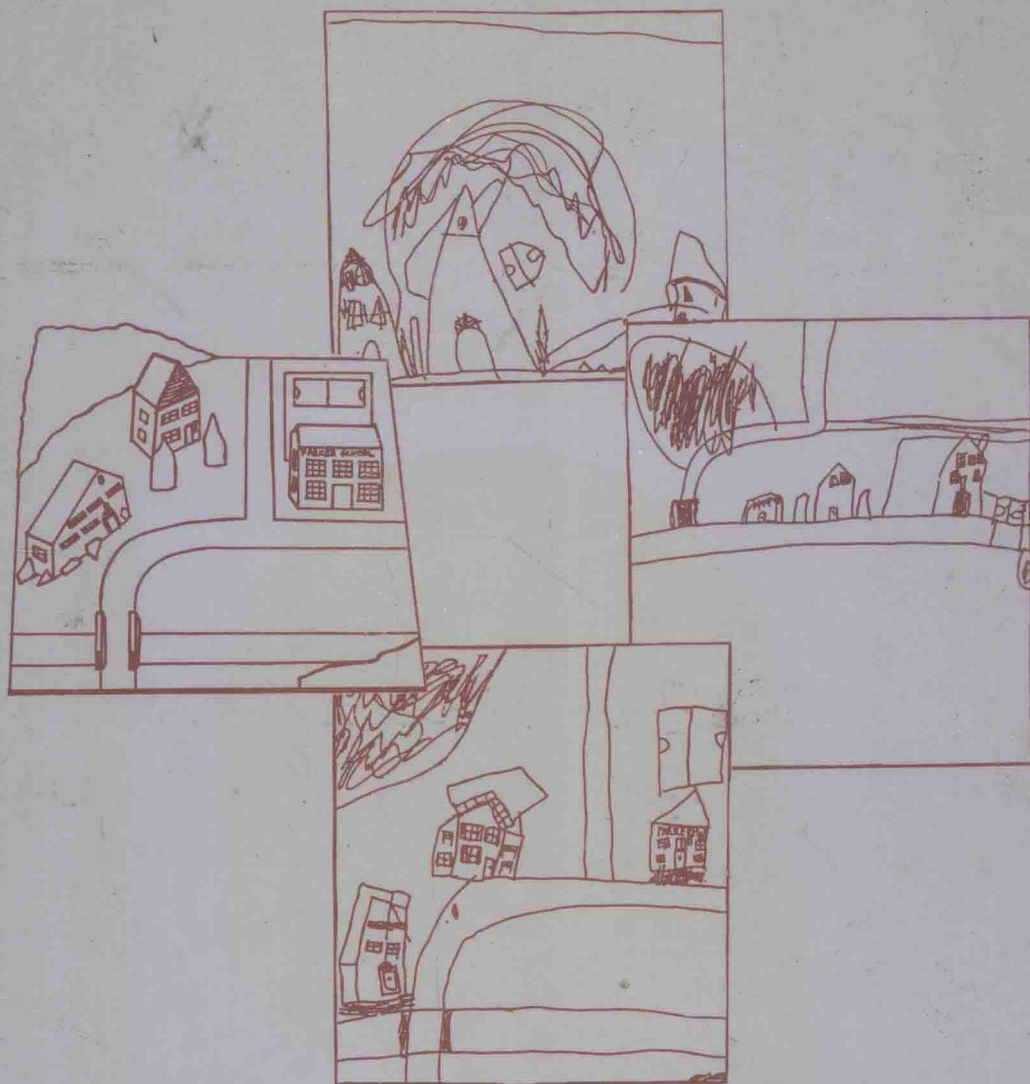


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Psychological Bases for Early Education

Edited by A.D. Pellegrini

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Edited by

A. D. Pellegrini

The University of Georgia

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Foreword

The arms of my University carry the motto *Rerum Cognoscere Causas* from Virgil's *Georgics*, which translates into English as 'to discover the causes of things'. Initially the reference was to connections between basic scientific knowledge and the applied sciences of engineering and medicine but the principle applies equally to the social and human sciences and their links with practical affairs. If we are to improve and reshape our world we need knowledge and the understanding and power which knowledge affords. The education of the young, formal and informal, is fundamental to the continued existence and development of a society and its culture.

The way in which we set about educating the young is based upon our implicit theory of growth and development and on changing presuppositions about the perfectability of mankind. And these are set in a world which has changed profoundly and dramatically over the last 50 years and where one of the few certainties is that further great changes will come. As J.R. Oppenheimer the distinguished American physicist puts it, 'In an important sense this world of ours is a new world, in which the unit of knowledge, the nature of human communities, the order of society, the order of ideas, the very notions of society and culture have changed and will not return to what they have been in the past.' Such realization emphasizes the importance of knowledge and understanding as a guide for action, and this is nowhere more important than in the education of the young.

Over the last 50 years education as a whole, and more recently early education, has assumed a position of political importance in the developed countries, as it surely will in the less developed countries in due course. This emergence on the political stage is not without controversy and it has served to underline the enormous importance of a soundly based science of education. One element of this science of education is our knowledge and understanding of the growth and development of children and how this fits together with educational practice. As the editor has it in a simple but compelling sentence,

‘After all in order to teach children we should know something about the ways in which they develop and learn.’ The essays contained in this book are a significant step in linking psychological theory and knowledge with important issues in the practice of early education. Dr Pellegrini has recruited colleagues from the United States and Britain each of whom has made a significant contribution to some aspect of research on the development of young children and set them the task of discussing their work in relation to early education. There are many topics in developmental psychology beyond those treated in this book which have relevance to early education but those which Dr Pellegrini has chosen have a timeliness. In some cases the topic has been largely neglected, in others new and interesting ideas have recently emerged or there have been important additions to our knowledge. For the developmental psychologist these essays will surely illustrate the practical significance of their work, and for educators they should certainly dispel any lingering doubts about the value of theory and research in developmental psychology.

KEVIN CONNOLLY

Preface

Most educators and psychologists would agree, in principle at least, that educational practice should be rooted in psychological theory and empirical research. After all, in order to teach children we should know something about the ways in which they develop and learn. This ideal state, however, is not often implemented. Educators often do not see the need for theory or research in their everyday teaching. They often choose strategies and materials that ‘work’, independent of the theoretical implications of the choice. Developmental psychologists, on the other hand, are often not interested in ‘applied’, or educational, questions; the obvious exception, of course, is the field of educational psychology.

This dichotomous situation is particularly obvious in many undergraduate and graduate teacher training programs. Students often take curriculum courses, e.g. in the teaching of reading, without understanding the process by which children learn to produce or comprehend language. It is not difficult to imagine a scenario wherein such course of study could lead to less than adequate educational practice. Educators may not realize that some of their practices may be contradictory, in a theoretical sense, to each other. It has been suggested by Kohlberg (Kohlberg and Mayer, 1972), and others (e.g. Pellegrini, 1987) that the apparent failure of certain educational programs is due to such theoretical and, resulting, practical inconsistencies. For example, many early education programs that are oriented to Piagetian and ‘open-education’ instruct their children in a theoretically consistent way (e.g. encouraging the divergent thinking and physical manipulation of materials). The evaluations of these programs, however, are theoretically inconsistent with the instructional techniques and the curriculum. That is, children are often assessed on language-oriented measures which call for convergent answering strategies. For this, and similar reasons, it is not surprising that many of these educational programs had less than optimal results.

In this volume an attempt is made to integrate the two fields of early

education and developmental psychology. We do not claim that this is the first time that such an effort has been put forth. As noted above, the field of educational psychology is dedicated, in part, to such a marriage. Further, Head Start and Project Follow Through attempted to base their educational programs on state-of-the-art psychological research. In this volume, however, we are dedicated to addressing the needs of young children (birth through approximately 6-years-of-age) and their families.

An underlying theme of this volume is that children should be viewed as beings wherein social, emotional, and cognitive processes are integrated. The authors in this volume repeatedly make the point that cognitive and social processes are interdependent. As psychologists, such an orientation allows us to examine, for example, the ways in which social processes, such as parent-child interaction, mediate children's cognitive development. Further, this orientation also allows us to examine the impact of cognition on children's social interaction processes, e.g. making friends.

From an educator's point of view, such an integrated approach is also useful. The authors in this volume make the point that educators should teach and assess the many dimensions of children's behavior and 'intelligences'. Many authors explicitly outline ways in which we should teach and assess within these different dimensions.

Another theme of this volume is that systematic individual differences exist in children and these differences have both biological and cultural dimensions. Unlike the structural theory of Piaget, which suggested uniform socio-cognitive development, the authors in this volume suggest that socio-cognitive development has many systematic variations. The examination of such 'individual differences' has long been of interest to psychologists. Educators, too, are interested in this phenomenon. After all, we must be aware of such differences if we are to teach successfully and assess validly. Further, it is important for educators to realize that a child could be accelerated in one area but not in other areas.

The third theme of this volume is that children's behavior is embedded in and affected by different levels of context. The work of both Bronfenbrenner (1979), on the ecology of human development, and of Smith and Connolly (1980), on the ecology of the pre-school, have concisely illustrated the ways in which macro- and micro-levels of context affect children's behavior. This theme is certainly consistent with the second theme of the volume, individual differences. Macro-contextual variables, such as culture, have been long recognized as having potent effects on development. As such, the relations between context and behavior are of importance to psychologists. From an educational point of view, we must understand the demands of the contexts from which children come and the demands of the context of school in order to educate all segments of pluralistic societies. The chapters in this volume explicitly address these questions as well as addressing the ways in which we can

optimally design early education learning environments.

The volume is organized into four sections. The first section, containing Chapter 1, outlines the relation between psychological theory and educational practice. In essence this chapter provides a tone for the remainder of the volume: good educational practice should be based on good psychological theory.

In Section 2 (Chapters 2, 3, 4 and 5) authors address the areas of cognition and literacy and early education. As noted in the Introduction to that section, the chapters raise new issues in both cognition and literacy. For example, the notions of different intelligences and different forms of literacy are addressed.

In Section 3 (Chapters 6, 7, and 8) the affective and social dimensions of early education are explored. As noted in the Introduction to that section, the interdependence between social and cognitive processes is stressed.

In the final section (Chapters 9 and 10) educational and developmental processes in context are discussed. The chapters examine the effects of macro-levels of context (e.g. community and school values) and micro-levels of context (e.g. play props and gender composition of groups) on children's behavior in schools.

In conclusion, this volume is intended explicitly to link psychological processes and early education. The discussions presented herein are of value to both basic and applied researchers. Hopefully, this effort will benefit both children and teachers by making schools more pleasant places in which to live and work.

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CHAPTER 1

Psychological Theory and Early Education

JAMES E. JOHNSON

PRELUDE

Since the later part of the nineteenth century we have witnessed the evolution of the complementary relationship between the two sister disciplines of child psychology and early education. From their respective origins as academic disciplines in modern times, the pioneers of each field and their descendants have recognized and nurtured their special ties to each other.

The new science of psychology at the turn of the century in the United States was preoccupied with liberating itself from philosophy and in establishing itself as an independent academic discipline and as a viable economic institution. Identification with the educational establishment was indispensable. Psychological authorities who stand out during this time all affiliated themselves with education: Edward L. Thorndike at Columbia University, John Dewey at the University of Chicago, and G. Stanley Hall at Clark University. (Thorndike began the educational psychology tradition, Dewey was responsible for a participatory or social developmental psychology in relation to education, and Hall ushered in developmental psychology.) The first generations of doctoral graduates in each of these new strains of the infant science of psychology typically found employment in teacher's colleges and departments of education across the country or in joint chairs of psychology and pedagogy. An important trademark which remains to this day (perhaps especially for the cognitive developmental brand of developmental theory which derives from tradition of G. Stanley Hall) is the connecting of developmental theory to empirical

Acknowledgment: I express my deepest gratitude to Frank H. Hooper and Irving Sigel for their extremely useful and open remarks about an earlier draft of this chapter and for their invaluable support in general in my quest to understand psychology and early childhood education. However, neither should be held responsible for the contents of the final version of this chapter, nor assumed to agree with my interpretations.

research on the one hand, and to educational practice on the other hand (Siegel and White, 1982).

Teachers and other professionals concerned with young children at the turn of the century were eager to enrich their practice through exposure to the new science of the study of the child. For example, Hall's first issue of *Pedagogical Seminary*, published in 1891 and devoted to reporting research results from investigations of the child, enjoyed an unexpectedly wide circulation (ARPC, 1891). Educational meetings at the national level during this time were dominated by an interest in what came to be called the Child Study Movement (1892–1911). Soon leading educational reformers were clamoring that child study be made a basic part of the teacher's professional training (Hall, 1894). In short, just as researchers were strongly motivated by the practical implications of their work, professional educators looked to the products of these studies of the child with great anticipation. Thus the special partnership was formed. Their legacy persists.

In this chapter the relationship between psychology theory and early education is discussed. Selected theoretical approaches are seen to relate to specific models of early education with alternative approaches being influenced by various interpretations of classical or contemporary theories of psychological development—applications which derive from cognitive as well as humanistically or behavioristically oriented psychological theories. Societal trends and changes in psychological theorizing are seen as contributing towards developments in early education. Surveying them conveys a sense of the magnitude of the progress achieved in the century-old relationship between psychology and early education. As the role of psychological theory in early education is considered, teaching strategies and materials, evaluation and preparation issues, and types of theorizing in practice, are discussed. However, before addressing these issues some advantage will be served by first casting a wider net. What follows is a review of some selected background material related to the topics at hand.

PSYCHOLOGY, PHILOSOPHY, PEDAGOGY

Strong consensus backed by considerable historical testimony exists in favor of the position that any productive partnership between psychology and early education is not due to any kind of explicit design or straightforward relationship between theory and practice. Indeed, any relationship approaching such an ideal would be viewed skeptically as happenchance at best and as hallucinatory at worst. Such sentiment prevails in recognition of the human frailty factor in the carrying out of even the best formulated plans. Moreover, macro-level 'umbrella forces' impinge upon the system of educational practice. The role of human values and belief systems must be considered as well the role of diverse components that intervene between theoretical rationales and early

education programs (Johnson and Hooper, 1982; Peters, 1977).

These and other misgivings have remained strong. Other concerns have picked up steam, as attested to by the multiplicity of publications produced over the past three decades. Leading scholars have grappled with the prospects and difficulties of integrating psychological theory with early childhood curriculum and instruction. Many of their publications reflect the decades of the 1960s and the 1970s when various enthusiastic efforts were made to revive the importance of developmental theories to education and to society at large. Widely discussed were the implications, issues, and problems of translating developmental theory into early childhood educational practices (DeVries, 1974; Hunt, 1964; Katz, 1974; Kohlberg, 1968; Kohlberg and Mayer, 1972; Murray, 1979; Day & Parker, 1977; Peters, 1977; Peters and Klein, 1981; Shapiro and Biber, 1972; Sigel, 1972).

1960s

It is not surprising that a dramatic upsurge in the number of articles and books devoted to psychological theory and early childhood education appeared first in the 1960s and early '70s. Many prevailing societal trends can be traced back to the days of Camelot, the Great Society, Vietnam and Watergate. The phenomena of the single parent and the dual career family, for example, began in force then and have grown ever more common since—dramatically changing the demand and face of early childhood education. The considerable expansion and diversification of early childhood programming over the past 25 years has brought with it a great increase in print devoted to this topic. These trends have continued unabated throughout the 1970s and into the '80s.

The 1960s brought with them also a new interest in the developing child. Seminal theoretical works in general developmental psychology appearing at this time helped spark and justify the rapid growth of early childhood educational programs. Before this time it was widely held that the environment during early years helped form the child's character and personality. Bloom (1964) and Hunt (1961), among others, emphasized the importance of the environment to the development of intelligence. As a result, intelligence began to be viewed to a greater extent not as a fixed commodity determined by the genes at birth, but as something very malleable and modifiable through alterations of the environment. The dominant research interests in the 1960s soon turned to cognitive and language development, piling in significance the few concrete contributions from psychological research to early education which occurred before this decade, a decade which also ushered in a new variation of early education programming.

An initial purpose of compensatory early childhood educational programs, such as the federally sponsored Project Head Start, was to provide environmental enrichment to young economically disadvantaged children who were

believed to be deprived of intellectual stimulation due to the impoverished nature of their early home environments. For professional educators and psychologists, the primary purpose of compensatory education was to foster individual change in preparation for successful formal schooling. The promotion of institutional change through family support and community action was an idea whose time had not yet come to full fruition. Concern with the young handicapped child with special needs was also growing at this time with programs and research centers coming into existence as a result of initiatives from the Kennedy Administration.

These early educational programs in the 1960s reflected major themes in developmental research and theory construction. Teaching materials and procedures often followed stage descriptions of the child's growth. A theme complementing a preoccupation with developmental stages and the criticality of early enrichment (as a keystone of compensatory education) was the principle of the optimal match. Developmentally relevant stimulation was said to be exposure to environmental events experienced as one notch above one's existing cognitive structure or level in terms of the demand features or difficulty level of the stimulation. The problem of the match for the educator was to find the appropriate mismatch between the child and the environment. Only an optimal discrepancy or a 'just noticeable difference' would be conducive to developmental change. Differences too pronounced would be incomprehensible and frustrating to the child, while differences that were not great enough would be boring or would fail to attract the child's attention. The problem of the match translated readily into the familiar dilemma of teaching children something too fast or too soon against too slow or too late (Duckworth, 1979).

The notion of the early years as a critical or as an optimal period for development, and the problem of the match, were twin concepts much in vogue in the 1960s and splendidly exemplified in the many experiments and demonstrations of infants' or pre-schoolers' prowess (or potential prowess) in diverse areas of perception, language, and cognition. Much of the early education and socialization practices both reflected and influenced this work in theory and research in developmental psychology, a discipline which itself was reeling from the discovery or rediscovery of Piaget. With Piaget, Bruner and others came a surge of interest in representation which formed a basis for a great deal of educational innovation in pre-school programming. The primary beneficiary, compensatory pre-school education, was not only upbeat but was also viewed by many as both a social action program and as field experiment for examining the impact of the environment on cognitive growth. Hunt (1964) commented on the activities of the time: 'Discoveries of effective innovations will contribute also to the general theory of intellectual development and become significant for the rearing and education of all children' (pp. 90-91).

The enthusiasm of the 1960s gave birth to various well-defined approaches to

early education. Many now appear to have been somewhat simple-minded and naive if not ill-conceived. Benefitting from the value of hindsight, of course, three observations can be made. First, early education is not a panacea for society's woes through the 'fixing of the individual before it is too late' remedy. Much has already been written concerning the gross fallacies of the deprivation not difference argument (see Ogbu's chapter in this volume). Moreover, lessons have been driven home since the 1960s concerning just where intervention should be best attempted to break the poverty cycle. School improvement and community action, for example, are now familiar themes.

Second, on the theoretical side, the various model programs of early education founded in the 1960s are no longer popular in so far as they embrace a unitary model of the child as learner. Bruner (1986) recently commented on the past decades' ways of relating different theories to educational practice: 'There is no reason, save ideology and the exercise of political control, to opt for a single model of the learner' (p. 200). Gradually a theoretical pluralism has evolved. It is now common to apply contrasting concepts or interpretative schemes to phenomena of different behavioral domains. In short, banner carriers for the monotheoretically-based programs common in the 1960s are now an endangered species. Although many early education programs may still tend to subordinate secondary theoretical bases to a dominant one, overall there has been a definite movement away from establishing early education programs built on 'single theory' foundations. Moreover, having programs which attribute an inferior status to their clients as a matter of program policy is a thing of the past; there has been a steady rise in our awareness of cultural bias and in our acceptance of cultural differences and rejection of the notion of cultural deficits.

Third, major theoretical constructs of early experience and optimal match have proven vague and general and have raised many unanswered questions (Clarke-Stewart and Fein, 1983). In the context of psychology and early education, for example, how does one define 'experience,' 'early,' and 'match'? Is experience the available stimulation within the program or classroom? The effective stimulation? The perceived stimulation? How does one define each kind of experience? Does enrichment have to be of specified temporal duration? What is the match? How does one know if an effective match has occurred? Confounding factors abound in any definition and description of key experiential components of particular early education programs.

Some enduring and worthwhile general blueprints certainly emerged during the 1960s from the ferment of rich ideas spawned from the decade's revived interest in the development of the young child. However, many ideas were erroneous or have proven incomplete. Many well-intentioned aspirations of the decade have turned out to be less than realistic; still others seem downright paternalistic by today's standards.