DOCUMENT RESUME

ED 221 224   IR 050 003

AUTHOR   Smith, Marshall
TITLE.   Bibliography of Publications, 1982 Supplement.
INSTITUTION   Wisconsin Center for Education Research, Madison.
SPONS AGENCY   National Inst. of Education (ED), Washington, DC.
PUB DATE   Jan 82
CONTRACT   NIE-G-81-0009
NOTE   56p.; For related document, see ED 203 882.

EDRS PRICE   MF01/PC03 Plus Postage.
DESCRIPTORS   Annotated Bibliographies; *Child Development;
                *Cognitive Development; *Cognitive Measurement;
                Concept Teaching; *Educational Research; Elementary
                Secondary Education; *Individualized Instruction;
                Learning; Mathematics Instruction; Mnemonics; Peer
                Teaching; Reading Skills; School Organization
IDENTIFIERS   *Diversity (Student)

ABSTRACT
                This supplementary bibliography of publications
produced in 1981 under the auspices of the Wisconsin Center for
Education Research is intended to inform the educational community of
the latest research and development on the education of individuals
and diverse groups of students in elementary and secondary schools. A
total of 50 technical reports, theoretical papers, working papers,
books, books in preparation, Ph.D. dissertations, and master's theses
are listed and annotated in the bibliography. Publications are
presented in five sections: (1) books summarizing and synthesizing
work in areas related to student diversity; (2) studies of student
diversity in learning and development; (3) studies of skill
development processes in relation to student diversity; (4) studies
of interaction and organization of classroom processes in relation to
student diversity; and (5) studies of student diversity and school
processes. Also included are an author index, a numerical listing of
papers and reports, and information on obtaining publications
included in the bibliography. (ESR)

BIBLIOGRAPHY OF PUBLICATIONS

1982 SUPPLEMENT

Wisconsin Center for Education Research

Marshall Smith

Director

School of Education
The University of Wisconsin
Madison, Wisconsin

January 1982

Wisconsin Center for Education Research
MISSION STATEMENT

The mission of the Wisconsin Center for Education Research
is to understand, and to help educators deal with, diversity
among students. The Center pursues its mission by conducting
and synthesizing research, developing strategies and materials,
and disseminating knowledge bearing upon the education of
individuals and diverse groups of students in elementary and
secondary schools. Specifically, the Center investigates

- diversity as a basic fact of human nature, through
  studies of learning and development

- diversity as a central challenge for educational
  techniques, through studies of classroom
  processes

- diversity as a key issue in relations between
  individuals and institutions, through studies of
  school processes

- diversity as a fundamental question in American
  social thought, through studies of social policy
  related to education

The Wisconsin Center for Education Research is a noninstruc-
tional department of the University of Wisconsin-Madison
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funds from the National Institute of Education.

TABLE OF CONTENTS

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BOOKS

BOOKS

The Wisconsin Center for Education Research has a responsibility to
ensure that the knowledge gained from its research and development
activities is readily available to the education community. For this
reason each major line of inquiry pursued at the Center is designed
to culminate in the publication of a "milestone" document such as a
book, a monograph, or conference proceedings. The following books
summarize and synthesize the work of Center-associated faculty and
other scholars in several areas related to student diversity. Infor-
mation regarding publication dates of books in press or in preparation
may be obtained from the Center Information Office.

Allen, V. L. (Ed.). Children as teachers: Theory and research on
tutoring. New York: Academic Press. 1976. 290 pp. $25.50.

These well-integrated articles discuss current theory and research
on peer tutoring, an increasingly important technique in the
education of children. Eminent scholars from several disciplines
have contributed the original chapters that make up the book.
The secondary themes of cross-age interaction and helping relation-
ships among children are prominent throughout the book. With its
emphasis on the practical educational and psychological aspects of
peer tutoring, Children as Teachers will be of great benefit to
educational psychologists, child psychologists, social psychologists,
educators, learning researchers, school psychologists, curriculum
developers, and to students and workers in special education, social
work, and related disciplines.

The first two sections of the book establish the basic theoretical
and empirical foundations for practical programs discussed in later
sections. A wide range of theoretical perspectives is offered,
including historical background, role theory, ethological and
cross-cultural considerations, and social skills theory. Chapters
in the second section present original research on social class and
ethnic differences in tutoring by young children, teaching by
siblings, nonverbal skills and consequences of tutoring for the
tutor, and the use of a variety of nonprofessionals as helpers.
The third section evaluates a wide range of tutoring programs
currently operating in the schools. Authors of these chapters
draw upon available research and their extensive practical experi-
ence to present the advantages and disadvantages of tutoring
programs, and to discuss the important considerations that should
be taken into account when developing tutoring programs in the
school. Finally, two chapters of the book summarize an extensive
amount of empirical research and practical experience relevant to
tutoring programs in the school.

Carpenter, T. P., Moser, J. M., & Romberg, T. A. (Eds.). Addition and subtraction: A cognitive perspective. Hillsdale, New Jersey: Lawrence Erlbaum Associates. 1982. 245 pp. $24.95.

This volume represents recent theoretical views and research findings of a group of international scholars who are concerned with the early acquisition of addition and subtraction skills by young children. The various chapters are an outgrowth of a series of papers presented at a conference held in November, 1979.

The chapters are organized into several sections: critical analyses of the structure of addition and subtraction problems, the role of counting in solution processes, development of addition and subtraction in other cultures, a technological/information processing analysis of error patterns, and developmental theories related to the acquisition of addition and subtraction skills.

While all the authors have the common aim of discussing the growth and development of the skills and understandings related to addition and subtraction, they individually bring a rich variety of perspectives to this area. The authors from Japan, Israel and the Soviet Union represent different cultural traditions as well as diverse research paradigms. The American contributors bring together the disciplines of psychology, educational psychology and mathematics education, including fields of interest such as information processing, artificial intelligence, early childhood, and classroom teaching and learning.

Dickson, W. P. (Ed.). Children's oral communication skills. New York: Academic Press. 1981. 416 pp. $29.50.

This book, which presents papers from a conference held in October 1978, integrates the research on children's communication skills deriving from two previously separate traditions: experimental research on referential communication skills and sociolinguistic research on children's communicative competence in natural settings. In addition, educational implications of the research and future directions for research and teaching of communication skills are considered.

The research brought together in this volume portrays an optimistic view of children's ability to communicate. Perhaps most exciting is the evidence emerging that children can be taught a number of speaking and listening skills. A second encouraging theme underlying the present volume is that both the referential and sociolinguistic traditions have important contributions to make to our understanding of children's communication. These two traditions

have tended to remain isolated from each other; this book is a step
toward the kind of cross-disciplinary interchange necessary for a
full understanding of communication skills development. The third
major contribution of this volume is to offer broader theoretical
perspectives on children's communication skills. It contains
theoretical papers which reflect the growing importance of cognitive
models of the processes underlying children's communication perfor-
mance.

This book is directed toward researchers in both the referential
and sociolinguistic traditions, educators concerned with the
development of a curriculum for oral communication skills, and
policy makers concerned with the role of communication skills in
the curriculum at the local, state, and national levels.

Harvey, J. G., & Romberg, T. A. (Eds.). Problem-solving studies in
mathematics. Madison: Wisconsin Research and Development Center
for Individualized Schooling. 1980. 287 pp.) $11.00.

This book explores the questions of how to find out what problem-
solving capabilities an individual has and what other intellectual
abilities are related to that capacity. The book reports nine
studies originally done as doctoral dissertations, and briefly
reviews 31 additional studies. The studies look at problem-
solving in elementary, secondary, and college classrooms.

Only the insight approach to problem solving is considered in the
book. That approach involves transforming the information given in
a problem by analysis, synthesis, recombination, or other technique.
The editors contrast insight with trial and error, another common
problem-solving approach.

One aspect of insight emphasized in the book is the use of heuris-
tics, higher order decision processes that help organize the search
for problem solutions. Diagrams, reasoning backwards, using
analogies, and looking for patterns are examples given by one of
the chapter authors.

Four chapters focus on teaching the use of heuristics for problem
solving and generally conclude that abilities can be improved.
Other chapters discuss how to assess student problem-solving skills,
including heuristics. Concluding chapters examine relationships
between learner characteristics such as gender and visual spatial
abilities and problem solving. The book includes an extensive
bibliography.

Klausmeier, H. J., & Allen, P. S. Cognitive development of children and youth: A longitudinal study. New York: Academic Press. 1978. 336 pp. $19.50.

The authors report the major findings from the first longitudinal study of cognitive development of children and youth, encompassing grades 1-12. This groundbreaking book presents a theory of cognitive learning and development (CLD theory) on which the longitudinal study is based, and describes the application of principles of cognitive learning and development to educational practices.

Psychologists, educators, and other professionals are given access to detailed longitudinal data on four different groups of students—Grades 1-3, 4-6, 7-9, and 10-12. Students' growth throughout the school year in acquiring concepts, understanding principles, understanding structures of knowledge, and problem solving is charted. Normative development is examined along with interindividual and intraindividual differences in the rate and pattern of development.

The authors present a design for instruction which evolved through two decades of research, together with a research-based form of schooling that makes possible effective instructional programming for the individual student. The results of many short-term experiments, the longitudinal study, and the school reform effort are brought together for the first time in this volume.

Klausmeier, H. J., & Associates. Cognitive learning and development: Piagetian and information-processing perspectives. Cambridge, Mass.: Ballinger Publishing Co. 1979. 384 pp. $25.00.

This book presents the results of a 4-year study of children's conceptual development from two perspectives: Klausmeier's conceptual learning and development (CLD) theory, which focuses on development during the school years, and Piaget's more comprehensive theory of cognitive development. The book makes significant progress in clarifying the relationships between the two theories and contributes substantially to extending knowledge of the course and nature of students' cognitive development. The material is addressed to the scholarly community in educational psychology, and education. It can also be used advantageously in graduate courses in cognitive development or learning.

Klausmeier, H. J., Rossmiller, R. A., & Saily, M. (Eds.). *Individually guided elementary education: Concepts and practices.* New York: Academic Press. 1977. 394 pp. $19.50.

Many elementary and middle schools across the country have adopted Individually Guided Education (IGE) in the last decade. Research and evaluation studies show that the teachers' own morale and the students' educational achievements are higher, and that the students' self-concept and attitudes toward learning are improved. This complete system for adapting instruction to meet the needs of individual children is a much-needed alternative to the age-graded, self-contained elementary school classroom, the departmentalized elementary school, and the unstructured, open classroom.

With *Individually Guided Elementary Education: Concepts and Practices*, students, teachers, and administrators now have an authoritative and comprehensive overview of this system. It is written by 16 scholars, most of whom worked with the Wisconsin Research and Development Center for Cognitive Learning, local schools, state education agencies, and teacher-education institutions in developing and refining IGE. It is ideal both for a basic text in a credit course or noncredit staff development program dealing with IGE, and also for a second text in courses and program dealing with elementary and middle school education.

This book covers in detail the components of IGE, and also provides an overview and history of IGE. In addition, it defines objectives for starting IGE schools and establishing IGE as a focus for educational renewal, and guides readers to additional material with descriptions of a wide variety of print and audio-visual materials keyed to the chapters.

This book provides useful, how-to-do-it information for current and prospective teachers and administrators wishing to learn about IGE or adopt it for use in their schools. It will prove equally useful to the staffs of existing IGE schools in refining their practices. In addition to its value as a primary text for credit courses and noncredit staff development programs in IGE, it can serve as a second or supplementary text for courses and programs in particular aspects of individualization, such as individualized reading, mathematics, science, or social studies, and in courses on alternatives in education. Students, researchers, and teachers interested in curriculum and instruction, administration, or educational psychology at the elementary level will find the book's new perspectives and coverage invaluable for dealing with the reform and renewal of American education.

Klausmeier, H. J., & Sipple, T. S. Learning and teaching concepts: A
strategy for testing applications of theory. New York: Academic
Press. 1980. 228 pp. $22.50.

This book has three major themes. First, the authors report the
results of 13 controlled experiments carried out over a 3-year
period. These results markedly extend our knowledge about learning
and teaching abstract process concepts (such as observing, inferring,
predicting, and classifying) during the intermediate school years.
Second, applications of Klausmeier's theory of cognitive learning
and development and of his model of instructional programming for
the individual student were tested and demonstrated; the book pre-
sents empirical verification of applications of both theories. The
third substantive area of the book involves the research paradigm
which had several noteworthy features. Each of the 13 experiments
was carried out simultaneously, the cumulative effects of the
experiments on both the experimental and comparison groups of
students were measured, and the participating teachers carried out
the experimental treatments as part of their regular instruction of
the students.

An important feature of this project is developing and then
empirically testing the effectiveness of instructional strategies
and materials based on theory. This approach avoids the limitations
of short-term experimentation that is unrelated either to theory or
to instructional practice. It also eliminates the pitfalls of
attempting to spell out applications of theory without conducting
research on the applications. Thus, the book is of interest to
practitioners as well as to researchers.

Levin, J. R., & Allen, V. L. (Eds.). Cognitive learning in children:
Theories and strategies. New York: Academic Press. 1976.
314 pp. $32.00.

This book approaches children's learning in the classroom setting
through a series of research projects carried out over a period
of ten years by investigators at the Wisconsin Research and
Development Center for Cognitive Learning. The research reported
in the book stresses an orderly progression from basic to applied
research in education and offers a balance of theoretical and
practical information on learning and development in children.
The chapters dealing with basic cognitive processes in children
include discussions of research projects on concept development,
memory processes, visual imagery, intellectual abilities, and
metaphor. Strategies for improving classroom instruction in
schools are dealt with through more applied research on preread-
ing skills, creativity training, cross-age tutoring, and the
teaching of concepts.

Lipham, J. M., & Daresh, J. C. (Eds.). Administrative and staff relationships in education: Research and practice in IGE schools. Madison: Wisconsin Research and Development Center for Individualized Schooling. 1979. 141 pp. $6.50.

This book synthesizes 20 studies, conducted between 1972 and 1978, that analyzed staff and administrative relationships in IGE schools. The book includes a brief description of IGE and its development, and major chapters on the adoption of IGE as an educational change, school organizational structure, educational leadership, and decision making. Both theoretical and practical applications of the research are discussed in detail, and areas for further research are indicated. Each study is abstracted in the appendix.

Many of the findings reported in the book have implications for educational practice. For instance, no innovation of any significance can occur in the school without the understanding and support of the principal and the active involvement of the staff. Strong linkage between teacher education institutions and local schools was also found to be an effective means for sustaining educational change. Also, principals and unit leaders must provide support, give direction, and encourage staff participation if the instructional program is to be effective. Different leadership behaviors are required during different stages of the implementation process. In addition, opportunities must be provided for the staff to participate appropriately in the decision-making process at both school-wide and instructional levels.

Massaro, D. W., Taylor, G. A., Venezky, R. L., Jastrzembski, J. E., & Lucas, P. A. Letter and word perception: Orthographic structure and visual processing in reading. New York: Elsevier-North Holland Publishing Co. 1980. 278 pp. $30.00.

This book evaluates how the reader's higher-order knowledge about orthographic structure interacts with featural information during the processing of letters and words. The research was carried out utilizing a general information processing model, which provided a formal framework from which hypotheses could be derived and tested. Since the study of visual processing in reading requires an examination of the visual features that are functional during reading, the authors describe those features used in the recognition of lowercase letters. In discussing the fundamental properties of the orthographic structure of English, they distinguish two broad categories of descriptions. The first is derived from statistical-redundance measures based on the frequency with which letter, letter sequences, and words occur in natural texts. The second category, rule-governed regularity, is based on phonological constraints of English and scribal conventions governing the spelling of English.

The psychological reality of various descriptions of orthographic structure in perceptual recognition tasks and overt judgment tasks are examined. The recognition tasks assess the degree to which knowledge of orthographic structure is utilized in word perception, and the overt judgment tasks assess the degree to which this knowledge is consiously available.

The book offers conclusions and implications for future research, and classroom practice. For example, additional experiments might help researchers to choose between rule-governed regularity and statistical redundance. This research promises to lead to the description that best reflects the knowledge of orthographic structure used in the course of normal reading.

Arriving at a good description of orthographic structure should be beneficial in the development of reading instruction. Given that the utilization of orthographic structure is an important component in letter and word recognition, instructional materials should be designed to facilitate children's understanding of this structure. Current phonics programs address only the correspondences between spelling and sound, not the constraints in English orthography. Delineating the best description of orthographic structure might facilitate the teaching and learning of this structure.

Popkewitz, T. S., & Tabachnick, B. R. (Eds.). The study of schooling: Field based methodologies in educational research and evaluation. New York: Praeger Special Studies. 1981. 316 pp. $26.50

The use of field studies in educational research and evaluation presents unique dilemmas, issues, and questions for researchers to consider. Among these are the implications of findings to educational knowledge and policy-making, methodological concerns about validity and instrumentation, and ethical and political questions related to access to school contexts and to control of research data.

This book responds to issues raised by the recent interest in educational field studies. It includes essays by an international group of scholars. Rather than making a surface distinction between qualitative and quantitative research, the authors explore the scientific roots of educational inquiry as they relate to the ethical, political, and social underpinnings of research.

The book consists of three major parts. The first part, entitled "Social Theory and the Study of Schooling," includes essays that explore field studies not as a set of operations, but as a set of ideas and historical traditions. Methodology is thought of as having broad dimensions that are closely related to theories of social affairs. Various essays in this section draw upon Marxist, phenomenological, and sociology-of-knowledge perspectives to consider what are significant questions for research.

The second part is entitled "Creating Knowledge About Schooling."
The essays in this section examine issues related to developing
valid descriptions and to generalizing from intensive analyses of
school contexts. As in the previous section, different intellec-
tual traditions are expressed to give shape to the problem.

The third part is entitled "Practical Problems of Getting into the
Field." These essays discuss political and ethical problems of
preparing researchers and carrying out field studies.

In short, each article is a complete statement of a response to a
problem rather than an excerpt from a longer paper. Each paper is
written by active practitioners in educational research. The dis-
cussion of theory as it relates to practice is useful in beginning
a course in field study methods.

Popkewitz, T. S., Tabachnick, B. R., & Wehlage, G. G. The myth
of educational reform: A study of school responses to a pro-
gram of change. Madison: University of Wisconsin Press.
1982. 288 pp. $27.00.

This book is about the relation of institutional qualities of
schooling and educational reform. The problem emerges out of an
indepth study of six elementary schools which have adopted a par-
ticular reform program, Individually Guided Education. Within this
common framework, the study identifies three distinctly different
patterns of schooling. These are labeled technical, constructive,
and illusory. Each of these institutional patterns contains par-
ticular conceptions of school knowledge, patterns of teacher and
pupil work, and professional ideologies. Drawing upon the sociology
of knowledge, these patterns of schooling are examined and the imp-
lications discussed for how educational reform is conceptualized,
implemented, and evaluated.

The book is divided into three parts. Part One provides the con-
ceptual background to the study: the problems of studying the
"effects" of reform within an institutional context and the
assumptions about schooling, learning, and social change that
shaped the development of this effort at reform. Part Two explores
the findings of the investigation: Technical, constructive, and
illusory schooling are discussed considering certain constitutive
characteristics of the schools studied. Part Three refocuses the
discussion of the different institutional configurations in relation
to the ways in which educational reform is conceptualized, imple-
mented, and researched.

This study of Individually Guided Education, reform, and institu-
tional life is not a conventional evaluation. The authors do not
establish criteria which are explicitly used to measure some out-
come, such as achievement, nor do they describe the extent to

which Individually Guided Education is successfully implemented.
The intent is to make problematic the categories and procedures
of Individually Guided Education by describing the implicit as
well as explicit learning which occurs when students, administra-
tors, and teachers respond to the strains of an educational reform.

Rossmiller, R. A., Geske, T. G., Frohreich, L. E., Doro, M., &
Johnson, H. W. Research utilization and productivity in IGE
schools. Madison: Wisconsin Research and Development Center
for Individualized Schooling. 1979. 60 pp. $6.50.

This monograph summarizes the results of studies of cost, resource
utilization, and productivity in elementary schools using the
system of Individually Guided Education (IGE). Data for the
studies were obtained from a random sample of 41 IGE schools and
15 matched pairs of IGE and non-IGE schools.

Instructional expenditures in IGE schools did not differ signifi-
cantly from those in non-IGE schools. However, teachers in IGE
schools spent their time differently than did their counterparts
in non-IGE schools. IGE teachers devoted significantly more time
to one-to-one instruction, particulary in reading and mathematics,
and significantly less time to large group intruction.

A production function approach was used to identify the input and
process variables that were most closely related to student
achievement in reading and mathematics and to student self-concept.
Several variables were found to be related consistently to student
achievement in reading and mathematics. Among them were (a)
teachers' involvement in a degree program, (b) years of teaching
experience, (c) teachers' sex, (d) students' maturity, (e) stu-
dents' social confidence, (f) teachers' perception of the
principal's leadership, (g) teachers' expression of job satisfac-
tion, and (h) teachers' involvement in decision making.

A set of 12 independent variables accounted for 78% of the vari-
ance in reading achievement and a similar set of 12 variables
accounted for 71% of the variance in mathematics achievement. All
of the variables included in the two composite sets were suscept-
ible to control by teachers and administrators. One subscale of
the Self-observation Scales, social confidence, served as a proxy
for student self-concept. A set of 12 variables similar to those
employed in the analyses of reading and mathematics achievement
accounted for 72% of the variance in social confidence scores.
The independent variables most closely related to social confi-
dence tended to reflect the ambience of the school rather than
specific aspects of the instructional process.

BOOKS IN PREPARATION,

Otto, W., & White, S. (Eds.). Reading expository material. New York:
    Academic Press. In press.

This book results from a conference held November 1980 that con-
sidered recent research in the teaching of and learning from
reading and the relevance of the research for classroom practice.
The conference was structured around three major categories of
interest, the reader, the text, and the interaction of the two.

Research in the first category focuses on the prior knowledge and
knowledge structures of readers. Some investigators have paid
particular attention to readers' cognitive development and to
readers' prior knowledge, or schema, development in order to
better understand the personal characteristics involved in effec-
tive comprehension.

Research in the second category focuses on the attributes of
printed material. A number of investigators have worked with
the analysis of text and the modification of text (e.g., adjunct
aids) to better understand the characteristics of text and textual
modifications as parameters of comprehension.

Research in the third area focuses on the interaction between
readers and printed material. Investigators have examined
readers' metacognitive development, the development of study
skills and learning strategies, and the effects of schooling as
they come to grips with the inescapable fact that reading compre-
hension is a product of both reader and text.

Through the conference's synthesis papers, reaction papers, and
invited essays, the book brings together these research areas,
integrating the reservoir of facts, implications, and directions
for developing instructional procedures designed to enhance
learning from text.

Wilkinson, A. C. (Ed.). Classroom computers and cognitive science.
    In production.

This book resulted from a November 1981 conference which brought
together experts to evaluate current and potential uses of com-
puters as instructional tools in formal classroom settings and in
formal education. The conference theme was instructional soft-
ware for promoting children's mastery of lexical skills and seman-
tic knowledge.

Major sections in the book include: Writing and Communicating,
Cognitive Skills in Reading, Reasoning with Semantic Knowledge,
and Will It Work? Practical Issues of Teaching with Computers.
Contributors include Marianne Amarel from Educational Testing
Service, Richard Venezky from the University of Delaware, Joyce
Haakansson from the Children's Television Workshop, Lawrence
Frase from Bell Labs, and Robert Sternberg, Janet Powell, and
Daniel Kaye from Yale.

Wilkinson, L. C. (Ed.). Communicating in the classroom. New York:
Academic Press. In press.

The impetus for this volume was a conference held October 1980
to integrate and evaluate the major theories, methods, and
issues associated with research in communicating in the class-
room and to explore educational implications of this work.

Several topics are addressed, including the following:

1. Communicative competence, which involves both the formal
and functional aspects of language development and learning
the rules that relate language use to social situations.
Basic knowledge about school-age children's pragmatic develop-
ment is reviewed as well as individual differences in the com-
municative competence of school-age children.

2. The classroom as an educational and instructional context.
Classroom activities require communication both as a means
toward achieving educational objectives and as an end in it-
self, that is, the learning of formal and functional language
rules. Studies of the classroom as a context are discussed,
and a variety of descriptive techniques, such as ethnography,
are considered.

3. Theories and approaches that researchers have used to study
communicating in the classroom. Researchers from a variety of
disciplines have focused upon discourse in the classroom.

4. Methods to investigate communicating in the classroom.
Several types of observational and experimental approaches are
discussed. Research consists of both qualitative and quantita-
tive analysis. Representation of the underlying assumptions
and methods of analysis is included.

5. Individual and group variation in communicating in the
classroom, including individual differences, bilingualism,
and dialect differences.

Yussen, S. R. (Ed.). The development of reflection. New York: Academic Press. In Press.

This book results from a conference held in October 1979 to explore recent developments in two interrelated fields of inquiry, metacognitive development and interpersonal attribution. Metacognition is concerned with the knowledge or beliefs held by individuals about the nature of some cognitive activity, e.g., remembering or comprehending. Interpersonal attribution concerns the beliefs held by individuals about what other people are like and what causes others to act the way they do.

The process of acquiring insights into one's own cognition is a logical part of acquiring understanding into the nature of what people are like in general. Thus, metacognitive awareness and interpersonal attribution appear to be closely linked.

The book consists of 10 chapters by the conference participants and brief introductory and concluding chapters by the editor. It defines the state of our knowledge about metacognitive growth and interpersonal attribution, speculates on the "link" between these two domains, and suggests consequences from this research for the practice of education. The book is expected to appeal to scholars in psychology, human development, and social psychology.

STUDENT DIVERSITY IN LEARNING AND DEVELOPMENT

Peter A. Schreiber
Coordinator

CHILDREN'S COMPREHENSION OF SYNTACTIC STRUCTURE

Faculty Associates:

W. Charles Read, Departments of English and Linguistics

Peter A. Schreiber, Departments of English and Linguistics

This investigation concerns the relative speed with which listeners comprehend (and answer) subject and object questions in English, German, and Dutch. The primary data are the times required to answer pairs of questions like

> Who is chasing the boy?
> Who is the boy chasing?

and their counterparts in Dutch and German. In the three languages, the corresponding questions express the same semantic content, but in three different syntactic forms. The subject/object functions are signalled by word order in English, morphology in German, and only by context in Dutch. Noting which of the two forms is responded to more rapidly in each language gives insight into the roles that these three kinds of cues play in the comprehension process.

Subject questions are answered faster in Dutch and German, object questions are answered faster in English. This outcome favors the view that comprehension is a highly interactive process which draws upon multiple kinds of cues, but we also note an ambiguity in the English results, and consequently a need for further investigation.

AFRO-AMERICAN COGNITIVE STYLE

Faculty Associate:

Barbara J. Shade, Department of Afro-American Studies

Shade, B. J. Afro-American cognitive style: A variable in school success? Theoretical Paper No. 94. 60 pp. October 1981.

During the 1970s increased study was directed to factors which contribute to individual differences in academic performance, particularly sex roles, social class, developmental changes, and race. "Race," until recently was defined by color, but current thinking redefines the concept as ethnicity with a culturally induced lifestyle and perspective. Proponents of this approach suggest that diversity in task and academic competence is precipitated by differences in culturally induced psychological, cognitive, and behavioral strategies rather than ability differences. This theoretical review examines this idea in terms of Afro-Americans.

METACOGNITIVE ASPECTS OF

PROSE COMPREHENSION

Faculty Associate:

Steven R. Yussen, Department of Educational Psychology

Buss, R. R., Yussen, S. R., Mathews, S. R. II, Miller, G. E., & Rembold, K. L. Development of children's use of a story schema to retrieve information. Working Paper No. 308. 29 pp. April 1981.

Two experiments examined the individual's ability to retrieve information from simple stories. In Experiment 1, second-grade, sixth-grade, and college subjects heard normal or scrambled stories and either recalled them exactly as heard or recalled them as good stories. Scrambled stories generally depressed recall and there was a clear improvement with age/grade in the ability to reorganize a scrambled story, with second graders performing especially poorly. In Experiment 2, we examined two alternatives for second graders' poor performance. First, it may be that younger children's memory for material they have just heard is "fragile" and any attempt to operate on it or transform it is doomed because the effort involved detracts from the effort to hold on to the memory itself. A second alternative is that the sequencing techniques needed to reorder a scrambled story are not well mastered in young children. Results confirmed that second graders can reorganize their recall only if some training in sequencing is offered.

Mathews, S. R. II. Age related effects of the interaction of prior knowledge and text structure on the recall of prose. Technical Report No. 569. (Ph.D. dissertation) 113 pp. April 1981. ED 201 977.

The structure of a text and prior knowledge about its contents have both been shown to impact on comprehension. The present study assessed the effects of those variables on comprehension and recall of text by fourth- and eighth-grade subjects. It was hypothesized that prior knowledge would have more of an impact on the fourth graders' performance than on that of the eighth graders. That impact would be manifested in recall of prior-knowledge-related information regardless of its location in the text structure. To assess this effect, each grade was divided into three groups: a prior knowledge group, an unrelated knowledge group, and a no knowledge control group.

A prediction of differential recall by the prior knowledge group and the unrelated group was supported at the fourth grade. This is consistent with a text structure hypothesis. At the eighth grade, no consistent differences in performance among the groups were detected.

The accessibility (free recall) and availability (probe questions) of information by the fourth graders are both affected by prior knowledge. These effects are not present with the eighth graders, and this difference is consistent with the suggestion that children become more text bound in their comprehension as they move through the school years.

Stevens, B. Children's awareness of story order. Technical Report No. 577. (Master's Thesis) 68 pp. June 1981.

The purpose of this study was to determine the role of story grammars in children's ability to detect misplaced information in simple narratives. The results indicated that children judged correctly ordered stories to be "well-formed" and "sensible," but frequently identified disordered stories to be "flawed." Developmental differences were found in children's abilities to utilize expectations for the sequence of a story in determining when the story made sense and in correctly reordering the story.

STUDENT DIVERSITY AND CLASSROOM PROCESSES:

SKILL DEVELOPMENT

Joel R. Levin
Coordinator

VOCABULARY INSTRUCTION WITH CULTURALLY

DIVERSE CHILDREN

Faculty Associate:

Dale D. Johnson, Department of Curriculum and Instruction

Johnson, D. D., Toms-Bronowski, S., & Pittelman, S. D. A review
of the trends in vocabulary research and the effects of prior
knowledge on instructional strategies for vocabulary acquisition.
Theoretical Paper No. 95. 60 pp. November 1981.

This paper presents an historical overview of trends in vocabu-
lary research, emphasizing the importance of word knowledge as
a critical component in reading comprehension. Research examin-
ing current psychological and pedagogical models as they relate
to vocabulary knowledge is described. Vocabulary research in
the area of specific teaching strategies is explored as it has
grown out of former vocabulary research findings; several
teaching strategies that reflect an information-processing orien-
tation are presented. Semantic mapping and semantic feature
analysis procedures are described and exemplified, as are other
more conventional vocabulary instructional strategies.

26

PICTORIAL LEARNING AIDS FOR THE

CLASSROOM

Faculty Associate:

Joel R. Levin, Department of Educational Psychology

Levin, J. R. Pictures as prose-learning devices. Theoretical Paper
No. 93. 67 pp. October 1981.

Popular strategies for improving prose processing consist of
procedures that force attention either to the text's macro-
structure or to the organization and interconnections of the
text's propositions. These strategies are assumed to enhance
students' comprehension of the text as encoded, as well as to
afford students with an efficient storage and retrieval scheme
for long-term recall of text information. However, with exposi-
tory or instructional texts containing factual information that
is unfamiliar, complex, abstract, or simply difficult to remember,
comprehension strategies of the kind just described may not be
optimally suited for enhancing long-term recall. Rather,
mnemonic strategies that are designed expressly for storage and
retrieval of difficult-to-remember information would seem to be
preferable. Several recent experiments are reported to provide
preliminary support for this view. It is proposed that prose-
learning strategies that combine the critical components of
comprehension-directed techniques with those of memory-directed
techniques will ultimately prove to be the most successful.

Levin, J. R., & Pressley, M. Understanding mnemonic imagery effects:
A dozen "obvious" outcomes. Theoretical Paper No. 91. 28 pp.
January 1981.

Using a recently devised imagery mnemonic as a vehicle, the
authors argue that even the most well-reasoned and explainable
psychological outcomes need to be validated empirically. Twelve
examples are provided in which an eminently reasonable cognitive
outcome was anticipated and yet, under experimental scrutiny,
some other equally reasonable cognitive outcome materialized.
Empirical validation behavior should be a foremost concern among
those who offer prescriptions for the improvement of educational
products and processes.

28

Levin, J. R., Kessler, J., Miller, G. E., & Bartell, N. P. More on how (and how not) to remember the states and their capitals. Working Paper No. 306. 30 pp. March 1981.

An empirically developed set of mnemonic materials for learning the states and their capitals was compared with a set of commercially available materials in two experiments with elementary school children. The empirically developed materials, which were considerably less complex than the commercially available ones, also proved to be more effective in both experiments. Students receiving the commercially available materials learned no better than students left to their own devices. Concrete suggestions are offered concerning how to maximize children's chances for success with mnemonic curriculum materials.

Levin, J. R., McCormick, C. B., & Dretzke, B. J. Investigation of a combined mnemonic strategy for teaching the order of U.S. presidents. Working Paper No. 307. 23 pp. March 1981.

Eighth-grade students were taught the names and numbers of a set of U.S. presidents according to a specially devised strategy. The strategy represented a combination of three pictorial mnemonic techniques: the method of loci, the pegword method, and the keyword method. Students taught according to the combined mnemonic strategy outperformed time-equivalent controls, whether provided with a well-ordered set of presidents during input (i.e., presidents presented in their proper serial order) or a more complicated set (i.e., presidents presented in alphabetical order). Additional mnemonic possibilities for research and practice are discussed.

Levin, J. R., McCormick, C. B., Miller, G. E., Kessler, J., & Pressley, M. Mnemonic versus nonmnemonic vocabulary-learning strategies for children. Working Paper No. 305. 34 pp. February 1981.

Fourth-grade students learned a list of relatively complex English vocabulary words in two experiments. In Experiment 1, pupils used either a mnemonic ("keyword") contextual or a verbal contextual procedure. In Experiment 2, three other conditions were compared to the keyword context condition. They included a non-strategy control condition and two other contextual variations: (a) an experiential context condition that had been used previously; and (b) a nonkeyword pictorial context condition. In both experiments, the keyword method proved effective for enhancing children's acquisition of new vocabulary words. Moreover, in the second experiment, neither of the two nonkeyword contextual variations improved students' performance.

Levin, J. R., Shriberg, L. K., & Berry, J. K. A concrete strategy for
remembering abstract prose. Working Paper No. 314. 33 pp.
December 1981.

In four experiments, eighth-grade students were presented short
prose passages that described the distinguishing attributes of
fictitious towns. Illustrations were devised to represent the
designated attributes, either separately, thematically, or the-
matically in conjunction with the mnemonic keyword method. Key-
word illustrations proved to be highly effective facilitators of
students' memory for and organization of the critical passage in-
formation. This was true with respect to both students' ability
to match the towns and their attributes and their ability to re-
call either the corresponding verbatim or essential attribute in-
formation. Implications of the findings and suggestions for
future research are included.

McCormick, C. B. The effect of mnemonic strategy variations on students'
recall of potentially confusable prose passages. Technical Report
No. 582. (Ph.D. dissertation) 158 pp. September 1981.

Two hundred and twenty eighth-grade students were presented biog-
raphies of fictitious people, which were constructed to be poten-
tially confusable. Some students were instructed to use a prose-
learning adaptation of the mnemonic keyword method to aid them in
remembering the information in the passages. Each keyword student
was provided instruction in one of three variations of the keyword
method, differing in terms of the organization of mnemonic images
produced by the imagery instructions. Control students were in-
structed to use their own best method to help them remember the
information. All three variations of the keyword instruction re-
sulted in significantly higher levels of recall (as measured by
a short-answer test) compared to the control students. This re-
sult occurred for two different test question orders, random and
ordered. Furthermore, keyword students could also be distinguished
from the controls, as well as from one another, on the basis of
qualitative differences in their recall patterns.

Pressley, M., Levin, J. R., & Delaney, H. D. The mnemonic keyword method.
Theoretical Paper No. 92. 68 pp. February 1981.

The keyword method is a two-stage procedure for remembering materials
that have an associative component. In the case of foreign vocabu-
lary learning, for example, the learner must first acquire a stable
association between the unfamiliar foreign word and a familiar
English word that sounds like a salient part of the foreign word.
The acoustically similar English word is the "keyword." The

learner then encodes a meaningful interaction between the keyword
and the foreign word's definition. The method has been investi-
gated most extensively with respect to recall of definitions from
vocabulary words. However, other aspects of vocabulary learning
are also considered here, as are potential classroom applications
of the keyword method based on a variety of curricular content.
Future research directions are emphasized throughout the discus-
sion.

Pressley, M., Levin, J. R., Kuiper, N. A., Bryant, S. L., & Michener, S.
Mnemonic versus nonmnemonic vocabulary-learning strategies:. Put-
ting "depth" to rest. Working Paper No. 312. 44 pp. August 1981.

The keyword method of vocabulary learning was compared with five
methods designed to increase semantic processing of the defini-
tions of the vocabulary words. In Exps. 1-3, recall of the defi-
nitions from the vocabulary words was the critical dependent
measure, with the keyword method producing greater learning
than in any of the semantic-based or control conditions. Also,
none of the semantic-based conditions facilitated definition re-
call, relative to a no-strategy control condition. In Exps. 4
and 5, the keyword method, two semantic strategies, and the no-
strategy control procedure were compared with respect to associative-
and response-learning components of vocabulary learning. The key-
word method enhanced vocabulary/definition (associative) learning,
but not definition (response) learning per se. In contrast, the
semantic conditions tended to increase nonassociative learning
of the definitions. These results bolster the case that the key-
word method is a vocabulary-learning procedure superior to semantic-
based strategies of the kind advocated by reading theorists.

Truman, D. L. The effects of pictorial aids on inferentially-produced
interference in younger and older children's sentence learning.
Technical Report No. 573. (Ph.D. dissertation) 160 pp. March
1981. ED 201 976.

The object of this study was to explore the effects of pictures
on inferentially-produced interference in recognition memory
for sentence information in two age groups, seven-year-olds
and eleven-year-olds. There were 104 subjects at each age level.

The design consisted of two levels each of age (younger or older),
strategy (no-strategy control or provided pictures), contextual
relatedness of distractors and test question (related or unrelated),
and item type (explicit or implicit). It was predicted that older
children would spontaneously infer and thus would have similar
levels of interference from implicit information and explicit

information, under a control condition. Younger children were
predicted not to infer spontaneously, and therefore their level
of interference would be higher on explicit items compared with
implicit items.'

Pictures displayed all sentence information except what would
later become a multiple-choice distractor. The pictures were
predicted to aid learning of target information for both younger
and older subjects compared to control subjects. It was also
predicted that when pictures were provided, there would be no
difference in interference levels between explicit and implicit
items at either age level.

The major finding was that learning with pictures was signifi-
cantly better than learning without pictures. The results of
comparisons of overall levels of interference indicated no dif-
ferences due to item type (explicit or implicit) at either age
level. There was no primary evidence of interference within
each item type. Possible sources producing no contextual inter-
ference in the control condition may have involved the use of
various covert strategies.

STUDIES RELATED TO OBJECTIVE-BASED

READING INSTRUCTION

Faculty Associate:

Wayne R. Otto, Department of Curriculum and Instruction

Eldridge, R. G., Jr. An ethnographic study of the acquisition and
     application of reading skills in one elementary school classroom.
     Technical Report No. 579. (Ph.D. dissertation) 308 pp. August
     1981.

     This was an ethnographic study intended to describe and examine the
     cultural knowledge, beliefs, ideas, and actions of one teacher and
     26 fourth- and fifth-graders in one classroom regarding the acqui-
     sition of reading comprehension skills during reading instruction
     and the application of those reading skills during social studies
     instruction.

     The information that was obtained offers general direction and
     specific concepts to guide future "full classroom" studies from
     both qualitative and quantitative perspectives. Such studies
     should help (a) to clarify further the classroom inhabitants'
     cultural knowledge, beliefs, ideas, and actions related to read-
     ing and reading instruction, and thereby (b) to develop further
     sound groundwork for seeking and for developing more effective
     practices in classrooms and schools.

Otto, W. R., White, S. R., Richgels, D., Hansen, R., & Morrison, B. S.
     A technique for improving the understanding of expository text:
     Gloss. Theoretical Paper No. 96. 119 pp. November 1981.

     Gloss is a technique that involves the use of marginal notes and
     other intratext notations to direct readers' attention while they
     read. Instead of relying on traditional adjunct aids like ques-
     tions and advance organizers, gloss attempts to direct the
     reader's active attention to places in the text where the applica-
     tion of specific skills and strategies would aid comprehension.
     Gloss notations focus on both the process (skills and strategies)
     of reading content area texts and the content (facts and concepts)
     of texts. Guidelines for writing gloss are given along with
     examples of gloss notations for a variety of texts.

STUDIES IN MATHEMATICS

Faculty Associates:

Thomas A. Romberg, Department of Curriculum and Instruction

Thomas P. Carpenter, Department of Curriculum and Instruction

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. M. Results from first and second individual interviews (February and May 1980) of the second phase of the longitudinal study. Working Paper No. 310. 98 pp. July 1981.

This report presents data from the first and second individual interviews of the second phase of a three-year study on addition and subtraction verbal problem solving. The second phase of the study is concerned with children's performance on verbal addition and subtraction problems which contain two-digit numbers, half of which require regrouping for correct computational solution. Ninety-six second-grade children were individually administered 12 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. M. Results from third and fourth individual interviews (September 1980 and January 1981) of the second phase of the longitudinal study. Working Paper No. 311. 97 pp. July 1981.

This report presents data from the third and fourth individual interviews of the second phase of a three-year study on addition and subtraction verbal problem solving. The second phase of the study is concerned with children's performance on verbal addition and subtraction problems which contain two-digit numbers, half of which require regrouping for correct computational solution. Ninety-six second-grade children were individually administered 12 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Anick, C. M., Buchanan, A. E., Carpenter, T. P., Moser, J. M., & Steinberg, R. <u>Results from eighth individual interview (January 1981), coordinated study #1.</u> Working Paper No. 313. 107 pp. August 1981.

This report presents data from the eighth individual interview of the subjects participating in a three-year study on addition and subtraction verbal problem solving. Ninety-two third grade children were individually administered 18 verbal problems that could be solved using addition or subtraction. Responses were coded in terms of appropriateness of strategy, correct or incorrect answer, type of error, mode of representation, and solution strategy. For every problem, over 90% of the subjects chose a correct strategy. Group data on the problems as well as information on individual subjects are reported in this paper.

Blum, G. W. <u>Kindergarten and first-grade children's strategies for solving addition and subtraction problems in abstract and verbal problem contexts.</u> Technical Report No. 583. (Ph.D. dissertation) 293 pp. November 1981.

The purpose of this study was to describe and compare children's performance on addition and subtraction problems presented in verbal (word) problem and abstract contexts. Fifty kindergartners and 54 first graders were individually interviewed in mid-year to observe their solution strategies and errors on 12 abstract and 12 verbal addition and subtraction problems.

All problems were based on the open sentences a+b=___, a-b=___, and a+___=c. The verbal problems included action (join) and static (combine) addition, and action (separate and join/change unknown) subtraction problems. Abstract problems paralleled the verbal problems and were presented in written number sentence mode to first-graders and oral mode (e.g., "Two and three are how many?") to kindergartners. All kindergarten subjects and half of the first-grade subjects had manipulatives available throughout the interviews.

Subjects used strategies involving concrete representation (with manipulatives or fingers) less with abstract than verbal problems and guessing occurred more frequently on the abstract problems. At both grade levels and for problems in both contexts, the subjects' strategies mirrored the structure of the problems. The errors exhibited at the two grade levels were similar, but first-grade subjects experienced fewer difficulties in modeling the relationship or action in the problems.

Subjects in each grade were clustered according to the solution strategies they employed and according to the types of problems they could solve. The clusterings indicated that subjects who

were homogeneous in terms of the types of problems they could solve were heterogeneous in terms of the solution strategies they employed.

The study indicates that abstract and verbal addition and sub-traction problems are of equal difficulty for children at the kindergarten and first-grade levels. This suggests that verbal problems are a potential vehicle for initial instruction on the operations of addition and subtraction.

Carpenter, T. P., Moser, J. M., & Hiebert, J. The effect of instruc-tion on first-grade children's solutions of basic addition and subtraction problems. Working Paper No. 304. 37 pp. January 1981.

This study investigated the effect of initial instruction on the processes children use to solve basic addition and subtraction verbal problems and problems presented using concrete objects. Prior to instruction and following a two-month introductory unit on addition and subtraction, 43 first-grade children were individu-ally tested on concrete and verbal problems representing different models of addition and subtraction. Prior to instruction, chil-dren's solution processes for the verbal problems modeled the, action or relationships described in the problem. Following in-struction, they generally used a separating strategy for all sub-traction problems. Although they could solve the problems, few children could coordinate their solutions with the arithmetic sentence they wrote representing the problem.

Romberg, T. A., Collis, K. F., & Buchanan, A. E. Performance on addi-tion and subtraction problems: Results from individual interviews--Sandy Bay study. Technical Report No. 580. 214 pp. November 1981.

This paper reports the results of the third in a series of collab-orative studies examining how young children acquire the skills to represent and solve verbal addition and subtraction problems. The purpose of this study was to relate children's cognitive pro-cessing capabilities and their grade level to their performance and to the strategies they used when working addition and subtrac-tion problems.

From two sets of data which assessed memory capacity and cognitive processing capacities, we identified six groups of children with different specific cognitive characteristics. For a sample of 44, children in five classes at Grades 1, 2, and 3 were selected and interviewed as they worked a set of addition and subtraction

problems. Each child was interviewed on three occasions. Each interview consisted of six tasks given under four of six conditions.

For both percent correct and strategy used, there were important variations due to problem set (size of number), to specific task, to instruction over time, and to grade. However, what is clear is that children who differ in cognitive processing capacity consistently performed differently regardless of the other important factors.

STUDENT DIVERSITY AND CLASSROOM PROCESSES:

INTERACTION AND ORGANIZATION

Penelope L. Peterson
Coordinator

ADAPTING INSTRUCTION TO STUDENT DIFFERENCES IN

APTITUDE AND COGNITIVE PROCESSES

Faculty Associate:

Penelope L. Peterson, Department of Educational Psychology

Peterson, P. L., Swing, S. R., Braverman, M. T., & Buss, R. Students' aptitudes and their reports of cognitive processes during direct instruction. Technical Report No. 581. 43 pp. August 1981.

Fifth- and sixth-grade students (n = 72) were randomly assigned to one of six classes using a factorial assignment of ability level crossed with attitude. Each class of 12 students was taught a two-day unit on probability. The teaching followed the direct instruction model. Students were videotaped during the lesson. After the lesson, students were interviewed about their thought processes using a "stimulated-recall" procedure. Results showed that, independent of student ability, students' reports of their understanding of the lesson were significantly related to achievement. Moreover, students who reported using specific cognitive strategies, such as relating the information being taught to prior knowledge, did better on the achievement test than students who did not report using such strategies.

Swing, S. R., & Peterson, P. L. The relationship of student ability and small-group interaction to student achievement. Technical Report No. 575. 38 pp. June 1981.

This study examined student ability and student behaviors during small-group interaction as hypothesized mediators of the effectiveness of small-group learning. Fifth-grade students (n = 43) completed ability and attitude pretests. A treatment group was trained in small-group interaction. Students received regular classroom instruction in mathematics for 4 weeks. Each day students worked on assignments in mixed ability groups of four students. Achievement, retention, and attitude toward mathematics were assessed. A Mann-Whitney comparison showed that trained students participated in more task-related interaction than control students. Results suggested that task-related interaction in the small group enhanced the achievement and retention of high and low ability students but did not facilitate the achievement of medium ability students.

CHILDREN'S COMMUNICATIVE COMPETENCE IN

INSTRUCTIONAL CONTEXTS

Faculty Associate:

Louise Cherry Wilkinson, Department of Educational Psychology

Wilkinson, L. C., & Spinelli, F. Peers' requests and responses in third-grade reading groups. Technical Report No. 584. 35 pp. November 1981.

This study investigates 35 third-grade students' requests and responses in their reading groups. Standardized reading achievement tests and tests of language knowledge were administered, and six samples of peer interaction were video-taped in seven homogeneous reading groups in the fall and spring of one academic year. The results showed that (a) the ability groups differed in reading achievement, and these differences remained stable throughout the year; (b) the groups differed in their requests and responses, and these differences also remained stable; (c) aspects of requests predicted obtaining appropriate responses, which confirmed a model of the effective speaker. Implications for opportunities to develop skills in peer instructional groups are discussed.

STUDENT DIVERSITY AND SCHOOL PROCESSES

Richard A. Rossmiller
Coordinator

STUDIES OF THE ORGANIZATIONAL STRUCTURE, PROCESSES, AND

BEHAVIOR IN THE SCHOOL AS A SOCIAL SYSTEM

Faculty Associate:

James M. Lipham, Department of Educational Administration

Dunstan, J. F. An ethnographic study of the decision-making processes and leadership behavior at the schoolwide level in selected secondary schools. Technical Report No. 572. (Ph.D. dissertation) 356 pp. February 1981. ED 206 091.

The major purpose of this study was to analyze the decision-making processes and leadership behavior at the schoolwide level in selected secondary schools that were implementing programs com-patible with the objectives of the Wisconsin Program for the Renewal and Improvement of Secondary Education. The data were gathered by means of field study methodology, including interviews, participant observation, and document analysis.

Decision making in the schools was analyzed in terms of decision content, stages, involvement, and constraints. Structural, participative, and supporting leadership behaviors were also identified, described, and analyzed.

Lipham, J. M., Dunstan, J. F., & Rankin, R. E. The relationship of decision involvement and principals' leadership to teacher job satisfaction in selected secondary schools. Technical Report No. 571. 147 pp. February 1981. ED 207 129.

This was a study of the relationships between extent of staff participation in educational decision making and staff perceptions of the principal's leadership and staff job satisfaction in four secondary schools. The major findings were:

1. Regarding involvement in decision making, school staffs were generally in a state of decision deprivation. They felt more deprived of making managerial or schoolwide decisions than they did in making technical or classroom type decisions.

2. Regarding staff perceptions of the principals' leadership, they rated principals highest in support behavior and lowest in work facilitation.

3. Regarding staff job satisfaction, they were most satisfied with relations with pupils, co-workers, and the administration and least satisfied with financial aspects and community relations.

4. Staff involvement in decision making was significantly and positively related to staff job satisfaction.

5. Staff perceptions of the leadership behavior of the principal were significantly and positively related to staff job satisfaction.

6. The combination of staff perceptions of the principals' leadership and specific school was the best predictor of staff job satisfaction.

Rankin, R. E. A qualitative study of the decision-making processes and leadership behavior at the teaching-advising level in selected secondary schools. Technical Report No. 576. (Ph.D. dissertation) 259 pp. May 1981. ED 206 092.

The major purpose of this study was to observe, describe, and explain the decision-making processes and associated leadership behavior at the teaching-advising level in selected secondary schools that were implementing programs compatible with the objectives of the Wisconsin Program for the Renewal and Improvement of Secondary Education. The data were gathered by means of qualitative methodology, including interviews, observations, and document analysis.

Decision making in the schools was analyzed in terms of decision content, involvement, and processes. Leadership behavior of schoolwide personnel and of a unit or department were also identified, described, and analyzed.

EVALUATION OF PRACTICES IN

INDIVIDUALIZED SCHOOLING

Faculty Associates:

Gary G. Price, Department of Curriculum and Instruction

Thomas A. Romberg, Department of Curriculum and Instruction

Price, G. G., Romberg, T. A., & Janicki, T. C. IGE evaluation phase I
summary report. Technical Report No. 578. 100 pp. November 1981.

Phase I of the evaluation of IGE was a large-sample survey of 156
schools. Two Instruction and Research (I & R) units per school
were studied--one that included grade 2 children and one that
included grade 5 children. The following were all hypothesized
to be positively correlated with measures of student achievement
in reading and mathematics: measures of the organization of
classroom instruction, a measure of the use of varied curriculum
materials designed to be compatible with the Instructional Pro-
gramming Model (IPM), a measure of the extent of schoolwide imple-
mentation of the IPM, and measures of assorted schoolwide organiza-
tional features distinctive to IGE. There were also hypothesized
links among some of these measures. Although some of the hypothe-
sized links among IGE-related measures were empirically supported,
none of the hypothesized links with student achievement were
supported by the data. Some of these negative findings can
plausibly be attributed to measurement error and specification
error inherent to the survey methods; others cannot. Some organ-
izational features distinctive to IGE were found to be positively
correlated with teachers' job satisfaction.

RESOURCE UTILIZATION IN SCHOOLS AND CLASSROOMS

Faculty Associates:

Richard A. Rossmiller, Department of Educational Administration

Lloyd E. Frohreich, Department of Educational Administration

Hassenpflug, A. M. The use and understanding of school time by third graders: An ethnographic case study. Technical Report No. 574. (Ph.D. dissertation) 360 pp. May 1981. ED 203 997.

The major purposes of this study were to determine how individual third graders use and understand school time, to ascertain what relationships exist between their use and perception of school time, and to generate conclusions about third graders' use and understanding of school time that would be relevant for educational administrators and teachers in allocating school time as an educational resource.

Data for the study were gathered from observations, interviews, and school records of 43 third graders in two ability-grouped units at one school. Noninstructional time accounted for nearly one-third of the total time available in the school week. Most primary unit (lower ability) third graders received fewer scheduled minutes of reading and mathematics per week than did those in the intermediate unit (higher ability). Despite substantial variations in the time actually allotted a subject each day, most students received at least 80 percent of the scheduled instructional time in each subject. Approximately three-fourths of the time in class was devoted to instructional activities and one-fourth to noninstructional activities. The mean percentage of off-task time for third graders was relatively low and was greater in academic subjects that in special subjects (art, music, etc.). Neither the length of academic classes, total achievement test scores, nor IQ scores showed much correlation with the percentage of student time off-task in subject areas.

NUMERICAL LISTING

TECHNICAL REPORTS

No. 569   Mathews, S. R. II. Age related effects of the interaction
           of prior knowledge and text structure on the recall
           of prose. Technical Report No. 569. (Ph.D. disser-
           tation) 113 pp. April 1981. ED 201 977.

No. 570   Harris, R. J. Relationship of counseling factors to minor-
           ity females' participation in mathematics and science.
           Technical Report No. 570. (Ph.D. dissertation) 177 pp.
           November 1980. ED 201 935. (See Bibliography of Pub-
           lications 1981 Supplement for abstract of this publica-
           tion.)

No. 571   Lipham, J. M., Dunstan, J. F., & Rankin, R. E. The rela-
           tionship of decision involvement and principals'
           leadership to teacher job satisfaction in selected
           secondary schools. Technical Report No. 571. 147 pp.
           February 1981. ED 207 129.

No. 572   Dunstan, J. F. An ethnographic study of the decision-making
           processes and leadership behavior at the schoolwide
           level in selected secondary schools. Technical Report
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52

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phase of the longitudinal study. Working Paper No. 310.
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the second phase of the longitudinal study. Working
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AUTHOR INDEX

TR = Technical Report
TP = Theoretical Paper
WP = Working Paper

AUTHOR INDEX

Allen, P. S.	Book (6)
Allen, V. L.	Book (3); Book (8)
Anick, C. M.	WP 310 (32); WP 311 (32); WP 313 (33)
Bartell, N. P.	WP 306 (27)
Berry, J. K.	WP 314 (28)
Blum, G. W.	TR 583 (33)
Braverman, M. T.	TR 581 (39)
Bryant, S. L.	WP 312 (29)
Buchanan, A. E.	WP 310 (32); WP 311 (32); WP 313 (32); TR 580 (34)
Buss, R. R.	WP 308 (21); TR 581 (39)
Carpenter, T. P.	Book (4); WP 310 (32); WP 311 (32); WP 313 (33); WP 304 (34)
Collis, K. F.	TR 580 (34)
Daresh, J. C.	Book (9)
Delaney, H. D.	TP 92 (28)
Dickson, W. P.	Book (4)
Doro, M.	Book (12)
Dretzke, B. J.	WP 307 (27)
Dunstan, J. F.	TR 572 (43); TR 571 (43)
Eldridge, R. G., Jr.	TR 579 (31)
Frohreich, L. E.	Book (12)
Geske, T. G.	Book (12)

Hansen, R.   TR 96 (31)

Harvey, J. G.   Book (5)
Hassenpflug, A. M.   TR 574 (46)
Hiebert, J.   WP 304 (34)

Janicki, T. C.   TR 578 (45)
Jastrzembski, J. E.   Book (9)
Johnson, D. D.   TP 95 (25)
Johnson, H. W.   Book (12)

Kessler, J.   WP 306 (27); WP 305 (27)
Klausmeier, H. J.   Book (6); Book (6); Book (7); Book (8)
Kuiper, N. A.   WP 312 (29)

Levin, J. R.   Book (8); TP 93 (26); TP 91 (26); WP 306 (27);
                                  WP 307 (27); WP 305 (27); WP 314 (28); TP 92
                                  (28); WP 312 (29)

Lipham, J. M.   Book (9); TR 571 (43)
Lucas, P. A.   Book (9)

Massaro, D. W.   Book (9)
Mathews, S. R. II   WP 308 (21); TR 569 (21);
McCormick, C. B.   WP 307 (27); WP 305 (27); TR 582 (28)
Michener, S.   WP 312 (29)
Miller, G.E.   WP 308 (21); WP 306 (27); WP 305 (27)
Morrison, B. S.   TP 96 (31)
Moser, J. M.   Book (4); WP 310 (32); WP 311 (32); WP 313
                                  (33); WP 304 (34)

Otto, W.   Book (13); TP 96 (31)

Peterson, P. L.   TR 581 (39); TR 575 (39)

Pittleman, S. D.   TP 95 (25)

Popkewitz, T. S.   Book (10); Book (11)

Pressley, M.   TP 91 (26); WP 305 (27); TP 92 (28);
                         WP 312 (29)

Price, G. G.   TR 578 (45)

Rankin, R. E.   TR 571 (43); TR 576 (44)

Read, W. C.   WP 309 (19)

Rembold, K. L.   WP 308 (21)

Richgels, D.   TP 96 (31)

Romberg, T. A.   Book (4); Book (5); TR 580 (34); TR 578 (45)

Rossmiller, R. A.   Book (7); Book (12)

Saily, M.   Book (7)

Schreiber, P. A.   WP 309 (19)

Shade, B. J.   TP 94 (20)

Shriberg, L. K.   WP 314 (28)

Sipple, T. S.   Book (8)

Spinelli, F.   TR 584 (40)

Steinberg, R. M.   WP 310 (32); WP 311 (32); WP 313 (33)

Stevens, B.   TR 577 (22)

Swing, S. R.   TR 581 (39); TR 575 (39)

Tabachnick, B. R.   Book (10); Book (11)

Taylor, G. A.   Book (9)

Toms-Bronowski, S.   TP 95 (25)

Truman, D. L.   TR 573 (29)

Venezky, R. L.   Book (9)

Wehlage, G. G.   Book (11)

White, S. R.   Book (13); TP 96 (3L)

Wilkinson, A. C.   Book (13)

Wilkinson, L. C.   Book (14); TR_584 (40)

Yussen, S. R.   Book (15); WP 308 (21)