

REFLECTIONS
IN EDUCATION

August, 1980/Vol. VI, No. 3

Doctoral Dissertations at Northern Illinois University



THRESHOLDS

IN EDUCATION

Vol. VI

No. 3
1980

McPherrin, Michael J.	A CASE STUDY OF DECLINING ENROLLMENT IN A LARGE SUBURBAN SCHOOL DISTRICT (1979)	2
Christensen, Judith Carol.	WISCONSIN ELEMENTARY SCHOOL TEACHERS' PERCEPTIONS ABOUT THEIR PROFESSIONAL DEVELOPMENT NEEDS (1979)	3
McDermott, Mary Ann.	AN ANALYSIS OF THE TEACHING OF CRITICAL THINKING IN BACCALAUREATE SCHOOLS OF NURSING AS REPORTED IN NATIONAL LEAGUE FOR NURSING ACCREDITATION REPORTS, 1977-78 (1980)	4
Smith, Gordon Allen.	THE INFLUENCE OF RACE AND SEX UPON EMPLOYEE SELECTION FOR A HIGH STATUS POSITION IN PUBLIC EDUCATION (1977)	5
Palmer, Leota Jean.	A COMPARISON STUDY OF CAREER PLANNING AND EMPLOYMENT AWARENESS OF COMMUNITY COLLEGE WOMEN (1979)	6
Lowenthal, Barbara.	EFFECTS OF SMALL GROUP INSTRUCTION IN COMPARISON TO LARGE GROUP INSTRUCTION ON THE ORAL LANGUAGE PERFORMANCE OF LANGUAGE DELAYED PRESCHOOL CHILDREN (1980)	7
Lamberts, Frances.	AUDITORY-COGNITIVE DEVELOPMENT IN RETARDED AND NONRETARDED CHILDREN: SALIENCE OF THE PERCEPTUAL SIGN AND THE LINGUISTIC SYMBOL (1978)	8
Collins, Michael.	COMPETENCY IN ADULT EDUCATION: APPLYING A THEORY OF RELEVANCE (1980)	9
Davis, James Michael.	FRONTIER AND RELIGIOUS INFLUENCES ON HIGHER EDUCATION: 1796-1860 (1975)	10
Rich, Thomas H.	THE WESTERN LITERARY INSTITUTE AND COLLEGE OF PROFESSIONAL TEACHERS AND THE COMMON SCHOOL MOVEMENT IN THE WEST, 1830-1840 (1973)	11
Volsch, Lucretia Pochobradsky.	PERCEPTIONS OF REGULAR AND SPECIAL EDUCATION TEACHERS REGARDING THE INFLUENCE OF SELECTED VARIABLES ON SCHOOL PERFORMANCE (1980)	12
Landerholm, Elizabeth.	A COMPARISON OF MOTHER AND FATHER INTERACTION WITH THEIR SIX-MONTH-OLD MALE AND FEMALE INFANTS (1980)	13
Hammerman, Elizabeth Lynn.	A DELPHI FORMULATION OF ENVIRONMENTAL EDUCATION OBJECTIVES (1979)	14
Beck, Jennetta A. Nykaza.	SEX DIFFERENCES AMONG ELEMENTARY TEACHERS IN ATTITUDES TOWARD PURSUING SCHOOL ADMINISTRATION CAREERS (1977)	15
Johnson, Elsie Carlson.	AN INVESTIGATION OF THE POTENTIAL USE OF SOLAR ENERGY FOR HEATING AND COOLING SCHOOLS (1978)	16

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Doctoral Dissertations at Northern Illinois University

This issue is devoted to graduate research in education at Northern Illinois University. The **Thresholds** Board of Directors, along with members of the Graduate Faculty in the College

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—James A. Rutledge

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Doctoral Dissertations at Northern Illinois University

This issue is devoted to graduate research in education at Northern Illinois University. The **Thresholds** Board of Directors, along with members of the Graduate Faculty in the College of Education, selected abstracts of fifteen doctoral dissertations for inclusion in this issue. Many others could have been chosen, but it was our purpose to present a selection of dissertation abstracts that would not only demonstrate a variety of research problems and methods, but also broadly represent departments in the College of Education. Dissertation directors or committee members were asked to comment on the significance of each piece of research. Permission to reprint these abstracts has been given by University Microfilms International, Ann Arbor, Michigan, which has sole copyright authority.

On our cover are two important parts of graduate education at Northern: Founders Memorial Library, dedicated in the spring of 1980 (the millionth volume was added to its collection in the fall of 1980), and the former Dean of the Graduate School at NIU, James A. Rutledge.

Professor Rutledge served as Graduate Dean at Northern until August 15, 1980. He came to NIU from the University of Nebraska, where he had served since 1953, both as professor of education and associate dean of the Graduate College. He received his Ph.D. in 1954 from the Ohio State University. At the present time, he is a professor of Secondary and Adult Education at Northern. We asked Professor Rutledge to comment on graduate education at NIU during his tenure as Dean.

An index to the first five years of *Thresholds* appears in the center of this issue.



Graduate work for the Doctor of Education degree has been a major enterprise at Northern Illinois University since the inception in 1961 of programs leading to doctoral degrees. In total through the May, 1980 commencement, the institution has conferred 713 Doctor of Education degrees and 273 Doctor of Philosophy degrees.

Individual programs for students seeking the Doctor of Education degree typically have included elements providing preparation for professional practice, as well as elements designed to prepare for scholarly activity which may be carried out in college or university settings. Some programs may emphasize the practitioner aspect, being designed primarily to develop skill in the improvement of educational practice and the application of theory and knowledge to the solution of educational problems. Other programs may stress the development of new knowledge and contribution to educational theory, as well as the maximum development of traditional research competencies.

Dissertations presented for the Doctor of Education degree show considerable variety, ranging from research studies dealing with theoretical aspects and presenting original contributions, to investigations analyzing professional practice. Such variety is desirable, permitting the doctoral student latitude to conduct a study in accord with the emphasis established for the individual doctoral program.

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—James A. Rutledge

A Case Study of Declining Enrollment in a Large Suburban School District

Michael J. McPherrin

This study traces enrollment decline and accompanying financial problems between July 1972 and December 1978 in a large suburban school district in Illinois, and it documents how the district's board of education and central office administrators responded to these challenges by cutting costs, reducing staff, and closing schools. More specifically, the study addresses five focal questions:

1. How significant were the declines and deficits in the district between 1972 and 1978?
2. What key events related to these declines and deficits occurred during these years?
3. How were the district's board of education and central office administrators involved in these events?
4. What caused these events?
5. What were their consequences?

The purpose of this study is to expand the new field of literature associated with declining enrollment in public education, to provide perspective on the problem for all who are currently affected by it, and to stimulate further empirical research on how best to deal with enrollment declines in public school districts.

This study blends the methodologies of field study, historiography, and case study, but emphasizes the case study method. The main strategies for data collection included document collection and interviews. Document data were collected from a number of primary and secondary sources including board minutes and administrative reports prepared by the subject district, articles and editorials from local news media, government reports and demographic studies from groups outside the subject district, and bulletins and petitions prepared by teacher and parent groups within the district. Following detailed analysis of the documents, structured interviews were conducted with three central office administrators and two board

The excitement of this dissertation is in its content and form. In content, the dissertation deals with a set of complex dynamics that dramatically affect public school districts and their programs in the early 1980's—declining enrollment, spiraling costs, school closures, and staff reductions in force. In form, the dissertation is a case study that documents in detail how one district dealt successfully with these dynamics during a recent six-year period. In its comprehensiveness, its administrative perspective, its detail, and its readable narrative, the study is exemplary and provides numerous insights for others who face a comparable challenge.

—John M. Nagle, Professor of Education
Assistant Dean of the College

members who had been intimately involved in the district's decision-making processes during the time period studied. To protect the anonymity of those cited in the study, fictitious names have been used for names of all individuals, buildings and places.

Between 1972 and 1978, enrollment in the district's schools declined 25 percent, state aid decreased drastically, several new contracts calling for increased salaries were negotiated with teachers, and inflation dramatically increased the costs of operation. In response to these challenges, the district's board of education closed five elementary schools, moved all sixth graders into the district's three junior high schools, cut costs sufficiently to maintain the same level of expenditure in the Education Fund for the last four years, reduced the district's teaching/administrative staff, and successfully passed a referendum that

increased the local tax rate by \$.39. The story of these challenges and of eight key events that evolved as the district responded to them is the substance of this study.

In documenting the seven years of activity in the district, the study identifies several major factors that explain the district's relative success in meeting these inter-related challenges of declining enrollment, school closure, reduction in force, and financial deficit: in depth knowledge of the content of the decisions that needed to be made; early development of a long-range plan and process for decision-making; involvement of citizens in the decision-making process; allowance of adequate time for all concerned to work through the process; and provision of strong leadership by both the district superintendent and the board of education.

Michael McPherrin received his doctorate from NIU in 1979, and is Director of Personnel for the Elmhurst, Illinois, Public Schools.

Wisconsin Elementary School Teachers' Perceptions About Their Professional Development Needs

Judith Carol Christensen

This study was designed to answer four questions about the professional development needs of Wisconsin elementary school teachers. These questions were:

1. What do they perceive as their professional development needs?
2. Which of their perceived professional development needs are most important?
3. How do they prefer to have their professional development needs met?
4. What is the effect of selected personal and demographic variables on their perceived professional development needs?

Data were collected in two phases. In the first phase, teachers from 98 randomly selected Wisconsin elementary schools listed up to five professional development needs that were most important to them. Their responses were combined to produce a questionnaire that contained 53 professional development needs.

In the second phase of the study, teachers in the same 98 schools were asked to rate each of the professional development needs on a 5-point Likert scale. In addition, they were asked to select a delivery mode that they would prefer to meet each need. A personal data sheet provided data to answer the fourth question of the study.

The chi-square test was used to analyze teachers' responses to the importance of the professional development needs by 14 independent variables: size of district, number of teachers in the school, sex of teacher, level of education, grade level taught, classroom organization, work with an intern or student teacher, organization affiliation, sex of the principal, full- or part-time principal, importance of professional development to the district and to the individual, and years of teaching experience.

The following conclusions are based on the findings:

1. The professional development needs

Teachers are often excluded from assessment of their in-service needs, and when they are included, they usually "react to" others' perceptions. This study is outstanding because it demonstrates that having teachers specify their own needs will generate lists of needs very similar to those generated by others. And teachers are happier with the process.

—Alan Voelker, Professor of Education

of teachers are many and diverse. These needs include the traditional needs of teachers, such as diagnosis of reading and math abilities, as well as a need to become familiar with new trends and issues in curriculum such as metric education and mainstreaming.

2. The professional development needs Wisconsin elementary school teachers feel are most important are primarily associated with what they should do with children to assist them in learning the content of the school curriculum and developing as a human being.

3. Teachers prefer formalized structures, such as university or district workshops, to meet their professional development needs.

4. The professional development needs that teachers identify are primarily affected by variables which are directly related to the individual teacher, such as number of years of teaching experience, importance of professional development to them, and sex, rather than to the school in which they work.



Judith Christensen received her doctorate from NIU in 1979, and is a member of the faculty of National College of Education, Evanston, Illinois.

An Analysis of the Teaching of Critical Thinking in Baccalaureate Schools of Nursing as Reported in National League for Nursing Accreditation Reports, 1977-78

Mary Ann McDermott

The problem of this study was threefold: (1) to verify critical thinking as an important aim of baccalaureate nursing education; (2) to describe the ways in which approved baccalaureate schools of nursing in their most recent National League for Nursing Accreditation Reports defined critical thinking and described the curriculum designed to facilitate critical thinking; and (3) to analyze the definitions and descriptions in comparison to a set of definitions of critical thinking and descriptions of learning experiences and teaching strategies reported in the literature as facilitating critical thinking. The source of the data was Self-study Accreditation Reports submitted by 103 schools of nursing to the National League for Nursing's Department of Baccalaureate and Higher Degree Programs in 1977 and 1978. The reports were examined in the League's national offices in New York City.

Acknowledgement of critical thinking as an aim of baccalaureate nursing education was verified by examination of each school's philosophy and objectives of the nursing program. Definitions of critical thinking were analyzed by comparing the school's definition to a set of definitions which the investigator had identified from the literature. The definitions were then judged and classified as accordant or discordant. A three-part inventory of critical thinking derived from a synthesis of the literature was developed by the investigator. This inventory, the **McDermott Inventory of Critical Thinking Attributes**, was used to analyze and summarize the data regarding the references by the schools to specific components of critical thinking—attitudes, knowledge, and skills—attributes of the critical thinker.

Descriptions of learning experiences and teaching strategies to facilitate critical

thinking were analyzed by comparing the school's descriptions to a set of descriptions developed from the literature. The school's definitions of critical thinking and descriptions of the learning experiences and teaching strategies to facilitate critical thinking were also examined for diversity.

As a result of the findings, the following conclusions were drawn:

1. Schools of nursing accepted and acknowledged the value of critical thinking as a major aim of baccalaureate education.

2. The definitions of critical thinking and the descriptions of learning experiences and teaching strategies used to facilitate critical thinking mentioned by the schools did not differ from those appearing in the literature.

3. All schools did not acknowledge the composite of attitudes, knowledge, and skills that can be attributed to the critical thinker. References to the skill component far outnumbered references to the attitude and knowledge components of critical thinking.

Diversity was not evident in either the definitions of critical thinking or the descriptions of learning experiences and

teaching strategies used to facilitate critical thinking.

The investigator did not anticipate the number of schools that did not define critical thinking and/or did not document the ways in which the National League for Nursing's Curriculum Criterion regarding critical thinking was met. The findings of the study suggest that faculty must not only affirm the aim, but must be convinced of its importance and familiar enough with the concept to plan for achieving the aim. The review of the literature and the findings of this study indicate that communication and clarification of the aim of critical thinking and the learning experiences and teaching strategies to facilitate its attainment are needed. A network of school of nursing faculty who will conduct research and publish in this area should be encouraged.

The **McDermott Inventory of Critical Thinking Attributes** could be used for the following purposes: (1) to clarify the concept of critical thinking for faculty, (2) to assess student attainment of those attributes, and (3) to provide a framework for a faculty development program.

As Elliott Seif and other futurists have recently pointed out, educators often emphasize the importance of developing critical thinking; however, the skills needed to think critically are seldom taught directly. In fact, educators often do not know how to teach critical thinking. A major contribution of this study is the identification of appropriate learning experiences and teaching strategies for developing critical thinking.

This study is an excellent example of what a good dissertation should be. It contains (1) a clear statement of a significant problem, (2) relevant hypotheses, (3) an exceptionally extensive review of related literature, and (4) appropriate research procedures.

—Raymond B. Fox, Professor of Education

Mary Ann McDermott received her doctorate from NIU in 1980, and is Chairperson, Maternal Child Health Nursing, Loyola University, Chicago.

The Influence of Race and Sex Upon Employee Selection for a High Status Position in Public Education

Gordon Allen Smith

This study identified and described the relationship of screening committee members' race and sex to rankings they would give to applicants for a prestigious position in public education, and the relationship of race and sex to the rankings which applicants would receive for such a position. Given the legal responsibility of employers to establish a discrimination-free system, a question of focal concern was whether or not screening committees serve to deter or safeguard against the presence of race or sex bias in the hiring process.

The investigation was conducted by having each of 140 participants in the study screen applicants for a position labeled Regional Commissioner of Education. Subjects were not told that they were involved in a study or that the applicants and position of Regional Commissioner were fictitious.

Such a position was used in the study because it represented the kind of job to which Blacks and women have had minimal access. Additionally, the role behaviors associated with the position are the antitheses of behaviors that have characterized Black and female social and work roles.

Respondents, all employees of a state education agency, were given the task of ranking the resumes of four mythical applicants, a White male, a Black male, a White female, and a Black female. All applicants could be identified by race, sex, and work history which clearly indicated which of the four applicants should be the first, second, third, or fourth ranked applicant. When respondents chose not to rank applicants according to qualifications, it was assumed that a ranking was motivated out of race or sex bias.

In order to determine if applicants with identical qualifications would be ranked equally with other such qualified applicants regardless of race or sex, it was necessary to

have each applicant evaluated when associated with the identical job qualifications previously held by one of the other three applicants. A different respondent group was assigned to evaluate each set of reassigned resumes.

The following ranking patterns were identified:

1. Neither sex was favored by preferential resume rankings.
2. The resumes of Black applicants were ranked significantly higher than those of White applicants.
3. White applicants received higher rankings from White respondents than from Black respondents, and Black applicants were favored with higher rankings from Black respondents than from White respondents.
4. Female applicants were favored with

rankings from female respondents that were significantly higher than those given by male respondents.

5. Black female respondents were found to vary significantly from the other respondent groups in the ranking of the four applicant resumes, giving higher scores to resumes of Black applicants.

6. The 30-39 year old respondent group and the 18-29 year old respondent group to a smaller extent, undervalued the White female resumes. On the other hand, the 40-49 year old respondents overvalued the rank assignment of these particular resumes.

In general, these findings indicate that each group involved in the study demonstrated a bias favoring applicants of the same race membership as their own.

This is a study of the influence of sex and of Black ethnicity upon the rankings assigned to the resumes of sex and race identified candidates for a prestigious position. The rankings of an integrated group of judges showed preference for neither sex as a group, but showed a marked preference for Black applicants as a group.

***—Wesley Schmidt
Professor of Education***

Gordon A. Smith received his doctorate from NIU in 1977, and has been on the staff of the Illinois State Superintendent of Public Instruction.

A Comparison Study of Career Planning and Employment Awareness of Community College Women

Leota Jean Palmer

The purpose of the study was to attempt to determine the awareness of women community college students to selected factors associated with women in today's job market. The study involved 320 women enrolled in four Illinois community colleges. The study variables were the age of the students, their marital status, curricular program enrolled in and their perceived effect of counseling in formulating career plans.

A study instrument was designed to obtain data essential for the stated purposes of the study and was completed by each respondent. Content validity was established by use of a panel of experts. Significance was determined at the .05 level.

As a result of an analysis of the study data, the following findings were considered to be significant:

1. The age of the students showed an influence on the responses of students. Women students over the age of twenty-one tended to respond in a manner that was more in keeping with informed opinion than did students twenty-one years of age and younger.

2. Data related to the variable of marital status revealed that presently or at one time married students tended to indicate that these students were more knowledgeable on the status of women in the job market than were students who had never been married.

3. Students enrolled in community college career programs tended to be less knowledgeable about the status of women in the job market than were students enrolled in transfer programs.

4. Less than one-half of the women students involved in the study had taken advantage of counseling in formulating their career plans. The factor of counseling or lack of counseling tended to have little or no effect on agreement or disagreement with informed opinion on the status of women in today's job market.

5. More than one-half of the women students twenty-one years of age or younger tended to be uninformed on questionnaire items related to the numbers of women who are presently heads of households and/or supported by women, the extent of divorces today, and factors concerning salaries paid to women today on the job market. The responses of these students paralleled the responses of women students who had never been married.

6. The majority of all students tended to agree that women college graduates tend to accept jobs below their abilities, that women could obtain more fulfillment in supervisory positions, that women like working for women supervisors at the same level as working for men supervisors, and that women generally do not strive to become supervisors.

With women over 35 who have job-related goals being the most rapidly-growing segment of the community college student population, it is important to understand the knowledge of these individuals relative to that job market. An understanding of the states of this knowledge would be important for the community college curriculum makers as well as advisors and counselors who theoretically work closely with these women. This study was an attempt to determine selective factors associated with this body of knowledge.

***—William K. Ogilvie
Professor of Education***

Leota Jean Palmer received her doctorate from NIU in 1979, and is a member of the faculty of Harper College, Palatine, Illinois.

Effects of Small Group Instruction in Comparison to Large Group Instruction on the Oral Language Performance of Language Delayed Preschool Children

Barbara Lowenthal

The purpose of this study was to investigate the effect of small group instruction in comparison to large group instruction on the oral language performance of language delayed preschool children. Forty language delayed children between the ages of 39 to 60 months were the subjects for this research. The sample was divided into two control or large groups of 10 children and six experimental small groups. There were three children in four of the small groups and four children in each of the remaining two groups.

The investigator taught the experimental groups and another instructor taught the control groups. Both the investigator and the instructor were experienced teachers of preschool handicapped children. The language instructional time for both the experiment and control groups was limited to 15 minutes for five days a week for a period of six months. During these times, the investigator and the other instructor taught an eclectic language curriculum.

The **Peabody Picture Vocabulary Test** (PPVT), Form B was administered as a pretest to all subjects in this study. The PPVT, Form A was administered as a posttest. The **Preschool Language Scale** (PLS) also was administered to all the subjects as a pretest and a posttest. The form of statistical testing for this study was an analysis of covariance. The covariates were the PPVT, Form B and the PLS Auditory Comprehension, Verbal Ability, and Language Age subtests. The PPVT, Form A posttest scores and the PLS posttest scores provided the data for analysis in this study. A scattergram analysis was employed when there was interaction between the variables of age and sex.

Educators are continually attempting to discover what specific factors influence children's learning and how these can best be utilized in program planning. Dr. Barbara Lowenthal's study and research provides significant data which indicate that language delayed pre-school children improve language skills when instruction is given in small groups with low-teacher pupil ratio. Since Dr. Lowenthal is a recognized teacher of language-delayed pre-school children, her study should be of interest to teachers and administrators

—Jeanette M. Kuhn, Professor of Education

The pertinent results of this study were:

1. There was a significant difference in oral receptive vocabulary when the main effect of group was analyzed. No significant main effects were found on age and sex. None of the interactive analyses was significant. The findings indicated that the experimental or small groups had significantly greater gains in receptive vocabulary than the control or large groups.

2. There was a significant difference in auditory comprehension when the main effect of group was analyzed. No significant main effects were found on age and sex. None of the interactive analyses was significant. The findings indicated that the experimental groups had significantly greater gains in auditory comprehension than the control groups.

3. There was a significant difference in verbal ability when the main effect of group was analyzed. No significant main effects were found for age and sex. None of the interactive analyses involving group was significant. The findings indicated that the experimental groups had significantly greater gains in verbal ability than the

control groups. A significant interaction was found between age and sex. A scattergram summarized the direction of these differences. The findings indicated that the younger males scored higher than expected. In addition, the older females did not score as high as expected in comparison to the younger males.

4. There was a significant difference in language age when the main effect of group was analyzed. No significant main effects were found for age and sex. None of the interactive involving group was significant. The findings indicated that the experimental groups had significantly greater gains in language ages than the control groups.

Recommendations for further study included replicatory studies with a larger population containing more female subjects, with an older population, and with a preschool population who do not have language delays. An investigation of the possible effect of family related data on small group instruction is also suggested as well as a follow-up study with the sample population.

Barbara Lowenthal received her doctorate from NIU in 1980, and is a member of the faculty of public schools in District 21, Wheeling, Illinois, she is also a part-time member of the faculty of Northeastern Illinois University, Chicago.

Auditory-Cognitive Development in Retarded and Nonretarded Children: Salience of the Perceptual Sign and the Linguistic Symbol

Frances Lamberts

It was the intent of the present two studies to explore certain characteristics of the cognitive processing of meaningful auditory stimuli by young nonretarded children and severely and moderately mentally handicapped students. The first study investigated their ability to recognize the auditory stimuli for 49 familiar experiential events, when the stimuli were presented as perceptual signs (environmental sounds) or as linguistic symbols (spoken words), and when recognition was measured by an auditory-visual, matching-to-sample task. The second study investigated their ability to recall sequences of two, four, and six of these stimuli, when recall was measured by a batch-processing adaptation of the matching-to-sample task. The specific research questions concerned: (a) growth in stimulus-recognition and short-term memory ability over a three-year, developmental age span; (b) differences in stimulus-recognition ability and memory span relating to mode of stimulus presentation; and (c) differences in stimulus-recognition and memory performance relating to presence or absence of mental handicap. A repeated-measures design was utilized in which developmental age and group were the between-subjects factors, and stimulus presentation mode and sequence length (in the memory study) the within-subjects factors.

Sixty-six subjects participated in the first, stimulus-recognition study. Of these, 31 were nonhandicapped three- through five-year-old children in regular nursery and Kindergarten classes, 35 were students in public school classes for the moderately and severely mentally handicapped. The mentally handicapped students ranged in chronological age from approximately eight to approximately 20 years. Their mental age, as measured on the Stanford-Binet or

WISC scales, was comparable to the chronological age of the nonhandicapped children. Sixty subjects participated in the second, memory-span study.

Factorial analysis-of-variance and regression treatment of the data revealed strong age trends in both stimulus-recognition and in memory-span performance. The age factor did not interact with either the group or the stimulus-mode factor. Absence of an age interaction indicated that: (a) the severely mentally handicapped and the young nonhandicapped children showed similar developmental growth in recognition of auditory stimuli for familiar events, and in short-term memory span; and (b) that such growth was similar for stimuli which are perceptual and for stimuli which are symbolic-linguistic in nature. An important finding, which was consistent in both studies, was seen in a significant stimulus-mode by group interaction. On both the stimulus-recognition and the memory task, the mentally handicapped students achieved comparable scores to the nonhandicapped children when the stimuli were perceptual. On both tasks their performance was significantly inferior to the nonhandicapped children's when the stimuli were linguistic. In the memory span study, a strong overall depression of recall scores was noted as compared to the span scores typically reported, when children of comparable ages were tested with other short-term memory procedures. The batch-processing task appeared to be more detrimental to recall performance for the nonhandicapped than for the handicapped students, resulting in an increase in the

latter's recall scores as the trial sequences increased in length. As in other memory research, greatly elevated response times were obtained for the retarded, relative to the nonretarded students.

The most significant finding from these studies concerned the ability of severely and moderately handicapped learners to process **perceptually** coded stimuli for familiar experiential events equally as successfully as nonhandicapped young learners. This ability was interpreted as revealing an aspect of severely handicapped learners' competence with regard to cognition of their environment which has not been investigated before and which, unfortunately, remains relatively untapped in instructional intervention efforts with such students. The retarded students' strong impairment, relative to nonretarded children, in ability to process **linguistic symbols** for the same events was related to theories of a critical age for language acquisition. Whereas other researchers have suggested that a fundamental, auditory-perceptual dysfunction, even auditory agnosia, may underlie severely mentally handicapped persons' language impairment, the results from the present studies indicate that this may not be the case for most such persons. Rather, the findings suggest that such persons achieve the requisite perceptual-semantic knowledge base for language too late, when the formative years for language learning have come to an end. Their subsequent linguistic development may, for that reason, be so laboriously inefficient, and so painfully limited.

This study gave new insight about (and hope for) the severely mentally retarded. It refutes previous theory, showing more similarity with normal youngsters in auditory-perceptual processing, and supporting, instead, an alternate explanation for their difficulty in language development. This insight may foster new approaches in their training, and give new expectations for what may be accomplished.

—Robert A. Rosemier, Professor of Education

Frances Lamberts received her doctorate from NIU in 1978, and is a member of the faculty at East Tennessee State University, Johnson City, Tennessee.



Competency in Adult Education: Applying a Theory of Relevance

Michael Collins

With regard to the determination of competent performance in the various undertakings of adult education, this study presents a theory of action focusing on the problem of relevance as an alternative to the orientations of competency-based systems. Emphasis is placed upon the action process, or performance itself, rather than on the identification of discretely defined competency statements. The prescriptiveness of pre-packaged, standardized curricula is thus replaced by projects of action, planned and enacted in a meaningful context according to the structures of thematic, interpretative, and motivational relevancies. As a back-drop for the explication of a theory of relevance, a careful description is undertaken of selected competency-based systems in adult education, followed by a critical analysis of the perspectives from which they emerge.

One of the major intents of the study is to affirm that a critical philosophy can be a practical endeavor for adult education and that, in phenomenology, we have the means

to extend and enrich practice and research in a systematic fashion. An approach to the problem of competent performance from the vantage point afforded by a phenomenologically-based theory of relevance takes into account the stock of knowledge adults bring to any learning situation as well as other essential constituents of their everyday life-world. In addition, it becomes apparent that there is a close affinity between leading phenomenological concepts and significant themes in adult education. From this, we can derive more self-assured foundations for the practice of adult education.

The investigations of Alfred Schutz are

seminal to the study, although clearly discernible philosophical insights are culled from such eminent thinkers as Edmund Husserl, Jose' Ortega y Gasset, John Dewey, William James, Henri Bergson, Jean Paul Sartre, Martin Heidegger, and Alfred North Whitehead. For the most part, direct reference is made to their original thought rather than through the interpretations of subsequent writers. An intriguing outcome of the undertaking is the close connection which emerges between the philosophy of American pragmatists, Dewey and James, and the phenomenology of Schutz and Husserl.

This dissertation is significant because it demonstrates clearly to the field of adult education that critical philosophy is a practical endeavor, and that it has fruitful implications for current concerns and research problems in adult education. Through lucid explication of phenomenological methods focusing on a theory of relevance, the author constructs a viable alternative to the orientations of competency-based systems, which are discussed in detail. Once this dissertation is disseminated, it will undoubtedly have an appreciable influence in encouraging further research along phenomenological lines in adult education.

—John A. Niemi, Professor of Education

Michael Collins received his doctorate from NIU in 1980, and is a member of the faculty of Kansas State University, Manhattan.

Frontier and Religious Influence on Higher Education: 1796-1860

James Michael Davis

As the United States entered the nineteenth century, there was an unprecedented growth of American colleges radically different from their European antecedents. This proliferation of institutions of higher learning was evident not only in the settled areas of the eastern seaboard but also in the frontier sections of the Old Northwest and the Old Southwest. Educational historians have explained this growth in a variety of ways. Since the majority of these institutions were affiliated with some Protestant denomination, the most prevalent explanation is one of denominational competition. A second explanation results from the disestablishing movement that weakened ties between the government and early colonial colleges such as Harvard, William and Mary, and Yale. The third explanation, very tentatively offered, is that the majority of these colleges were created to meet the needs of frontier communities and were, as a result, a frontier institution. Most notable among education historians theorizing on the frontier origins of higher education was Donald Tewksbury. He published *The Founding of American Colleges and Universities Before the Civil War* in 1932. In his book, he indicated the need for further research into the relationship between the frontier society and colleges built on the American frontier.

As a result of Tewksbury's concern, the thesis developed for this dissertation was as follows. The unique characteristics of the frontier region of the United States in the period from 1800 until the Civil War provided the essential and necessary cultural impetus and support for the denominational college movement. Due to the social, political, and philosophical features of these frontier sections, the evangelical forces of Protestantism found a climate supportive of its *elan vital* and its subsequent educational growth. The combination of the frontier mind and evangelical Protestant spirit provided the necessary environment for an important

development of higher education in the United States.

Methodology was based on the examination of historical and cultural generalizations accepted by historians and social scientists. However, the application of these generalizations to educational theory and institutions was unique. Lawrence Cremin's definition of education as the transmission of culture provided the framework and spirit of the examination. The first chapter explains the viewpoint of the Protestant denominations most affected by the evangelical movement of the colonial Great Awakening. The second chapter examines the frontier, not as a place, but as a process epitomized by the relationship between the settler who shapes and affects his environment and who is, in turn, shaped and affected by that environment. The third chapter indicates the interrelationship that emerged between the frontier mind and the forces of evangelical Protestantism that

emerged into a cultural perspective that sought extension by institutions reflective of that perspective. The final chapter examines institutions of higher education on the frontier and the extent to which they were created by and reflective of this interrelationship.

The conclusion is that indeed colleges built on the frontier were reflective of that society. Protestant denominational organizations, a major factor in the creation of these colleges, were transitional agencies that linked the frontier to a larger culture, a fact obscured by the traditional stress on their competitiveness. In decentralization, founding philosophy and conditions of charter, these colleges evinced strains of egalitarianism and social democracy demanded by frontier society. Finally, while the institutional form and intellectual tradition had ties with the East, the affective reality of the education offered was that of the frontier.

Since historians depend heavily on monographic research, it periodically becomes necessary to integrate and synthesize the findings. Davis attempted to do this. He concludes that denominational competition and weakened ties between colonial colleges and government are inadequate to explain the denominational college movement. To these must be added the influence of the frontier and the needs of frontier communities. The result was an institution evincing strains of egalitarianism and social democracy as demanded by frontier society.

—David B. Ripley, Professor of Education

James M. Davis received his doctorate from NIU in 1975 and is Instructional Coordinator, Naperville North High School, Naperville, Illinois.

Thomas R. Rich

The Western Literary Institute and College of Professional Teachers and the Common School Movement in the West, 1830-1840

The purpose of this study was to examine the origin, activities and achievements of the Western Literary Institute and the College of Professional Teachers, 1830-1840. The study examined the literature of the Conventions as it related to the development of the common school in the West as a unique American institution. The activities of the Institute that were directly related to the creation of the office of Superintendent of Common Schools in Ohio and the passage of the Ohio School Law in 1838 were also investigated. The study examined the activities of member states to ascertain the influence that the Institute had in promoting the common school movement throughout the Mississippi Valley. Finally, the study concerned itself with those circumstances and events which led to the decline and death of the Institute in 1845.

The conclusions were summarized as follows:

1. The Western Literary Institute and College of Professional Teachers was responsible for organizing and coordinating the campaign for common schools throughout the West. Many leaders of the common school movement in the various states were also members of the Western Literary Institute. These men worked to implement the comprehensive strategy developed by the Institute.

2. The Western Literary Institute and College of Professional Teachers identified, articulated and publicized the fundamental characteristics of the common school. It was to be Christian, republican, and universal. The curriculum was to be a broad national scheme, inclusive rather than exclusive. While the curriculum was to be classical in content, its goal was to produce practical men, men who could both think creatively and earn a living.

3. The Western Literary Institute and College of Professional Teachers lobbied for

This study examines a relatively unknown but influential movement in the history of American Education in Ohio and the Mississippi Valley. The continuing impact on the organization of public education in the West is documented and explained.

—Eldon G. Scriven, Professor of Education

the creation of a general state school fund, a general supervising state officer, and a state teachers' training institute.

4. The Western Literary Institute and College of Professional Teachers recognized the need to educate the respective state legislators regarding the needs of the common school. They organized political action and data gathering committees for this purpose. The collective efforts of these committees resulted in the passage of significant school laws in Ohio, Indiana, Kentucky, Missouri, Tennessee, Georgia, South Carolina and the Iowa Territory.

5. The data collected for this study indicated that the efforts of the Western Literary Institute and College of Professional Teachers to enlist public support for their activities proved woefully inadequate. The Western Literary Institute was unable to publish a periodical that

appealed to the general public.

6. The distribution of the Federal Surplus Revenue among the various states provided a great lift for the common school movement in the West. The mismanagement of these funds and the economic Panic of 1837 was a severe blow to the vitality of the Western Literary Institute and College of Professional Teachers.

7. The slavery issue became a source of concern among the members of the Western Literary Institute, both Northerners and Southerners. The relocation of the annual conventions from Cincinnati, Ohio to Louisville, Kentucky represented an attempt to ameliorate Southern feelings. The strength of sectionalism after 1845 made it impossible for the Western Literary Institute to function as a regional educational organization.

Thomas Rich received his doctorate from NIU in 1973, and is superintendent of Rhodes School District 84-5, River Grove, Illinois.

Perceptions of Regular and Special Education Teachers Regarding the Influence of Selected Variables on School Performance

Lucretia Pochobradsky Volsch

This study examined the difference between the expressed perceptions of regular education teachers and special education teachers who teach at different educational levels in regard to the influence of selected variables on school performance. In addition, the perceptual differences within each group according to the different educational levels in regard to the influence of selected variables on school performance were explored.

A questionnaire was constructed based upon a list of selected variables which appear to influence school performance. The selected variables were obtained from a review of current literature and a teacher survey. The list included 115 items which were categorized into four general areas of family background, school conditions, student characteristics and community aspects. Teachers were asked to rate each item according to a Likert-type scale regarding their perceptions of the item's influence on school performance.

The questionnaire was sent to a random sample of 1,044 regular and special education teachers within DuPage County, Illinois. Data from 626 questionnaires (60 percent of the total questionnaires distributed) were analyzed both descriptively and comparatively. The statistical analysis used was chi-square. An alpha level of .05 was set in order to reject the null hypothesis. Conclusions were drawn based upon assumptions according to the percentage of significantly different items.

A significant difference was found between the perceptions of regular and special education teachers. Also, perceptions were significantly different within each group according to different educational levels.

The greatest difference was found between all regular education and all special education teachers. Some difference was found between the perceptions of teachers

of both groups at different educational levels. In general, the perceptions between regular and special education teachers were found to be more different regarding the influence of items of the categories family background and school conditions. The perceptions between these groups were found to be more similar regarding the items of the category student characteristics. More regular than special education teachers rated items of the categories family background and community aspects as having substantial influence on school performance. More special than regular education teachers rated items of the categories school conditions and student characteristics as having substantial influence on school performance.

The greatest difference, within groups, was found among the perceptions of regular education teachers according to different educational levels. The least difference was found among the perceptions of special education teachers according to different educational levels. In general, the perceptions of both regular and special education teachers at different educational levels were found to be more different regarding the influence of items of the category school conditions. Perceptions among regular education teachers were

found to be more similar regarding the influence of items of the category family background. Perceptions among special education teachers were found to be more similar regarding the influence of items of the category community aspects. In general, the significantly different items, within both groups, were rated by more primary teachers as having substantial influence on school performance than teachers at the intermediate or secondary levels. Within both groups, more intermediate teachers rated the significantly different items as having substantial influence on school performance than teachers at the secondary level.

This study obtained perceptions from regular education teachers and special education teachers regarding the influence of variables on school performance. Conclusions from this study indicate areas in which teacher institutions and school personnel can enhance educational programs for teachers, thus providing for more effective teaching. These programs could concentrate on teacher perceptions, teacher behavior and instructional procedures. From such programs, teachers should be better prepared to deal with students and facilitate learning.

The data indicated a significant difference between the perceptions of regular and special education teachers, and that perceptions were significantly different within each of these two groups of teachers, according to the educational level at which they work. More specifically, the perceptions between regular and special education teachers were found to be more different regarding the influence of items dealing with the variables, family background and school conditions while the perceptions between these groups were found to be more similar regarding the items of the variable, student characteristics.

The major strength of this study was the identification of those variables which influence school performance. The instrumentation of this study could be utilized for in-service activities which address more effective instructional procedures. It must also be noted that the educational level at which the teachers are teaching must be taken into account when planning in-service activities.

—Nancy M. Vedral, Professor of Education
Chairperson, Department of Curriculum and Instruction

Lucretia P. Volsch received her doctorate from NIU in 1980 and is on the faculty of the Rockford, Illinois, Public Schools.

A Comparison of Mother and Father Interaction with their Six-Month-Old Male and Female Infants

Elizabeth Landerholm

The purpose of the study was to investigate the relationship between the sex of the parent and his/her interaction with his/her six-month-old first-born infant. Twenty-two white, middle class mothers and fathers were videotaped interacting with their six-month old infants (11 male, 11 female) on ten tasks.

Later, trained observers watched the videotapes and coded the parents' interaction with their infants on seven variables: Physical contact, social/verbal stimulation, object/material play, effectiveness, responsiveness, teaching behavior and sex role. The first six variables were observable variables. These variables were observed and recorded on three coding sheets adapted from Koller (1979), Clarke-Stewart (1973) and Stewart and Stewart (1973).

The seventh variable, sex role, was investigated through the use of a questionnaire and the recording of a parent's toy choice. This was an attitude variable which compared how fathers and mothers saw their role with their male and female infants and the toy that they thought was appropriate for their male and female infants.

The data were analyzed by conducting a 2x2 analysis of Variance (sex of the parent and sex of the child) on all observable variables and on the ranking of child care tasks. On the attitude variable, sex role, the data was tabulated and examined descriptively.

The significant findings were as follows: Sex of the infant was significant on the variables of physical contact and object/material play. Both fathers and mothers used more physical contact (.02 level) with their male infants and more object/material play (.006 level) with their female infants. Sex of the parent was significant for the variables social/verbal stimulation (.04 level), teaching behavior social/verbal



stimulation (.05 level) and ranking of child care tasks (.008-.001 level). Mothers exhibited more social/verbal behaviors with their infants than fathers did. Mothers agreed on child care ranks 1, 2, 7 and 8, while fathers only agreed on rank 5. The interaction of sex of the parent and sex of the infant was significant on the variable

effect (.03 level). Fathers had more effect with their female infants than they did with their male infants.

The conclusions of the study were that the sex of the parent and the sex of the infant had significant effects on parent/infant interaction.

The field of early childhood education is expanding, and includes work with infants and with parents. Ms. Landerholm has completed a well-considered, videotaped study of parent behavior with children which will be useful to teachers of children, day care providers, and parent educators.

—George Scriven, Professor of Education

Elizabeth Landerholm received her doctorate from NIU in 1980, and is a member of the faculty of Roosevelt University, Chicago.

A Delphi Formulation of Environmental Education Objectives

Elizabeth Lynn Hammerman

The purpose of this study was to arrive at a comprehensive set of major objectives for environmental education to serve as a structural framework for curriculum development, program refinement, and program evaluation.

The 50 state coordinators for Environmental Education reduced a list of 70 objectives found in current research and literature to 24 by rating each objective on a scale of 1 to 5. The state coordinators recommended professionals in environmental education, conservation education, and outdoor education from agencies and groups concerned with EE as potential Delphi panel members.

A Delphi survey was started with 58 panel members and went through four rounds over a 5-month period. In Round 1 panel members listed five objectives that they considered of major importance for EE. These 5 came from 24 objectives given for consideration or they were generated by respondents.

In Round 2 panel members selected the 10 objectives from the list of 55 generated from Round 1 that they considered most important for environmental education. A weighted frequency was used to rank the objectives with the 10 highest ranked objectives becoming the "high priority" objectives. A list of 44 objectives was retained for use in Round 3.

In Round 3 panel members reviewed the group ranking of the 44 objectives in relation to their own choices from Round 2, and selected the 10 most important objectives for EE. A reason was given for selecting any objectives outside the high priority designation in Round 2. A list of 36 objectives was retained for use in Round 4.

In the final round, panel members considered their own and the group's previous rankings of the objectives, along with the reasons given for retaining objectives. Their final ranking was given.

The highest ranked objectives from Rounds, 2, 3, and 4 were:

The Delphi technique was a useful process for involving professionals from environmental education, conservation education and outdoor education in the identification of objectives. Through this process a set of "high priority" objectives was identified and consensus was achieved. The set of objectives encompasses the cognitive, affective, and psychomotor domains of learning, and gives a view of its complex nature. The objectives can become a framework by which environmental education programs can be developed, refined, and evaluated.

—Robert J. Maple, Professor of Education

1. To treat environmental education in an interdisciplinary manner. To involve social, political, economic, etc., aspects in addition to science.

2. To develop a citizenry that is: (1) knowledgeable about the biophysical and sociocultural environments of which humans are a part; (2) aware of environmental problems; and (3) motivated to act responsibly to develop diverse environments that are optimum for living.

3. To develop an awareness for man's/woman's place (dependence and interdependence) with the total environment, the relationship of the individual to himself/herself (self concept development within an individual) relationship of one person to another (how the individual relates to other individuals), and one's relationship to the natural, global environment.

4. To develop a clear understanding of the human being as an inseparable part of the functioning system that has the ability to alter the interrelationships of the system.

5. To provide experience with working with environmental problems, issues and concerns and thereby gain experience in the

personal valuing process, decision making and political and governmental systems and how to effect appropriate meaningful and necessary changes in them.

6. To foster a change in attitude and values through a commitment to life styles conducive to maintaining a quality environment.

7. To help individuals and social groups gain a variety of experiences with the total environment to acquire a basic understanding of the total environment, its associated problems and humanity's critical responsibility, presence and role in it.

8. To develop an awareness of the need for individual responsibility to maintain or improve the environment.

9. To develop a holistic view (systems approach) of the environment which enables one to evaluate the impact of changes on the environment.

10. To develop an awareness of the historical, cultural, and natural environments of the **communities** in which students reside; to lead students to appreciate the heritage associated with their communities and to realize the environmental status of it.

Elizabeth Hammerman received her doctorate from NIU in 1979 and is engaged in work in environmental education in Oregon, Illinois.

Sex Differences Among Elementary Teachers in Attitudes Toward Pursuing School Administration Careers

Jennetta A. Beck

Sex-role stereotype attitudes which might affect decisions to pursue elementary school administrative careers were investigated to determine if these attitudes differ significantly between male and female elementary teachers, between age groups 21-30 and 31-or-older, between male and female elementary teachers in age group 21-30, and between male and female elementary teachers in age group 31-or-older. Two hundred five elementary teachers were included in the sampling. Sex and age were used as independent variables and chi square statistical treatment was used in the data analysis.

Variables investigated in the study related to inter-personal family relationships and role expectations of spouses. Also included were variables related to sex-role stereotype attitudes regarding males and females in educational administrative leadership roles. Time required for administrative responsibility was found to be a significant variable for females when compared to males in the 21-30 age group, when deciding whether or not to accept an administrative position. Female teachers were as interested as male teachers in being involved in the decision making process, but they did not express interest in taking on more responsibility.

Female teachers, particularly in age group 21-30, were not as willing as males to accept administrative positions in a large urban district, nor were female teachers in age group 21-30 as academically prepared as male teachers in age group 21-30 for administrative careers. The study revealed no overt bias toward males or females when teachers indicated which sex would serve best as an educational administrator. When asked about their feelings toward reporting to a woman superior, the females in age group 21-30 indicated that they would feel uncomfortable.

Female teachers, particularly those in age

Among elementary teachers, Beck found that females were less interested than males in taking on more responsibility and in preparing themselves for administrative careers. Females were also less inclined to make sacrifices or to ask their families to make sacrifices in order to attain administrative positions.

—Donald E. Ary, Professor of Education

group 21-30, expect their husbands to earn more income. Although male teachers would feel uncomfortable earning less than their wife, it was found that males were significantly more willing than females to accept the concept of equal incomes. The burden of being the major financial provider for a family is still upon the males, but it appears to be imposed by the females.

Accepting an administrative position was not perceived by married or single teachers to be a jeopardy to marriage or the possibility of getting married, and professional

competition does not appear to be a concern for younger teachers.

A recommendation of this study is that both men and women need to re-examine their value systems and develop a greater awareness of role expectations which are imposed on each sex. The underlying effect of the socialization process leaves both males and females with attitudes which impose certain responsibilities on the other. As long as these attitudes prevail, men will predominantly be seen in positions of educational leadership.



Jennetta Beck received her doctorate from NIU in 1977, and is assistant superintendent and director of personnel in District 21, Wheeling, Illinois.

An Investigation of the Potential Use of Solar Energy for Heating and Cooling Schools

Elsie Carlson Johnson

The application of solar energy for heating and cooling a building, such as a school, is becoming increasingly attractive as the prices of conventional fuels increase and the supplies of fuels diminish. School boards, in planning new schools, should consider solar-assist energy sources, because natural gas permits are becoming limited or unavailable and electric costs are high.

This study investigated the potential use of solar energy as an auxiliary system for heating and cooling school buildings. Jay Stream Junior High School in Carol Stream, Illinois was used as a model for configuration and square footage in the investigation. Design and construction criteria were established. Conservation techniques including the use of berming, overhangs, vestibules, clerestories, and double-hung windows were incorporated into the design. U Factors for the windows, walls, perimeter, and roof were established. The total heat loss from the building was determined and a conventional boiler size was chosen. The heat gain in summer was determined and the conventional air conditioner tonnage was established. Both were competitively bid and installed.

Three identical solar-electric-reversible heat pump heating and cooling systems with varying numbers of solar collectors of 3,000, 6,000, and 11,000 square feet respectively, were bid, installed, and compared to the conventional heating and cooling system for capital outlay costs, life-cycle costs, and payback periods based on life-cycle calculations.

The heat provided by the light fixtures and by the occupants of the building were computed as part of the heating and cooling impact. Passive energy collection was not measured in this study.

The amount of maintenance and repair needed by the solar-assist systems was difficult to predict because of the short time

that buildings with solar collectors have existed. Operation and maintenance costs were estimated at \$1,500 per year for the first 15 years and at 2,000 per year for the last 5 years. The interest rate paid on the bond principal was set at five percent annually. Natural gas costs increased ten percent per year. Electric costs escalated three percent per year.

All three solar-electric-reversible heat pump systems were more economical to operate than the conventional system. There was a 50 percent utility savings with 11,000 square feet of collectors and a payback of capital outlay costs in 17 years. The 6,000 square feet of collectors saved 43 percent of the utility costs and the capital outlay costs were paid back in 15 years. The

3,000 square feet of collectors saved 36 percent of the utility costs and the payback of capital outlay was in 12 years. This last system had the greatest net savings amounting to \$279,035 in 20 years.

The reversible heat pump had a 1 to 2.72 efficiency ratio. That is, for every Btu it used it distributed almost three. It was this efficiency ratio which led the researcher to combine the reversible heat pump with the electric and solar components.

A cost analysis such as the researcher has conducted for the board of education, when they need a rationale and justification for a project, assists them in deciding among alternatives regarding whether a capital improvement is justified.

This was a timely, well-done study investigating in depth the use of solar energy in conjunction with solar-electric-reversible heat pumps for heating and cooling systems in school buildings. Both the financial and some of the technical aspects of the use of solar energy were investigated, and a cost benefit analysis was made using different size solar energy collector systems. Thus this study should provide a model for helping to assess the feasibility of using solar energy, which would have some applicability even as technological advancements, applications, and cost factors change in the future.

—Milton E. Carlson, Professor of Education



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—Milton E. Carlson, Professor of Education

Elsie C. Johnson received her doctorate from NIU in 1978, and is Superintendent of Schools, Community Consolidated District 93, Carol Stream, Illinois.



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