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ABSTRACT

This paper describes the first year of a 3-year project to identify the specific skills of expert special education teachers. The project has three objectives: (1) to develop a knowledge base of identified expert special educators who work with culturally and linguistically diverse students with mild/moderate disabilities; (2) to field-test expertise teacher training materials and activities by incorporating them into a teacher education program; and (3) to evaluate and disseminate project results. The project is based on the premise that changes in the nature of special education have altered the role that special education teachers play. These changes include the inclusion movement, the changing demography of the school population, and the increased emphasis on transition services for adolescents. The literature is reviewed concerning characteristics of the expert educator of students with disabilities, the definition of expertise in teaching, and findings of research on thought processes of expert teachers. These findings suggest expert special educators focus more intensely on the needs of the individual learner than do regular educators. Other findings suggest that an effective method for teaching expertise is the use of videotaped classroom situations with audiotapes of the expert teacher commenting on his/her instructional behavior. (Contains 59 references.) (DB)

SPECIAL THINKING IN SPECIAL EDUCATORS

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ABSTRACT

In the last ten years, the construct of expertise has been used as a fruitful heuristic for describing the classroom behaviors and cognitions of effective teachers (see Berliner, 1986; 1987; Borko & Livingston, 1989; Clark & Peterson, 1986). However, this body of research has traditionally focused on instruction within the regular classroom: there are few studies that have examined expertise in *special* education teachers. Knowledge of this expertise is particularly important given the rapidly metamorphosing role of special education in public education and the changing demography of students receiving special education services. For example, due to recent educational initiatives, learners with special needs are increasingly being included in regular clasrooms. As a result, special educators are often called upon to serve in a consultation service role in the education of disabled students. There is a strong need, therefore, to investigate what skills novice special education teachers must have to meet the educational needs of mentoring students with disabilities and the changing demands of their educational role.

This project has three objectives. I. Developing a knowledge base of identified expert special educators who work with culturally and linguistically diverse students with mild/moderate disabilities; II. Field testing expertise teacher training materials and activities by incorporating them into a teacher education program; and III. Evaluating and disseminating results of the project. Our activities during the first year have been identifying expert teachers of exceptional learners with mild to moderate learning problems and conducting an in-depth study of these teachers. The data gathered from the practicing expert teachers will be analyzed both qualitatively and quantitatively and a description of these special education teachers will be generated. Activities during the second year will be to 1) verify and expand upon the findings from the first year of the project using a larger sample of special education teachers, 2) observe and analyze the instruction of special education student teachers, 3) develop videotapes and curriculum materials that focus on expert instruction by special educators, and 4) the dissemination of findings from the first year. Activities of the third year will be to 1) incorporate, as a pilot test, the descriptions of expert teachers developed during Year Two into a Masters level course for prospective special education teachers entitled Developing Expert Instruction, 2) examine the effects of the pilot course on special education student teachers, 3) compare these results to those student teachers not exposed to these concepts, and 4) disseminate nationally the results of the project to other teacher educators and researchers.

IMPORTANCE

Statement of the Problem

Substantial attention has been given to the study of teaching and teacher education (Houston, 1990; Wittrock, 1986). Recently, however, the field of special education has been changing at such a rapid rate. Specifically, there have been significant changes in the role of the special educator, in the delivery of special education services, in the coordination of services with other health and human service agencies, and a tremendous change in the demography of students receiving special education services. These changes have occurred both at the elementary and at the secondary level. As a result of these changes, our current knowledge base on teachers may be inadequate to prepare them to effectively teach students with disabilities.

The *quality* of education provided to children and adolescents with disabilities is of paramount concern. The quality of educational instruction is especially critical given the central role of the teacher in the educational process. Berliner (1986) has commented that "The final arbiter of what it is that gets taught is the classroom teacher." Despite this critical need for trained, competent personnel in special education, a number of studies have shown that academically able students are not being attracted to teaching (e.g., NCEE, 1983). The need for an increased number of teachers must be linked with improving the quality of their preparation so that teachers are better equipped to meet the needs of children and youth with disabilities. Although there is a variety of lists/compilation of competencies purportedly needed by special education teachers (e.g., Graves et. al., 1993). These competencies are, to a great extent, intuitively derived with little empirical or theoretical support for their identification as a critical competency. Given the substantial effect that the teacher has upon the instructional process and student outcome, it is the position of this proposal that those teachers who exhibit *expert* skill in teaching children and adolescents with disabilities should be studied.

The Changing Context of Special Education

Several changes in the nature of special education have particularly influenced the role that these teachers now play in the educational system. The inclusion movement, the changing demography of school population, and the recent emphasis on transition services for adolescents, have greatly influenced the competencies presently needed by special educators.

The Inclusion Movement. Recently, a number of studies on the national status of special education (e.g.. Reynolds, Wang, & Walberg, 1987; Slavin, 1987; Ysseldyke, Reynolds, & Weinberg, 1984) have called for the provision of special education services within regular classroom as a replacement for special programming for students with developmental disabilities. In addition, Public Law 94-142, as well as the more recent IDEA (1990) legislation, have mandated education that mainstreams these students into regular education settings. As a result, teachers are instructing classrooms of students with "alarmingly high ranges of instructional levels" (Phillips, Hamlett, Fuchs, & Fuchs, 1993). However, what specific *teacher* competencies facilitate inclusion are not known. There remains a surprising lack of research on the effectiveness of teachers who instruct mainstreamed classes (Brady, Swank, Taylor, & Freiberg, 1992).

While there is controversy concerning the inclusive education movement (see Kauffman, 1993; Stainback & Stainback, 1993), it is clear that special education teachers will be increasingly called upon to consult with and support regular educators in their instruction of special needs students, particularly those with mild and moderate disabilities. Special education teachers must be prepared for roles not only as classroom instructors, but as collaborators with their professional peers and liaisons to special students (Nolat, Tindal, & Hasbrouck, 1991). The changing role of the special educator calls for examination of the skills that are needed to successfully collaborate and consult with regular educators. Arick & Klug (1993) found in a survey of 1,468 special education administrators, that the highest-rated special education-related training need was that of collaboration of special with general

educators and other instructional personnel. The expert special educator, then, may be seen as one that is skillful in facilitating this type of collaboration with his or her regular education colleagues. To date, however, those special educators who do so competently have not been studied.

Changing Demography of School Populations. School populations and their associated geographical, political, and economic contextual variables differ greatly. Bronfenbrenner (1977, p. 516) has pointed out that "properties of the environmental context...influence the processes that take place within that context and there by affect the interpretation and generalization of the research findings." The context in which the educator instructs similarly affects the instructional decisions in which s/he engages.

Special educators are instructing an increasingly diverse population of students. Hilliard (1992) comments that "Cultural, racial, and economic diversity are realities in American schools." The national growth rates for minority populations (Hispanic- 38.6%, African American-14.6%, Asian and others- 40.1%) are much greater than the growth rate for the Anglo population (3.2%). By the year 2000, one of every three people in the nation will be Hispanic, African American, or Asian American. As a group, minorities often comprise the majority of students in public schools, and in terms of students being served by special education, minority students continue to be over represented. For example, African American students represent 12 percent of elementary and secondary enrollments, yet they constitute 28 percent of total enrollments in special education. The population of the state of Texas echoes the changing demographics at the national level. The public school population totals over three million. Fifty percent of these students are Anglo, 33% are Hispanic, 15% are African American, and 2% are other minorities (primarily Asian and Native American). Of the 1,058 school districts in the state, the average percent of students within each district who are served by special education ranges from 6 to 11% (Texas Education Agency, 1990). This range is in line with the percentage of students served nationwide. Thus, the classroom teacher faces the challenge of educating an increasingly heterogeneous student population.

Despite the changing demographics of the student population, we know little about how educators effectively adapt to diversity in student characteristics. Grant and Secada (1990) comment that currently, "...we have no maps of how teacher cognitions, beliefs, and skills with respect to the teaching of diverse student populations actually develop." They suggest that the knowledge of that experienced teachers of these students have may serve as a starting point for training novice teachers. This work "might entail mapping what teachers from diverse populations know that makes a difference in their teaching of students from similar backgrounds." Such knowledge seems to be an essential part of what makes an educator effective in today's classrooms.

Need for Transition Services. Transition of disabled youth from school to work also has been identified as a major priority for federal, state and local educational agencies. Public Law 98-199, the Extension of the Education for All Handicapped Children Act, was enacted, in part, to provide programmatic and fiscal incentives to state and local educational programs, vocational education and vocational rehabilitation to promote a more comprehensive system of transition for disabled youth. In addition, Public Law 98-524, the Carl D. Perkins Act, mandates counseling services that will help to facilitate the transition from school to post-school employment for all disabled students. Although some transitional assistance has been available since the 1940's, successful transitions for persons with disabilities, particularly to competitive employment, have not occurred. A U.S. Commission on Civil Rights (1983) reported that the unemployment rate for people with disabilities was between 50-75%. Of those who are employed, most work in sheltered settings or are underemployed. Most people with disabilities experience inappropriate living conditions, living with either relative or friends, with very little integration into their communities (Rusch & Phelps, 1987; Halpern, 1990).

Part of the changing role of the special educator is an increased focus on facilitating this transition of the adolescent and young adult into the working world. While we know relatively more about the instructional decisions of the teacher in the elementary classroom, we

know little about the decisions the educator makes with regards to providing transition services to the secondary student. There is a desperate need for investigating teacher competencies at the secondary level, where special educators are required to consult and communicate with other transition personnel.

The Expert Educator of Students with Disabilities

The changing role of the special educator begs for a close examination of those teachers who are particularly effectual in educating students with special needs and who consult with regular educators regarding instruction of disabled students. Researchers have frequently and fruitfully used the construct of expertise to conceptualize the knowledge that superior teachers in regular education possess (e.g., Berliner, 1986; Borko & Livingston, 1989; Carter, Cushing, Sabers, Stein, & Berliner, 1988; Peterson & Comeaux, 1987; Shulman, 1986). Expertise is generally defined as superior knowledge and skill within a specific domain (e.g., Chase & Simon, 1973; Chi, Feltovich & Glaser, 1981; Ericsson & Smith, 1991; Glaser & Chi, 1988). In research on expert teachers, some researchers (e.g., Leinhardt, 1983; Leinhardt and Smith, 1985; Shulman, 1986) have investigated expert instruction within a specific subject matter, while other studies have focused on teacher's pedagogical content knowledge (e.g., Grossman, 1990; Shulman, 1986). Research on expert teachers in the regular classroom setting focus on how they organize information their knowledge about the classroom and on the instructional decisions that they make. Several studies have suggested that expert and novice teachers make different judgments about students (Leinhardt, 1983; Cadwell & Jenkins, 1986; Stader, Colyar, & Berliner, 1990) and pay attention to different information about students when planning and implementing their lessons (Carter & Doyle, 1987; Strahan, 1989), but differences in the underlying content of expert-novice teacher thinking with regards to specific student characteristics has rarely been examined. Specifically, there have been few investigations of expert teachers of learners with special needs. Blanton, Blanton, & Cross (1993) concluded "we know very little about the knowledge possessed about instruction by regular and special

education teachers, and especially how these groups of teachers think about, discuss, and approach instruction for special learners."

Defining Expertise in Teaching

The issue of what constitutes expertise in teaching is somewhat controversial (Borko & Shavelson, 1989). Berliner (1986; 1987) has discussed the difficulties entailed in determining which teachers may be defined as experts. While he argues that amount of experience should not be equated with amount of expertise, he suggests that five years of teaching experience is a necessary, yet not sufficient criteria by which to judge expertise. Other criteria which have been typically employed have been nominations by colleagues or administrators, observations by researchers, and standardized test scores of students (Borko & Shavelson, 1989). While these criteria have clear limitations when applied to special educators, we have few other criteria by which to judge competent teaching. In addition, the role of special educator necessitates not only assessing teaching performance in the classroom, but the success with which the special educator consults with the regular educator. As children and youth with disabilities are increasingly mainstreamed into the regular classroom, there is a need for special educators to be skilled at facilitating this transition with the regular educator. Given these changes in the role of the special educator, we suggest that the expert special educator should incorporate the notion of *expert consultant* as well.

Research on Expert Educators

In their 1986 chapter entitled *Teachers' Thought Processes*, Clark and Peterson summarized the findings of several studies on the content of teachers' interactive thoughts. They reported "in all of the six studies, the greatest percentage of teachers' reports of interactive thoughts were concerned with the learner" (p. 269). While teachers in these studies also mentioned thoughts about objectives, content matter, and instructional processes, most of the time teachers thought about what students understood and how they were responding to instruction. The percentage of the time in which teachers' comments involved the learner was approximately 40% across all but

one of the studies reviewed. The exception was a 1977 study by Semmel in which the percentage of time teachers thought about the learner was significantly higher, (60%). Of particular interest is that this study was the only one in which teachers were dealing with exceptional children. An explanation for this difference did not seem to be that the class was smaller in size (see Conkler, 1982; cited by Peterson & Clark, 1986). It appears that teachers who instructed exceptional children thought more about the learning processes of these children.

Several recent studies have implied that educating learners with special needs entails particular instructional and cognitive skills (e.g., Bartelheim & Evans, 1993; Bay & Bryan, 1991; Blanton, Blanton, & Cross, 1993; Cambone, 1990; 1992). Bay and Bryan (1991) observed twenty-eight regular classroom teachers and asked them to identify students in their rooms who were low achievers; average achievers; and special education students. The teachers were videotaped during instruction and interviewed about their thought processes using a stimulated recall procedure. Teachers made significantly more comments, both negative and positive, concerning special education students than they did about average achievers or low achieving students.

An ethnographic study by Cambone (1990; 1992) depicts the complex, dynamic, and reflective nature of one special education teacher's approach to delivering academic content in a classroom of emotionally disturbed students.

> {I} didn't really think enough about how different this group is from the group I had last year...What doesn't look like a complicated task at all was much too complicated for this group in a way that it wasn't for the group last year...we needed to cut out like 25 steps and that's the kind of thing that happens with this group a lot. That I've always taught the youngest kids who were emotionally disturbed and learning disabled and I felt like I had already pared everything down to the barest minimum. And now, with this group I need to go twenty steps below that (p. 11).

In this case, the teacher's approach to instruction was characterized by a continual forming and reforming of mental models of her students. The teacher continually attempted to reconcile individual students' needs with the needs and requirements of the educational setting.

These preliminary studies, taken together, suggest that the nature of cognition in special educators has a different focus than that of teacher cognition in regular classrooms. The nature of the special educator's task appears particularly complex, interactive and focused on the needs of the individual learner. In examining skilled performance, a number of researchers (e.g., Rogoff & Lave, 1984; Perkins & Solomon, 1989) have pointed out the contextual nature of expert knowledge in that it appears tightly bound to the domain in which it is developed. This situated nature of cognition lends support to the prediction that teacher cognition would differ according to the characteristics of students in a classroom and the social environment in which teaching takes place.

Once a clearer, more comprehensive expert model of the teacher of children and youth with disabilities is created, special education teacher training can become more empirically grounded and examples of "best practice" can be provided to the novice teacher. In addition, the process of transferring expert behaviors to the novice, such as may take place in regular and special education collaboration, can be begun.

Training for Transfer of Expertise

There is some research on the training of novice teachers using the knowledge and information from expert teachers (see Berliner, 1986; 1987). This research suggests that novice teachers may be instructed to use similar routines and strategies as do expert teachers. However, it is often the case that an expert educator (such as a supervising teacher) has difficulty in clearly communicating the reasons for his or her instructional decisions. It is suggested by researchers in the field of expertise that this difficulty is due to the automatization of the behaviors that an expert develops: They become less easily accessible at a conscious level. The implications are that our present system of student teaching is limited in its effectiveness, no matter how expert the supervising teacher, simply because it is difficult for the supervising teacher to explain why he or she makes certain instructional decisions in the classroom.

An alternative method for transferring expertise, while still providing a real-world example, is with the use of case studies. In a Bay and Bryan (1991) study, it was found that novice teachers, after viewing videotapes of teachers instructing children with disabilities, increased reflectivity after hearing audiotapes from a stimulated recall procedures. These audiotapes included comments from teachers while they watched themselves in a videotape of an earlier teaching session. However, the effects of using such a format as part of a teaching training program has not been assessed.

Expected Outcomes

The purpose of this proposed project is to conduct an in-depth investigation of the unique instructional knowledge base that expert special education teachers possess. It is proposed that an understanding of this expert knowledge will not only add to the research literature, but can be fruitfully applied to training preservice special education teachers. It also will provide information about the role of consultation in special education and how educators successfully educate students from a wide variety of ethnic backgrounds. Finally, it will produce instructional materials and training modules that may be used in teacher training programs to model expert thought and behavior that occurs in the special education setting.

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