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Introduction

Teachers of children with mild disabilities frequently encounter challenges in teaching these students to write different types of texts (e.g., fantasy vs. scientific). The Early Literacy Project used a variety of approaches, including an apprenticeship model of guided instruction. The teachers used think alouds and interactive conversations with students about reading and writing texts. For example, teachers might think aloud about how to read or write a particular text genre. Early Literacy Project students were significantly superior to the control students in reading achievement and writing fluency (Englert, Mariage, Garmon, & Tarrant, 1998).

In a study of parents' experiences with their young deaf or hard-of-hearing children, parents were asked to describe their child, including reasons they were proud of him or her. One parent commented, "His name is David. He is eight years old and he has cerebral palsy on his left side and he is hearing impaired. It is profound in his right ear and moderate to profound in his left. So, he wears two hearing aids and he does sign and he reads lips and he's learning how to read. And that's about it. Ya know, he's a sweet little boy. He has asthma and he's on medication for seizures. Other than that he's just like a normal little kid and you would never be able to tell he has all these problems" (Meadow-Orlans, Mertens, & Sass-Lehrer, 2003).

The preceding cases illustrate the type of research that was conducted with an emphasis on positive factors and accommodations that support people with disabilities in their quest for a full life. Previously, much of special education research derived from a deficit perspective that located the problem in an individual and focused on his or her disability as the reason that he or she could not perform certain functions or activities.

More recently, special education researchers have shifted to a sociocultural perspective that focuses on the dynamic interaction between the individual and environment over the lifespan (Seelman, 2000). This focus on strengths and modifications of contextual factors has emerged under a variety of names such as positive psychology (Seligman & Csikszentmihalyi, 2000) and resilience theory (Brown, D'Emidio-Caston, & Benard, 2001; Cooper, 2000).

IN THIS CHAPTER

- The purposes and intended audiences for this book are introduced, along with reasons that research is important in special education.
- Trends and issues in special education are explored in terms of their implications for research methodology and the need for additional research.
- A discussion of philosophical orientations in research provides an organizing framework for the depiction of the steps typically followed in conducting research.

People with disabilities have been viewed through various lenses throughout history. Gill (1999) described the moral model and the medical model of disability. The moral model suggests that the disability is a punishment for a sin or a means of inspiring or redeeming others. The medical model sees the disability as a problem or a measurable defect located in the individual that needs a cure or alleviation that can be provided by medical experts.

SHIFTING PARADIGMS: DEFICIT TO TRANSFORMATIVE

- Swadner and Lubeck (1995) state that the deficit model emphasizes "getting the child ready for school, rather than getting the school ready to serve increasingly diverse children" (p. 18).
- Based on the belief that factors outside of the child place the child at risk, Boykin (2000) suggests eliminating the negative stigma attached to the term "children at risk" to "children placed at risk."
- Transformative research based on resilience theory focuses on the strengths of the individual and ways to modify the environment to remove barriers and increase the probability of success.

In the disability community, Seelman (2000) described a new paradigm that shifts the location of the problem from within the individual to the environmental response to the disability. This paradigm that evolved from the efforts of scholars, activists with disabilities, and their nondisabled allies departs from the former models in terms of its definition of disability problems, the scope of potential solutions, and the values underlying both the definition of the problems and solutions (Gill, 1999). The new paradigm frames disability from the perspective of a social, cultural

minority group such that disability is defined as a dimension of human difference and not a defect (Gill, 1999; Mertens, 1998, 2000b). Within this paradigm, the category of disability is recognized as being socially constructed such that its meaning is derived from society's response to individuals who deviate from cultural standards. Furthermore, disability is viewed as one dimension of human difference. According to Gill (1999), the goal for people with disabilities is not to eradicate their sickness, but to celebrate their distinctness, pursue their equal place in American society, and acknowledge that their differentness is not defective but valuable.

A transformative paradigm for research has emerged in parallel with the emergence of the sociocultural view of disability. A paradigm is a way of looking at the world. It is composed of certain philosophical assumptions that guide and direct thinking and action. It is significant that the community of people with disabilities and their advocates, as well as the research community, are experiencing what might be termed a paradigm shift as they reexamine the underlying assumptions that guide their theory and practice. The potential of merging paradigms between these two communities at this juncture in time provides many possibilities. For those of you who drive the highways of the world, you know that the merge lane can be a means of accessing new frontiers or it can also be a danger zone that must be approached carefully. The authors think this is a very apt metaphor for the state of merging paradigms in the research and disability communities.

Philosophical Orientation of the Book

Educational researchers are engaged in examination of the merits of various paradigms for defining approaches to research. A paradigm is a worldview that includes certain philosophical assumptions about the nature of knowledge (i.e., epistemology). Historically, the postpositivist paradigm defined approaches to research in special education. Epistemologically, positivism is represented by the rationalistic paradigm, which typically employs a quantitative research design. The interpretive/constructivist paradigm is typically associated with qualitative research designs and is described as contextual, experiential, involved, socially relevant, multimethodological, and inclusive of emotions and events as experienced. The transformative paradigm holds that knowledge is not neutral but is influenced by human interests, all knowledge reflects the power and social relationships within society, and an important purpose of knowledge construction is to help people improve society (Banks, 1995). It is beyond the scope of the present text to explore the underlying axioms of each paradigm (see Denzin & Lincoln, 2000; Mertens, 1998; Nielsen, 1990); however, researchers should be familiar with the paradigm debate, read and reflect on this topic, and establish their own worldview as it affects their research activities.

In terms of philosophical orientation, researchers must not only identify their epistemological worldview, but also their ideological perspectives, that

is, the researcher's position as to the use of research for political purposes. Langenbach, Vaughn, and Aagaard (1994) identified two ideological views prevalent in the research community as status quo and reform. Researchers who are not overtly political in their interpretation of their data are oriented toward the status quo. Researchers who explore political explanations of their data move into the realm of reform. These two positions, status quo and reform, actually represent two end points on a continuum, with many researchers falling in the middle. This overlay of ideology can be used within the positivist or the interpretive/constructivist orientation to research; however, it is central to the transformative paradigm.

Feminist researchers serve as one example of scholars who have written extensively about the reform ideology in research, and their perspectives have particular importance for researchers in special education for two reasons. First, "women with disabilities traditionally have been ignored not only by those concerned about disability but also by those examining women's experiences" (Asch & Fine, 1992, p. 141). Almost all research on men and women with disabilities seems to simply assume the irrelevance of gender, race, ethnicity, sexual orientation, or class. Second, Fine and Asch (1988) made the point that people with disabilities comprise a minority group, and most of their problems can and must be understood in a minority group framework. As a minority group, persons with disabilities have differential power and receive differential and pejorative treatment. As the authors of this text, we are sensitive to issues related to bias based on ethnicity, gender, class, and disability, and we include implications of the reform ideology in our exploration of working with special education populations throughout the research process.

The transformative paradigm places central focus on the lives and experiences of marginalized groups, such as women, ethnic/racial minorities, people with disabilities, and those who are poor. In this process, the researcher links the results of the inquiry to wider questions of social inequity and social justice. While acknowledging issues of advocacy and objectivity, transformative research has the potential to contribute to the enhanced ability to assert rigor in the sense that ignored or misrepresented views are included. One of its major contributions is exploration of the myth of homogeneity, that is, that all members of a minority group share the same characteristics. Diversity within the disabled population encompasses not only race/ethnicity, gender, language, economic level, severity and type of disability, but also functional limitations, limitations in performance of activities and instrumental activities of daily living, use of assistive devices, and receipt of specific benefits associated with disability.

EXAMPLE OF THE ROLE OF RESEARCH IN CHANGING PRACTICE

- Practices without evidence as to their effectiveness and unsupported myths have sadly affected the lives of children with disabilities (Gallagher, 1979; Van Cleve & Crouch, 1989). One such myth was

that deaf children should not be taught sign language because it would inhibit their desire to learn to speak. In the 1960s, for example, research was conducted that suggested deaf children of deaf parents had higher scores than deaf children of hearing parents on reading, arithmetic, social adjustment, and writing and were no different in terms of use of speech and lip reading (Meadow, 1967). Within a short time after the appearance of that research, a revolution occurred in deaf education such that between 1968 and 1978, the majority of deaf programs changed from oral communication to total communication (Moores, 1987).

- Research can guide teachers in how to revise their own practice, as well as make contributions toward fundamental changes in educational practice. This is not to say that research by itself will be responsible for changes in practice, such as the dramatic changes in deaf education. Societal change is dependent in part on the use that is made of such information by politically-oriented advocacy groups, such as the National Association of the Deaf. Nor does it suggest that the issue is closed regarding the most effective communication system for deaf people. Debate rages on as to which sign communication system is best, and this continues to be the type of empirical issue on which research can shed light.

Purpose of This Book

Teachers and other educational personnel find themselves face-to-face with children who need an appropriate education for which there is either an inadequate research base or they are unaware of the research that exists. Thus, not only is there a need for more research in special education, but there is also a need for more critical analysis of existing research and improvement of the quality of research in special education. Those who conduct research in special education must be aware of the implications of the unique context and special populations for their work. No specific research methods are unique to special education; however, there are many contextual factors that are unique to special education that influence the way research is conducted (Gaylord-Ross, 1990-1992; Switzky & Heal, 1990). Special education adopted its research methods from such other disciplines as psychology, sociology, ethnography, and anthropology.

The purpose of this book is to enable the reader to use tools to design, conduct, and report research in a way that transforms, when appropriate, the delivery of special education. This book explores ways to adapt those research methods to the special education context by providing the reader with a framework for developing research questions and methods, as well as critically analyzing and conducting research focusing on the specific special education context. Unique contextual factors and populations in special education have implications for research conceptualization, design, implementation, interpretation, and reporting. For example:

- The definition of who constitutes the special education population is not clear cut. What are the implications of labeling someone "at risk" or disabled?
- How can appropriate identifications be made for such populations as developmentally delayed or learning disabled?
- What are the implications of conducting or critiquing research that addresses different types of functional impairments (e.g., mental retardation vs. paralysis, blindness vs. epilepsy)?

These are the types of contextual issues specific to special education research that are addressed in this book.

The approaches to research are presented with the intention of: (1) changing people's views of people with disabilities to understand that the problem is not located in the individual, but rather in the societal response to the disability and (2) examining the ways that research can contribute to understanding how people with disabilities can better learn the skills and knowledge they need to have successful lives, and how those who work with them can support this process through the application of research-based practice.

The audience for this book includes people who need information to support their decision making (note: this is program evaluation, which is discussed in Chapter 2). This includes those who set policy, administer and implement programs, teach the students, and advocate for people with disabilities. For all these people, this book provides guidance in the conduct or critical analysis of research with special education populations. The populations included are primarily those that are eligible for funds under the federal government's classification system of special education students in the Individuals with Disabilities Education Act (IDEA) of 1997, that is, mental retardation, hearing impairments, speech or language impairments, visual impairments, serious emotional disturbance, orthopedic impairments, other health impairments, specific learning disabilities, multiple disabilities, deafness/blindness, autism, and traumatic brain injury. (Readers interested in research with gifted students are referred to Buchanan & Feldhusen, 1991; Friedman & Shore, 2000; and Howe, 1999.) Additionally, the text includes discussion of infants and toddlers with disabilities and persons with developmental delays and those at risk.

EXAMPLES OF POTENTIAL USERS OF THIS BOOK

- Stephanie is a fourth grade teacher who has spent the summer redesigning the reading program that she will use to teach reading to students with learning disabilities assigned to her class in the coming year. As part of her design process, she asks the question, "How will I know if my new program improves the reading performance of my students?"

• Pat, a state director of special education, has been responsible for designing and implementing a new state policy that requires local special education directors to prepare and carry out local improvement plans. Now she needs evidence to take to the State Board of Education regarding the impact of the new policy on the local school divisions and the students they serve.

• The local parent advocacy group has changed its approach from openly challenging the school division to viewing their relationship as a strategic alliance with the schools with a shared goal of quality educational experiences for all children. The group is pleased with the results of the shift in policy and wants to share their success with other parent advocacy groups.

• Bill, a faculty member at the local university, has observed that for the past several years, students with disabilities in his local school division who take the state's Standards of Learning assessments have performed poorly in comparison to their peers in other school divisions. He has devised a new system for teaching test-taking skills to students with disabilities and wants to gather evidence about what aspects of the program work and which might need improvement to enhance performance of students with disabilities on the assessments.

This text does not purport to replace research methodology texts (see, e.g., Bogdan & Biklen, 1998; Creswell, 2003; Denzin & Lincoln, 2000; Gall, Gall, & Borg, 2003; Harding, 1987; Mertens, 1998; Patton, 2002; Tashakkori & Teddlie, 2002) or educational assessment texts (see, e.g., Pellegrino, Chudowsky, & Glaser, 2001; Sternberg & Grigorenko, 2002). Rather it explores the adaptation of research methods to the special education context by providing the researcher with a framework for critically analyzing and conducting research within the special education context.

Trends and Issues Influencing Special Education Research

Special education research is affected by political, legislative, programmatic, social, and contextual factors that are unique to its functioning. These factors have implications for methodology at every stage of the research process.

Political and Legislative Changes

Beginning in the 1990s and extending into the twenty-first century, several key policy decisions at the federal level and their accompanying legislative mandates have changed the way educators view the relationship between research and practice.

• The Government Performance and Results Act (1993) required all agencies to not only state organizational goals and objectives in measurable terms, but also annually collect performance measurement and evaluation information as evidence of progress toward achieving those aims. All federal managers had to be able to communicate to Congress and the public what they were trying to accomplish, how they planned to achieve these ends, what indicators they would use to judge their performance, and how well they were doing with respect to anticipated results. A significant federal education action provided funds to public schools to reform their educational practices. But to receive the funds, the schools had to demonstrate that the reforms were proven practices – based on experimental control with comparisons to standards-based assessments.

• Perhaps the most sweeping federal initiative to influence research practice is the Elementary and Secondary Education Act referred to as No Child Left Behind (NCLB) (2001). This legislation requires the use of scientifically-based research to improve educational practice. The Act defines scientifically-based research as "rigorous, systematic, and objective procedures to obtain valid knowledge" about an educational program or practice. The expectation is that evaluations will be conducted of these programs using experimental and quasi-experimental methods to assess the impact of the programs with respect to intended results (see Chapter 4). Randomized designs and those using thoughtful matching techniques are the preferred research approach in NCLB (Slavin, 2002).

• The Education of the Handicapped Act, passed in 1975, was changed to the Individuals with Disabilities Education Act (IDEA) in 1990, and was reauthorized in 1997. IDEA (and its predecessor legislation) resulted in fewer students with disabilities being educated in separate schools or classrooms. The effect of this change has at least two methodological implications. First, identification of research subjects became more complicated, and second, placement in many schools resulted in an increase in the variability of contextual factors (Wang, Reynolds, & Walberg, 1990). The identification of the independent variable in studying the effects of educating students with disabilities in inclusive settings becomes a more complex issue, which is not satisfactorily resolved in most special education research (Gallagher, 1990; Wang et al., 1990).

The ultimate goal of these federal initiatives is to improve educational opportunities for all children, including those with special needs. The intent is to increase the number of special education graduates with the knowledge, skills, and values that they need to become productive citizens. The initiatives provide an excellent opportunity for researchers to play a significant role in the production of information that not only identifies successful practices, but also enables the sharing of these practices with others who face similar challenges. In this way, the initiatives fit nicely with the transformational worldview characterized throughout this text.

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Programmatic Issues

The Office of Special Education Programs, U.S. Department of Education funded the IDEA Partnerships in October of 1998 to build capacity and develop leadership potential in their primary partner organizations and constituencies by modeling collaboration at all levels of partnership, creating and disseminating quality products that are user friendly, and creating national and public access to information in an audience-focused streamlined way (www.IDEAINFO.org). The IDEA Partnerships include families, advocates, teachers, local service providers and administrators, and state and national policymakers.

One significant outcome that the IDEA Partnerships achieved provides direction for current and future research in special education. Through collaborative needs assessments, the IDEA Partnerships identified five high-priority domains in which action was needed if educational opportunities and services for students with disabilities were to be improved. The domains are: Standards-Based Reforms, Personnel Development, Overidentification, Family Involvement, and School Climate and Discipline. The domains are described in a series of framing papers that may be accessed at http://www.ideainfo.org/summit.htm.

Standards-Based reforms. Standards-based reforms and their assessment programs have led to noteworthy improvements in educational opportunity for students through the alignment of educational practice to desirable educational outcomes. Yet, there are continuing challenges to ensure that all students, including those with disabilities, share in these benefits. Researchers must be able to inform policymakers and practitioners, as well as parents and advocates, about effective practices to include students with special needs in standards-based instruction and assessments. Research has demonstrated that the percentage of students with disabilities taking the assessments either through traditional means or through alternative assessments has been steadily increasing (Thompson & Thurlow, 2001). Yet, additional questions need to be addressed.

RESEARCH QUESTIONS TO THINK
ABOUT REGARDING STANDARDS-BASED REFORMS:

• What are the reasonable accommodations to make in curriculum and instruction to ensure the students acquire the necessary knowledge and skills to be able to perform on the assessments?

• For those students who cannot take the state assessments because of the limitations of their disability, what forms of alternative assessment approaches are reliable, valid, and fair?

Personnel Development. Having sufficient numbers of qualified professionals and paraprofessionals to provide special educational and

related services has been an issue since the passage of PL 94-142, the Education for All Handicapped Children Act. Yet, our nation's schools continue to experience chronic shortages in personnel in the areas of instruction, related services, and program administration. Without qualified practitioners, educational opportunities for students with disabilities will never reach the level necessary to ensure educational success. Recruitment and retention of professionals in special education is of critical concern to federal, state, and local policymakers.

Research by Miller, Brownell, and Smith (1999) indicates that a number of factors influence decisions to continue in the field including working conditions, stress, and certification status.

RESEARCH QUESTIONS TO THINK ABOUT
REGARDING PERSONNEL DEVELOPMENT

- What factors – personal and geographical – influence a person's decision to enter and stay in special education?
- What unique knowledge, skills, and values do these professionals require to be successful?
- Given the continued overrepresentation of minorities in special education, what practices will lead to the successful recruitment and retention of ethnically-diverse practitioners to the field of special education?
- The design and delivery of special education and related services is complex. How can research inform and improve the practice of cooperative teaching and collaboration within and across service domains?
- What role, if any, do economic and social trends play in recruitment and retention?

Overidentification. Like personnel issues, overidentification is not a new concern to special educators. Moreover, overrepresentation of culturally-diverse and linguistically-diverse students in special education is a fact based on both legal and research findings. On the one hand, overidentification can be traced to unfair, unreliable, and invalid assessment and diagnostic practices. On the other hand, disproportionality can result from a lack of cultural competency, understanding cultural diversity and being able to accommodate for the diverse needs and preferences of students who are culturally and linguistically diverse. While cultural competency has many different definitions, Hanley (1999), as cited in Edgar, Patton, and Day-Vines (2002), sees it as "the ability to work effectively across cultures in a way that acknowledges and respects the culture of the person being served" (p.10). According to Daugherty (2001), the number of ethnic minority group members will increase significantly in the future, and by the year 2020, the majority of school-age children in the United States will be from racial or ethnic minority groups. At the same time, the number of teachers and other service personnel who are European American comprise over 85% of our education workforce (Edgar et al., 2002). The resulting imbalance may lead to inappropriate referral decisions and placements in special education.

RESEARCH QUESTIONS TO THINK
ABOUT REGARDING OVERIDENTIFICATION

- How can research in special education lead to the development of more culturally and ethnically valid assessment instruments and processes?
- What role does cultural competency play in the decision to refer students for special education?
- How can teachers differentiate instruction so that students who are ethnically and linguistically diverse can benefit from their educational experiences?
- What role should families play in the design, implementation, and evaluation of educational programs for these students?

Family Involvement. Educators cannot and should not try to do the job alone when it comes to the education of students with special needs. They should form performance partnerships with parents aimed at achieving the shared goal of creating effective educational practices that will lead to better results for students. With the support of federal legislation, forming these partnerships is not only required but facilitated through the direction provided by the legislation and guidelines. Parents provide a rich source of information about the strengths and needs of their children. They can be a resource to the design and delivery of special educational and related services. Recent reports (Davies, 1996; Lewis & Henderson, 1997) indicate that parents and families are essential to the success of recent school reform initiatives. Yet, parental involvement remains a challenge today.

RESEARCH QUESTIONS TO THINK ABOUT
REGARDING FAMILY INVOLVEMENT

- What factors drive and restrain successful parental involvement? While research in special education has been a significant resource to our knowledge in this area, more needs to be done, particularly when dealing with culturally-diverse and linguistically-diverse students and families.
- Does the involvement of families in the prereferral process increase the validity of the decision making?
- What strategies work best to modify parental, teacher, and administrator attitudes to enhance functional family involvement?
- What new skills do parents, teachers, and administrators need to enable a positive working relationship that benefits children?
- How do state and local policies affect parental involvement?
- What strategies work best to enable schools to reach and involve traditionally underrepresented families?

School Climate and Discipline. Educating all children, including those with special needs, is most effective when carried out in a positive school climate. According to Sugai and Horner (2001), schools are not able

to provide a full continuum of effective and positive learning experiences for their students. Many schools may lack the capacity to deal effectively with defiant and disruptive behavior. An emerging trend that is demonstrating positive results is entitled positive behavior support systems (PBS) (Sugai & Horner, 2001). The goal of PBS is to enhance the capacity of schools to educate all students, especially students with challenging social behaviors, by establishing an effective continuum of PBS systems and practices (Sugai & Horner, 2001).

Often the reason a student is referred for special educational services is because the student has been disruptive. Research reported by Sugai and Horner (2001) indicates that when PBS systems are in place, then there is not only a reduction in the number of referrals, but also an increase in the quality of referrals. These effects have been found to last over time when the practices are adopted PBS systems. A positive school climate is an important piece to the puzzle of effective school practice.

RESEARCH QUESTIONS TO THINK ABOUT
REGARDING SCHOOL CLIMATE AND DISCIPLINE

- What specific practices will result in the development of a positive school climate and will also have positive effects on teacher, parent, and student behavior?
- What state and local policies are needed to support the systematic application of research-based practices that yield a positive school climate?

Total Inclusion Movement. Special education is embroiled in a time of change and reform that is an outgrowth of more than two decades of struggling with the implications of the original mainstreaming legislation. A strong voice from within the special education community is calling for total inclusion of students with disabilities, in the form of a merger of general and special education (Biklen, Ferguson, & Ford, 1989; Lipsky & Gartner, 1989), and general education is taking up this call as well (National Association of State Boards of Education, 1992).

Research Questions to Think About Regarding Total Inclusion

- What are effective practices for total inclusion based on specific types of disabilities?
- What are the factors that contribute to success in total inclusion programs? What are the barriers that must be overcome?

Contextual and Societal Trends

As Seelman (1999) noted about the demographics within the disability community, there is great diversity within the 20% of the national population that have disabilities. Women have higher rates of severe disabilities than

men (9.7 vs. 7.7 percent), while men have slightly higher rates of nonsevere disability. Considering both sex and race, Black women have the highest rate of severe disability (14.3%), followed by Black men (12.6%). Rates of severe disability for men and women who are American Indian, Eskimo, or Aleut are nearly as high; persons who are American Indian have the highest rates of nonsevere disability. Researchers who undertake research with these populations need to be knowledgeable about the diversity within the community in order to be culturally sensitive in the interest of gathering valid research data and interpreting the results accurately.

RESEARCH QUESTIONS TO THINK ABOUT
REGARDING CONTEXTUAL AND SOCIETAL TRENDS

- What are effective instructional practices for students with disabilities whose native language is not English?
- What are the cultural factors that contribute to success for students from diverse ethnic or racial backgrounds?

Need for Additional Research

Over one decade ago, Wang et al. (1990) recognized the role that research can play in the complex challenges that face special educators. They stated:

> The field of special education seems particularly open to theories and practices, even before they are thoroughly tested. There are millions of children whose problems have been diagnosed in terms of cognitive rigidity . . . Lack of sensory integration, perceptual problems, auditory sequencing difficulties, or unusual WISC profiles—all of which add up to zero or near zero validity when later tested for instructional relevance. The solution to these problems is a particular responsibility of the researchers in the special education community who should call for decent levels of evidence before practices are allowed to enter the field in broad ways. (p. 202)

The need for additional research should be a point of thoughtfulness at the end of every research study. Researchers should build their research on using the blocks of knowledge available from previous research, examine the contribution of the studies they have conducted themselves, and assess what is needed to further understand the issues of good practice. This topic is further explored in the final chapter of this book.

Steps Typically Followed in Conducting Research and the Organization of This Book

The typical process of planning and conducting a research study was used as the basis for organizing the information in this book (see Figure 1.1).

Figure 1.1   Steps in the Research Process

Step 1: Identify own worldview (Chapter 1)

Step 2: Problem sensing (Chapters 1, 2, 3, and 10)

Step 3: Literature review; research questions (Chapter 3)

Step 4: Identify design (quantitative/qualitative/mixed/program evaluation) (Chapters 2, 4, 5, 6, and 7)

Step 5: Identify and select sources of data (Chapter 8)

Step 6: Identify and select data collection methods/instruments (Chapter 9)

Step 7: Data analysis, interpretation, reporting, and identifying future directions (Chapter 10)

We recognize that the research process is never as linear as it is portrayed in Figure 1.1 and (especially with qualitative and mixed methods designs) the process can be very iterative in nature. However, our goal is to depict the typical steps in conducting research, even though a researcher may be doing footwork that more resembles the cha-cha than a straightforward stroll.

Research in special education is used to explore the use of the literature review, to define the theoretical framework and to identify research questions, variables, and the most appropriate approach to the research (Chapters 1, 2, and 3). Specific implications of quantitative, qualitative, mixed methods, or evaluation-based designs are critically evaluated in special education research (Chapters 2, 4, 5, 6, and 7). Issues such as the identification of subjects, the definition of populations, the heterogeneity of subjects, appropriate sampling techniques, and ethics (Chapter 8), and reliability, validity, and accommodations for populations with disabilities are examined for data collection (Chapter 9). Data analysis and interpretation issues are discussed in terms of appropriate use of analytic methods and the impact of analytic technique and results on conclusions and on future directions for research (Chapter 10).

The reader who is interested in actually planning a research study can use the organizational framework in this text in conjunction with any of the research book references presented earlier in this chapter to plan and conduct a research study.

QUESTIONS AND ACTIVITIES FOR DISCUSSION AND APPLICATION

1. What myths in education do you know about that influenced educators to behave in ineffective ways (e.g., physical punishment is a good way to discipline)?

2. How has research been helpful to you in your work?

3. What is your opinion as to the usefulness of research to the parent, teacher, counselor, or administrator in special education?

4. What issues can you identify that are in need of additional research?

5. What trends are occurring in special education that can influence research methodology and topics?

6. What trends are occurring outside of special education that can influence special education research methodology and topics?

7. What questions are being asked or assertions made with respect to the design, delivery, and/or outcomes of special education in your school or school division, by whom, and for what purposes?