



**ADVANCES IN LEARNING AND BEHAVIORAL
DISABILITIES**

VOLUME 19

APPLICATIONS OF RESEARCH METHODOLOGY

**THOMAS E. SCRUGGS
MARGO A. MASTROPIERI**

Editors

G160
A652

ADVANCES IN LEARNING AND BEHAVIORAL
DISABILITIES VOLUME 19

APPLICATIONS OF RESEARCH METHODOLOGY

EDITED BY

THOMAS E. SCRUGGS

George Mason University, Fairfax, USA

MARGO A. MASTROPIERI

George Mason University, Fairfax, USA



E200603690



ELSEVIER

JAI

Amsterdam – Boston – Heidelberg – London – New York – Oxford
Paris – San Diego – San Francisco – Singapore – Sydney – Tokyo

JAI Press is an imprint of Elsevier

JAI Press is an imprint of Elsevier
The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK
Radarweg 29, PO Box 211, 1000 AE Amsterdam, The Netherlands
525 B Street, Suite 1900, San Diego, CA 92101-4495, USA

First edition 2006

Copyright © 2006 Elsevier Ltd. All rights reserved

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher

Permissions may be sought directly from Elsevier's Science & Technology Rights Department in Oxford, UK: phone (+44) (0) 1865 843830; fax (+44) (0) 1865 853333; email: permissions@elsevier.com. Alternatively you can submit your request online by visiting the Elsevier web site at <http://elsevier.com/locate/permissions>, and selecting *Obtaining permission to use Elsevier material*

Notice

No responsibility is assumed by the publisher for any injury and/or damage to persons or property as a matter of products liability, negligence or otherwise, or from any use or operation of any methods, products, instructions or ideas contained in the material herein. Because of rapid advances in the medical sciences, in particular, independent verification of diagnoses and drug dosages should be made

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN-13: 978-0-7623-1295-5

ISBN-10: 0-7623-1295-5

ISSN: 0735-004X (Series)

For information on all JAI Press publications
visit our website at books.elsevier.com

Printed and bound in The Netherlands

06 07 08 09 10 10 9 8 7 6 5 4 3 2 1

Working together to grow
libraries in developing countries

www.elsevier.com | www.bookaid.org | www.sabre.org

ELSEVIER

BOOK AID
International

Sabre Foundation

APPLICATIONS OF RESEARCH METHODOLOGY

ADVANCES IN LEARNING AND BEHAVIORAL DISABILITIES

Series Editors: Thomas E. Scruggs and
Margo A. Mastropieri

Recent Volumes:

- Volume 14: Edited by Thomas E. Scruggs and
Margo A. Mastropieri
- Volume 15: Edited by Thomas E. Scruggs and
Margo A. Mastropieri
- Volume 16: Edited by Thomas E. Scruggs and
Margo A. Mastropieri
- Volume 17: Edited by Thomas E. Scruggs and
Margo A. Mastropieri
- Volume 18: Edited by Thomas E. Scruggs and
Margo A. Mastropieri

LIST OF CONTRIBUTORS

<i>Stephanie Al Otaiba</i>	College of Education and Florida Center for Reading Research, Florida State University, USA
<i>Giulia Balboni</i>	University of Valle d'Aosta, Italy
<i>Jeanine Clancy-Menchetti</i>	Florida Center for Reading Research, USA
<i>Maureen Conroy</i>	Department of Special Education, University of Florida, USA
<i>Samantha Dietz</i>	College of Education, University of Miami, USA
<i>Dimitar Dimitrov</i>	College of Education and Human Development, George Mason University, USA
<i>Jennifer Dixon</i>	College of Education, University of Miami, USA
<i>Elizabeth A. Edgemon</i>	Curry School of Education, University of Virginia, USA
<i>Craig Enders</i>	Department of Psychology, Arizona State University, USA
<i>Rosa García</i>	Department of Developmental, Educational and Social Psychology and Methodology, University Jaume I of Castellón, Spain
<i>Marona Amandla Leaura Graham-Bailey</i>	Peabody College, Vanderbilt University, USA
<i>Brian R. Jablonski</i>	Curry School of Education, University of Virginia, USA
<i>Olga Jerman</i>	Graduate School of Education, University of California, Riverside, USA

<i>Kathleen Lane</i>	Peabody College, Vanderbilt University, USA
<i>John W. Lloyd</i>	Curry School of Education, University of Virginia, USA
<i>Margo A. Mastropieri</i>	College of Education and Human Development, George Mason University, USA
<i>Kimberly A. McDuffie</i>	Clemson University, USA
<i>Marjorie Montague</i>	College of Education, University of Miami, USA
<i>Kelley S. Regan</i>	Department of Special Education, George Washington University, Washington, DC, USA
<i>E. Jemma Robertson</i>	Peabody College, Vanderbilt University, USA
<i>Edward J. Sabornie</i>	College of Education, North Carolina State University, USA
<i>Christopher Schatschneider</i>	Department of Psychology and Florida Center for Reading Research, Florida State University, USA
<i>Thomas E. Scruggs</i>	College of Education and Human Development, George Mason University, USA
<i>Manuel Soriano</i>	Department of Developmental and Educational Psychology, University of Valencia, Spain
<i>Janine P. Stichter</i>	Department of Special Education, University of Missouri, Columbia, USA
<i>Lee Swanson</i>	Graduate School of Education, University of California, Riverside, USA
<i>Andrew L. Wiley</i>	Center for Social Development and Education, University of Massachusetts, Boston, USA

CONTENTS

LIST OF CONTRIBUTORS	vii
QUALITATIVE RESEARCH APPLICATIONS WITH YOUTH WITH HIGH-INCIDENCE DISABILITIES <i>Edward J. Sabornie</i>	1
STATISTICAL ANALYSIS FOR SINGLE SUBJECT RESEARCH DESIGNS <i>Thomas E. Scruggs, Margo A. Mastropieri and Kelley S. Regan</i>	33
VALIDATION OF COGNITIVE OPERATIONS AND PROCESSES ACROSS ABILITY LEVELS AND INDIVIDUAL TEST ITEMS <i>Dimitar M. Dimitrov</i>	55
STRUCTURAL EQUATION MODELING: "RULES OF THUMB" WITH PARTICIPANTS WITH DISABILITIES <i>Giulia Balboni</i>	83
MODERN ALTERNATIVES FOR DEALING WITH MISSING DATA IN SPECIAL EDUCATION RESEARCH <i>Craig Enders, Samantha Dietz, Marjorie Montague and Jennifer Dixon</i>	101
SEEING THE FOREST AND THE TREES: A MORE RIGOROUS APPROACH TO MEASUREMENT AND VALIDITY IN BEHAVIORAL DISORDERS INTERVENTION RESEARCH <i>Maureen A. Conroy and Janine P. Stichter</i>	131

AN EXAMINATION OF SCHOOL-WIDE INTERVENTIONS WITH PRIMARY LEVEL EFFORTS CONDUCTED IN SECONDARY SCHOOLS: METHODOLOGICAL CONSIDERATIONS <i>Kathleen L. Lane, E. Jemma Robertson and Marona Amandla Leaura Graham-Bailey</i>	157
EXAMINING THE EFFECTS OF PROFESSIONAL DEVELOPMENT TO IMPROVE EARLY READING INSTRUCTION: HOW STRONG IS THE CAUSAL CHAIN? <i>Stephanie Al Otaiba, Jeanine Clancy-Menchetti and Christopher Schatschneider</i>	201
READING COMPREHENSION AND WRITTEN COMPOSITION PROBLEMS OF CHILDREN WITH ADHD: DISCUSSION OF RESEARCH AND METHODOLOGICAL CONSIDERATIONS <i>Ana Miranda, Manuel Soriano and Rosa García</i>	237
CONDUCTING INTEGRATIVE REVIEWS OF SPECIAL EDUCATION RESEARCH: OVERVIEW AND CASE STUDY <i>Elizabeth A. Edgemon, Andrew L. Wiley, Brian R. Jablonski and John W. Lloyd</i>	257
MATH DISABILITIES: A PRELIMINARY META-ANALYSIS OF THE PUBLISHED LITERATURE ON COGNITIVE PROCESSES <i>Lee Swanson and Olga Jerman</i>	285
SUMMARIZING QUALITATIVE RESEARCH IN SPECIAL EDUCATION: PURPOSES AND PROCEDURES <i>Thomas E. Scruggs, Margo A. Mastropieri and Kimberly A. McDuffie</i>	315
SUBJECT INDEX	337

QUALITATIVE RESEARCH APPLICATIONS WITH YOUTH WITH HIGH-INCIDENCE DISABILITIES

Edward J. Sabornie

ABSTRACT

The contributions of qualitative research to the study of behavioral-emotional disabilities, mild intellectual disabilities, and learning disabilities (the three types of high-incidence disabilities) are relatively recent and far from abundant. This chapter discusses qualitative, or “naturalistic” research by briefly examining the methodology used in such inquiry, reviewing many of the available studies concerning those with high-incidence disabilities, and providing implications from the existing empirical literature. It is not recommended that qualitative research takes the place of quantitative research in special education, but well-designed and executed naturalistic studies can contribute additional knowledge that is worthwhile to the field.

The impact of qualitative research in special education, in comparison with group or single-subject design studies, is a relatively recent phenomenon. While qualitative inquiry has established a slight foothold in special education, and it appears to be growing in popularity among doctoral students

Applications of Research Methodology
Advances in Learning and Behavioral Disabilities, Volume 19, 1–32
Copyright © 2006 by Elsevier Ltd.
All rights of reproduction in any form reserved
ISSN: 0735-004X/doi:10.1016/S0735-004X(06)19001-1

involved with disability-oriented dissertations, it is still far from the major means of empirical production in the field. Perhaps it is because the majority of special education researchers are not captivated by its contributions, or that most investigators are simply uninformed in using such methodology. Qualitative research has also been somewhat shunned in special education because it has been closely associated with postmodern philosophy, and some leaders in “naturalistic,” or “interpretive” research (e.g., Lincoln & Guba, 1985) believed that it should not be forced to co-exist with quantitative research. Perhaps this latter mentality has trickled down to the masses.

Skrtic (1986) and Stainback and Stainback (1984) served as catalysts for increased interest in “multiparadigmatic” research in special education, although their conclusions regarding the beauty and power of qualitative inquiry were not universally accepted at the time (see Kauffman, 1987; Simpson & Eaves, 1985; Ulman & Rosenberg, 1986). According to Stainback and Stainback, the potential of qualitative research lies in its ability to expand our viewpoint and awareness of students who are identified as exceptional. Without the knowledge that naturalistic research can add to our understanding – at least in the eyes of the Stainbacks and Skrtic – the field of special education is left with an incomplete picture of those with disabling conditions, how they are treated in school and served in the community, what challenges they face in life, and especially how they think and feel.

Many qualitative studies related to those with high-incidence disabilities (i.e., behavioral-emotional disabilities (BED), mild intellectual disabilities (MID), and learning disabilities (LD)) typically include vibrant descriptions of participants and their dialog, and carefully drawn images of the contexts in which phenomena exist that interact with persons experiencing disabilities. The qualitative researcher interviews participants to gain additional personal perspective from an “expert” on the matter under study. The weight assigned to qualitative interviews is usually judged by the trustworthiness of the data related to confirmability, credibility, dependability, and transferability (Guba, 1981). Naturalistic inquiry seeks to “ground” its research focus on a variable examined in an investigation and, in so doing, completely highlight the issue, with imperfections included, through interpretation provided by the researcher. According to some (see Kavale & Forness, 1998; Simpson & Eaves, 1985), it is in the interpretative nature of knowledge production where qualitative research is weakest regarding objectivity and science.

Some qualitative research designs (see below) depend on consistent and multiple direct observations of behavior and its context. In some types of

naturalistic studies the researcher or “inquirer” must completely immerse himself or herself into an environment as a “participant observer” so that all aspects of an environment or phenomenon are felt first hand. For that reason the social context is very important in many qualitative studies. Participant observation is also aimed at providing greater potency to the interpretation provided by the researcher. Some interpretive research uses *triangulation*, which provides for different interpretations of a phenomenon, using many sources of information, and various qualitative data collectors. Analysis of interpretive data can be made easier through computer programs such as *NUD*IST* and *The Ethnograph*, among others. “Member checks,” in which a data collector asks participants to double-check field notes and a researcher’s interpretation of a respondent’s statement, are also found in many qualitative studies (cf., reliability checks in single-subject research). In other words, while Lincoln and Guba (1985) believed that qualitative research need not compete with or co-exist with quantitative research, the two types of inquiry share more characteristics than some would care to admit.

The purpose of this chapter is to examine published qualitative research as it applies to students and people with high-incidence disabilities. A précis of interpretive research methodologies will be provided as well as a review of selected qualitative research studies concerning persons and issues related to those with BED, MID, and LD. Implications from the reviewed naturalistic research will also be offered.

QUALITATIVE RESEARCH METHODOLOGIES

The five most frequently used designs or “traditions” of qualitative research include: (a) ethnography, (b) grounded theory, (c) biographical, (d) case study, and (e) phenomenological (Creswell, 1998). Following is a brief description of the methods used with each type of naturalistic inquiry.

Ethnographic Research

Because of its extensive use in anthropology by Mead (1963), ethnographic research is probably the best known of all the types of naturalistic research. The origin of the participant observer used in many types of interpretive analysis can be traced to ethnographic research, and there are many types of qualitative scholarship that include variations of the theme and methods found in ethnographic inquiry. Those who espouse philosophies such as

postmodernism and Marxism, among other schools of thought, have also adapted and used ethnography to highlight their beliefs (Tedlock, 2003).

The *sine qua non* of traditional ethnographic inquiry is the immersion of the researcher in coterie. What ethnographers attempt to provide is a comprehensive interpretation of all the nuances, ethnicity, and life cycles of a *culture* so that the reader understands the group "from the inside." The data collector uses field notes and observes people going about their daily tasks and rituals, interviews as many participants as possible from all walks of life to gain an extensive array of perspectives, and analyzes such data to expose the culture or group with all its complexity. This type of research is far from easy or ephemeral for in order to uncover all that is endemic to a culture or group requires a considerable time commitment on the part of the ethnographic investigator. Todis, Bullis, Waintrup, Schultz, and D'Ambrosio (2001), for example, studied the life histories of 15 adolescents with behavior and emotional problems over the course of five years (see below). What emerges from an ethnographer's published field notes is a holistic representation of a group with all its successes, problems, and peculiarities.

Grounded Theory Research

Qualitative research based on grounded theory was originally developed in the 1960s by sociologists Glaser and Strauss (1967). In grounded theory inquiry, a researcher formulates questions about a phenomenon, collects data on the item of interest, analyzes the preliminary data and reconstructs the phenomenon, then collects additional data and reconstructs until satisfied and a tentative theory emerges. This iterative process is used to ensure that any theory constructed from the available data is an accurate description of the phenomenon under study. Logistically, it is perhaps one of the more difficult types of qualitative research because of the back-and-forth construction and reconstruction process involved in this type of inquiry.

Grounded theory inquiry requires the researcher to interview participants that are closely involved with a phenomenon (e.g., social skills of adolescents with high-incidence disabilities; see Kolb & Hanley-Maxwell, 2003, below). Such interview data form *categories* that are descriptive of the phenomenon under consideration. Along with the interviews, the researcher may also choose to observe participants interacting with the phenomenon, if possible. At some point in time after interviews have been conducted the researcher begins data analysis that leads to the formulation of preliminary theoretical constructs; subsequent data collection (e.g., interviewing) continues until the research categories are *saturated* and the phenomenon is completely

uncovered in the mind of the researcher. The formation of categories that may change over time with additional data collection and saturation is referred to as "constant comparative" data analysis (Creswell, 1998).

A standard sequence of research steps is followed in grounded theory data analysis. *Open coding* is the first stage whereby data categories and subcategories are formed with the initial data. The next phase of analysis involves *axial coding* in which new categories are formed in addition to what was established in the open coding phase, and the specific context and consequences of the phenomenon are exposed. *Selective coding* follows next whereby categories and subcategories are commingled and the investigator forms a tentative hypothesis concerning the phenomenon. A research report traditionally follows selective coding which attempts to explain the phenomenon in narrative form with numerous excerpts from interviews supporting any hypotheses generated. Students learn in introductory qualitative inquiry courses that any grounded theory researcher is duty-bound to curb subjective views of the construct under examination so that an untainted perspective emerges from a systematic process. Suppression of subjectivity on the part of the researcher, however, is difficult at best because of the personal (i.e., non-software generated) manner in which categories and subcategories may emerge from the multi-step coding process.

Biographical Research

Biographical qualitative research has existed in disability-related interest areas at least since the days of the noted physician, Itard, and the classic examination of his patient, Victor, in the *Wild Boy of Aveyron* (Itard, 1962). Traditional naturalistic inquiry of a biographical nature consists of one person telling a researcher about his or her labors and life experiences, and the investigator then brings such stories to text. Typical of biographical research is a seminal event in a person's life that serves as an axis for personal change, or change of perspective, and this incident is interpreted by the qualitative investigator. Different types of biographical inquiry include oral histories, autobiographies, life histories, and individual biographies (Creswell, 1998).

To begin this type of research, the biographical inquirer explores the available written documents and records of the participant of interest and describes the person in terms of the various stages of life experienced. Written records of another are interpreted and brought to life in the narrative, and the investigator also describes the relationship that he or she has formed with the main character of the biographical study. The majority

of the qualitative data presented in a biographic study, however, are the conversations and interviews between the participant and biographer. When the participant relates that a noteworthy event led to a change of direction or perspective, the researcher typically visits the important place and attempts to comprehend the context of the environment, and describes it in the narrative so that any consumer of the research understands its significance. In other words, the researcher attempts to interpret the critical event for the reader and includes the investigator's own impressions of the incident and its context. The investigator also connects the participant's turning point to the larger world at the time of the incident as well as present circumstances, and generally completes the biography with "lessons learned" (Lincoln & Guba, 1985).

Case Study Research

Case study naturalistic research is often associated with investigations of individuals, but a "case" need not be concerned only with people, but an activity, program, or event that is bounded by place and time (Creswell, 1998; Stake, 1994, 1995). Case studies can examine (a) different types of the same phenomenon (e.g., a few community colleges serving students with LD), (b) one very unique case or intervention (e.g., a special, 4-year college serving only students with LD and those with attention deficit hyperactivity disorder such as Landmark College in Vermont), or (c) one example from a set of similar cases (e.g., the services a "Students with Disabilities Program" office offers at a large, state-supported university).

Researcher and participant observations, interviews of individuals involved with a phenomenon, and archival record examinations are all characteristics of the methodology of case study qualitative research. Also found in this type of research is *purposeful sampling*, the converse of random sampling. The purposeful sampling procedure requires choosing a variety of cases (or informants) that present different views of the same construct in an open-ended data collection time frame. The tactics used in case study research can vary from when a researcher attempts to expose an entire phenomenon (e.g., the efforts of all the general educators serving students with BED in an elementary school), to *embedded analysis*, where a very specific trait of a case is uncovered (e.g., teaching reading to elementary level students with MID in general education classes). Similar to other types of qualitative inquiry, in case study research the inquirer uses extensive field notes and anecdotal records which comprehensively describe the phenomenon and its context and document the chronology of events that touch the

case. The investigator should also include his or her relationship and past history with the case in the narrative. Data analysis involves a broad search for themes and subthemes and couching the results in the social context where the case resides.

Phenomenological Research

Perhaps the most controversial of all the forms of qualitative inquiry in the eyes of the positivistic researcher, phenomenological methodology relies on heavy interpretive techniques and postmodern philosophies (Sabornie, 2004). The following captures the philosophy that undergirds this type of inquiry: "Phenomenologists reject the scientific *realism* (emphasis in original) and the accompanying view that the empirical sciences have a privileged position in identifying and explaining features of a mind independent world" (Schwandt, 2001, p. 191). In this type of research, the investigator describes the subjective statements of participants and structures and derives meaning from such information. Contrary to a quantitative researcher involved in analyzing graphs, behavioral trends, and statistical data, a phenomenologist instead describes subjective feelings and emotions of participants who have interacted in some manner with the same phenomenon. The actual personal reactions expressed by participants are the data source, and the goal of the researcher is to uncover the underlying structure to all the sentiments.

A typical phenomenological study opens with the researcher stating his or hers views toward the construct under study, and how experience has colored the researcher's views toward it. The narrative of this type of inquiry also includes an attempt by the researcher to see the phenomenon through the eyes of the participants, and to derive new or different meaning from the view of the contributors. The inquirer attempts to experience the construct in the same way as the participants, and conducts interviews with participants before, during, and after contact with the phenomenon. Important participant statements (in the eyes of the researcher) describing the phenomenon are chosen and analyzed to determine if themes emerge to indicate some new or uniform structure to the comments. In a phenomenological narrative the researcher organizes the discourse assuming that participants' subjective impressions of a construct, event, or incident have a specific structure, and the configuration of the contributors' emotions is revealed.

Similar to the variety and combinations of research designs shown in quantitative and behavioral inquiry, the five types of qualitative research designs discussed above have many variations (e.g., action research, critical

theory research, discourse analysis, focus group research, narrative research, quasi-life-history research; see Brantlinger, Klinger, & Richardson, 2005). One should also keep in mind that the origin of the five qualitative traditions was not in education but in other social sciences such as sociology, psychology, anthropology, and even political science (Creswell, 1998).

Except in studies involving issues pertinent to LD, there is very little subject matter pattern to the extant interpretive research involving youth with high-incidence disabilities. In light of this shortcoming, the studies concerning issues in BED and MID that are reviewed below are presented without regard to a specific subject matter (i.e., dependent variable); discourse related to excellence of design and execution, and magnitude of contribution of the studies, is found below in the conclusions section. Last, many studies included in the review did not specifically examine actual students or persons with high-incidence disabilities but rather chose to examine issues and phenomena related to the participants with BED, MID, and LD.

RESEARCH CONCERNING BEHAVIORAL-EMOTIONAL DISABILITIES

Because the source of most special education inquiry is in applied behavior analysis and quantitative, group design statistics, the amount of qualitative research involving any one group of students with disabilities is not voluminous. This is especially true of research involving students with BED, and most of the available naturalistic studies originate somewhat recently in the 1990s and early 2000s.

Crowley (1993) used an ethnographic design to examine the perceptions of six adolescents with BED toward helpful and harmful teacher behaviors in general education classes. The participants had a history of aggression in school, and they spent at least one period per day in a general education classroom. The author conducted between four and eight 50-min interviews of each participant over a period of six months. Crowley asked the adolescents specific questions during the audiotaped interviews (e.g., "What kinds of things do teachers do that you find helpful in your general education classes?"), and also used direct observation of the participants (i.e., in 36, 50-min sessions) in the general education settings. Borrowing from applied behavior analysis, Crowley also performed interrater reliability checks of the observational data collected.

Six themes emerged from the extensive data collection: Three (i.e., teacher-student communication, flexible academic programming, and flexible