

CHILDREN'S ISSUES,
LAWS AND PROGRAMS

Research Methods for Children

Laura Anne Nabors

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RESEARCH METHODS FOR CHILDREN

LAURA ANNE NABORS



New York

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FROM A DECLARATION OF PARTICIPANTS JOINTLY ADOPTED BY A COMMITTEE OF THE AMERICAN BAR ASSOCIATION AND A COMMITTEE OF PUBLISHERS.

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RESEARCH METHODS FOR CHILDREN

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PREFACE

Research with children is an invaluable way to tell their story in their own words. Research documenting ideas about children from parent and teacher perspectives is valuable, but in itself, does not tell the story from the child's point of view. Thus, the purpose of this book is to develop a book for those interested in conducting research with children, to document their voices and perceptions. It is very important to remember that there are many, many great references out there about research with children. This author had to select some references for the statements she made. This was very challenging! There are many, many well-written documents and texts and the reader is encouraged to open the door to a world of knowledge by reading other research articles and books that provide valuable insights into the developing child.

Each chapter in this book is intended to provide a summary of ideas that will help the reader in thinking about research for children, from their perspective and telling their story. This author spent time during graduate school wondering why so much information about children was presented from the adult perspective. This information is terrific and educational, but it does not tell the "whole story" in the "child's own words" or from the child's perspective. This observation has lead to a research track for this author, wherein she has tried to focus the "knowledge camera" if you will on children's perspectives of their development and their world. This is the foundational idea for the development of this book.

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Chapter 1

LEARNING ABOUT RESEARCH WITH CHILDREN

This initial chapter serves to orient the reader to the author's perspective on the importance of research for children. Research with children has a long history in the developmental literature. However, a great deal of the research about children is from adult perspectives, namely teachers and parents. The views of parents, teachers, and other professionals are invaluable and provide a rich source of information about child development and critical issues faced by children and their families. Assessment of children's points of view is often more difficult. Often this occurs because children are less verbal and cognitively advanced than adults (Niditch & Varela, 2011). Although this is the case, children's points of view remain a valuable source of information about their lives and about what is happening in their family. Consequently, when conducting research with children, it is critical to include their views of their own development and this can be accomplished using interviews and surveys as well as other methods that will be presented in this book.

WHAT IS A RESEARCH PROJECT?

Research conducted "for children" answers a question of interest and points to a story of what is happening to thoroughly answer a question of interest to the researcher. It is the researcher's goal to select a question that matters, and has relevance to understanding more about child development and functioning. When a research project is well-designed it answers a question.

When a researcher develops a program of research and conducts several studies in a field of interest, he or she begins to develop a “good story” to contribute to knowledge in the field. A good story has to follow some key principles. It must be “true,” which is a key goal of the scientific method (Campbell & Stanley, 1963; National Research Council, 2002; Rothman, 1988).

A research project is understandable and well-planned. This means that the study is well-constructed and others can reproduce or replicate the project. In order to do this the researcher has to develop a good explanation of the research methods, study procedures, study participants, and research tools or measures used to gather data. To orient the reader about the research question and the available information about this question, the researcher has to review the literature in the field and provide a detailed argument, as a detective would, about available evidence in the field and questions that remain to be answered. Questions that remain to be answered may be thought of as research gaps. Gaps in knowledge can be “filled in” or answered in a well-constructed research study.

A research paper is the “map” that tells one the story of the research. Research maps or papers are typically written in a format that helps the reader to understand the map. There are several key sections to a research paper. They are: the introduction, methods, results, discussion, and references. Ideas about what should be revealed or written in each of these sections to create a map of the project will be discussed in the following sections of this chapter. In addition, ideas for reviewing each of these sections in journal articles will be presented.

Introduction and Literature Review

The introduction section of a paper presents the literature review (see Hart, 2003 for detailed ideas on writing literature reviews). In this section the researcher presents a review of the literature about the research area of interest. As this section is developed, the writer narrows his or her focus to the gaps or unknown information in the literature that needs to be learned. The end of this section often concludes with the research aims or purpose(s) of the study followed by specific research questions.

One method for learning about introduction sections to research papers is to read articles in peer-reviewed journals. Peer-reviewed journal articles are recommended for publication after review and critique by fellow researchers

with expertise in the field that the manuscript addresses. Some well-known peer-reviewed journals in children's research include: *Child Development*, *Developmental Psychology*, *Journal of Adolescent Health*, *Journal of Clinical Child and Adolescent Psychology*, and the *Journal of Applied Developmental Psychology*. These are just a few of the many excellent journals in the field. One way to begin to receive a journal to read is to join a professional organization. When one joins a professional organization as a student, it is often the case that part of membership benefits is receiving a copy of the organization's journal when it is released, for example, quarterly or monthly. Review of articles in the journal is a great building block for learning how to write a journal article.

The introduction often begins with a statement of the problem in the area, or why the area is a critical field for study for learning about children. After this, research in the area is reviewed and the general conclusions and ideas for generating research to add knowledge are discussed. Table 1 presents some key questions to ask yourself when you read the introduction section of a manuscript.

Table 1. Questions to Ask When Critiquing and Introduction

• Does the statement of the problem appear early in the introduction?
• Is the problem of value in terms of improving theory in the field?
• Does the author present a theory or theories that are important to help you understand a phenomenon or area that is critical to child functioning?
• Can one tell the importance of the area of study for some aspect of child development or functioning?
• Is the statement of the problem well-supported by the literature in the introduction?
• Is the problem important and necessary to address?
• Does the introduction review gaps in research knowledge that current studies have not filled?
• Is the research question or questions clearly described and do you feel you have knowledge of background research in this area?
• Is the writing clear and organized?
• Does the writing narrow from the importance of the topic, to knowledge in the field, to gaps in the literature, to important research questions to be examined in the current study?

When reviewing the research aims or purposes and hypotheses at the end of the introduction several questions help the discerning reader to review the proposed study, as a reviewer's ultimate goal is to judge the scientific merit

and contribution of the research study that he or she is reviewing. This often entails making decisions about the selection of independent and dependent variables, which are presented in hypotheses or research hunches (Greig & Taylor, 1999). The independent variable is a “change variable.” It is the factor or variable that will change and cause some type of effect. The dependent variable is the effect or outcome variable that the researcher wants to see changed. Specific definitions about how each variable is assessed or measured should also be provided. These “operational definitions” provide the operations or specifications for assessment of change in the independent and dependent variables. These hunches can be constructed in an “If...[such and such a change in an independent variable], then....[such and such of a change will occur in the dependent variable] format.” For example, “If a child has nurturing parents, then chances are that he or she is more likely to experience positive emotional development.” This is an appropriate if, then statement, but lacks clarity, because one has difficulty understanding the change variables and the outcome variables. Hypotheses should be specific and measureable. Thus, a better way to construct the previously mentioned hypothesis might be, “If parents use praise on a daily basis and avoid punishment, their children will have higher levels of self-esteem.” The independent variables can be “operationally defined” or assessed – number of times the child is praised each day and number of times the child is punished. Likewise, the dependent variable can be operationalized as change in child’s positive feelings in his or her abilities or about him- or herself as a person that is measured on 12 question self-esteem survey completed by the child. Some questions that one can ask to evaluate the nature of the hypotheses in an introductory section of a manuscript are: (1) are the hypotheses specific enough?, (2) Are the independent and dependent variables defined?, and (3) Is the literature reviewed in the introduction specific and does it lead one to understand and consider the researcher’s hypotheses?

Methods: Participants, Measures, and Procedures

The research methods section is the “nuts and bolts” of the mapping process that a researcher uses to tell the research story. Parts of the map, which allow a reader to find his or her way through the study, are a precise definition of the participants, the measurement tools used to assess change in study variables, and the procedures used to run the study. If this map is well-written, then another researcher could potentially reconstruct and redo the study to

“check in” on the findings, which is called replication. Let’s begin with thinking about what should be included in a “Participants” section. First, the number of participants should be presented along with a breakdown of key demographic or background variables about study participants. Some of the key demographic variables include: gender, ethnic group, and age of the participants. Other factors can be critical too. For instance, if one is studying a group of participants that have chronic illnesses, another key background factor becomes type of illness for each participant. Perhaps it is important to include information on a child’s grades or the region of the country where the child resides in this section. Finally, it is recommended that researchers report whether the study was approved and at many institutions research is approved by an “Institutional Review Board.” This board is made up of researchers and other representatives who review the research study and make sure it is ethically sound and that participants know that their participation is voluntary. A sentence or two showing that the study was approved may appear at the end of the participants section.

The next important section describes study measures or instruments. This section describes the surveys, interview tools, or observational methods used to gather data for the study. Several factors contribute to making this section “work” or become comprehensible. Some questions one could consider for the measures section are provided in Table 2.

Table 2. Questions for Judging the Measures Section

• Were the measures the right ones to select, given study hypotheses and what the authors hoped to accomplish in conducting this study?
• What other measures could have been used?
• Were the measures appropriate for the subjects who participated in the study?
• Did the researchers develop or “make up” their own measure?
• If they did make it up, do they have any statistics to check the reliability and validity of their measure?
• Were standardized measures used that have an evidence base to support their use?
• Were the measures too long?
• Could the measurement have been improved in any way
– Such as by using multiple methods, such as behavior observations, self-report, teacher report or parent report?

A final section in a “basic” methods section of a manuscript is the procedures section. It is a nuts and bolts description of the steps in conducting

the study, from recruitment of participants, administering consent and assent forms (parent and child permission forms for study participation), to administering study measures. It is important to write clearly and succinctly each step the researcher or research team took in running the study. Describing how follow-up measurements were conducted, which often occur after an intervention, such as teaching children social skills, can provide a window on how “outcome data” were collected for the study. The procedures are a blueprint of the study “steps” which can then be judged to ensure that bias or other variables are not operating to impact the influence of the independent variable or variables on the dependent variable. Table 3 presents ideas of questions one could pose when evaluating a procedures section. The fourth bullet point in Table 3 refers to threats to validity, which are threats to the design of the study that could influence study findings such that one could not conclude that the independent variable induced a change the dependent variable.

Table 3. Questions to Guide Evaluation of the Procedures Section

• Were the procedures appropriate? Did any factors negatively impact the steps in conducting the study?
• Could another researcher replicate the procedures or the study?
• Should procedures have been different? For example, would an interview have been better or yielded more information than a survey?
• Could any confounding variables (or factors that the researchers did not study or measure) be influencing the relationship among study variables OR among the independent and dependent variables in the study?

One can tell a lot about the “ethics” or fair practices for conducting a study from the participants and procedures sections. Participants should be able to withdraw from the study, should not receive undue influence, such as large incentives, that might cloud their judgments about participating, and participants should not be harmed by data collection methods or by answering questions or participating in observations used in the study. A detailed discussion of ethnics in research with children is beyond the scope of this chapter. Readers interested in a detailed review of this type of information might like to review a book entitled, “Ethical Issues in Mental Health Research with Children and Adolescents,” by Kimberly Hoagwood, Peter Jensen, and Celia Fisher (1996), which is one of many well written and informative textbooks reviewing ethics in the conduct of research with

children. Sales and Folkman (2000) also present a thorough review in their book entitled, "Ethics in Research with Human Participants."

Results or Study Findings – How Did It Go?

The results section of a paper tells one how the study went and whether hypotheses were supported or correct. In this section, the researcher needs to present findings clearly. Questions that one can ask when reviewing this section are: (1) Were the statistics used to analyze the data appropriate? (2) Did the researchers have enough subjects to use the statistic that they selected? (3) Were significance levels and the direction of the results presented? and (4) Should they have included more descriptive information or analyzed other information? As a novice, this section is often the most difficult to analyze. When one is stuck understanding results, good advice is to "consult." That is ask a colleague or statistician about the appropriateness of the statistics used and whether the statistics used were appropriate to use with the data gathered for the type of research question under study. The presentation of tables or figures can help one understand the "highs and lows" of the numbers and what they mean. Tables should enhance the data presented in the text and add greater clarity to the readers' understanding of what happened when the study was conducted.

Discussing Study Findings

The discussion section describes the results in terms of the information presented in the literature review (Skelton & Edwards, 2000). The first paragraph of the discussion summarizes the main findings or "punch line" of the research project and provides a statement about how the research project answered the main research questions under investigation. Following this key introductory paragraph the authors should describe each aspect of their statistical results in detail, while making reference "back" to information presented in the literature review to show that each finding did or did not support key information available in literature in the field of study. After reviewing each key finding and the theory guiding the research, the next item in the discussion section often is "limitations of the current study."

In this part of the discussion section, the researchers point out the shortcomings of their research study and offer explanations for other

confounding (or extraneous, unmeasured variables) that may have influenced study findings. Many things can influence research with children. For example, if the study was conducted over a period of time, let's say a year, did the child change because he or she participated in an intervention, such as therapy, or did the change occur simply because the child matured? Did any type of "people-pleasing" or social desirability bias possibly impact findings? A social desirability bias could occur if a child gives positive responses to questions to present him – or herself in a favorable light to "please" or "sound positive" for the examiner, who is often considered by the child to be a "respectable, wise" person. Was there something that the researchers forgot to measure that they should have measured? Did something happen—"not according to procedures" or the plan of the study—to change study findings? These are key questions to address in the limitations paragraph or section of the discussion.

The discussion section typically ends with a concluding paragraph or more that describes the "take home message" from the study findings: what key findings were, how the study advances literature, and how the study contributed to our knowledge about children.

This is one place where the researcher can introduce his or her notions of what happened in the study. The researcher also can point out directions to inform the field or for the next study that will move research in the field forward. One way to summarize this key paragraph is to think about whether the authors addressed these four ideas: (1) summary of key study findings, (2) literature supporting study findings, (3) state the implications of findings, and (4) present ideas for directing future study in the field. It may be helpful to use the acronym SLIP for "slip in your main message" to remember the key components – "S" for "*Summary* of key findings," and "L" for "does *Literature* in the field support key findings for the study", and "I" for consideration of whether the researcher discusses the implications or meaning of his or her study for children or the key group the research study was designed to help, and finally, "P" for whether the researcher "*Presents* ideas for directing future research in the field."

The ideas presented in this chapter were designed to help one think about key sections in a research paper. Reviewing research papers is a first step in understanding the design and conduct of research and how to write about a research study. Table 4 presents a table that presents key items to address when reviewing a journal article.

It is recommended that students use this type of table, along with the questions reviewed in this chapter, as a checklist to jot down ideas for an

article review. This chart serves as a guide to writing an article review, which pulls together the reviewer's thoughts and analysis of the scientific rigor and quality of an article.

Table 4. Table to Assist in Finding Critical Information when Reviewing a Research Article

Introduction	Method	Results	Discussion
Thorough literature review?	Participants – could you clearly understand “who” was recruited? Was there any bias in recruitment methods or the sample? Was there information on Institutional Review Board approval to satisfy ethical concerns?	Could one tell what data analysis method was used?	Were findings clearly discussed, with references to relevant explanatory literature from the introduction?
Were gaps in the literature mentioned?	Measures – were measures clear and did the measures have clear information about their utility or reliability and validity?	Were statistical analyses clearly described and were p values and statistics reported correctly?	Were key findings discussed and explained? Could one easily understand which hypotheses were supported and which were not?
Were research questions understandable and would they move the field forward?	Procedures – were the steps of the study clearly identified so that one could replicate or redo them? Were there any flaws in the steps of the study that could have confounded (e.g., confused) study results?	Should any other statistical analyses have been conducted?	Were adequate study limitations and directions for future research presented?

SUMMARY

Students of the research process can begin to learn how to tell research stories by reading papers in peer-reviewed journals in the field. Participating in discussion groups and class discussions about a research project can be a “brainstorming” method that scaffolds student learning about how to conduct and write about a research project. Another way to learn about research and