

Research 101: Tools for Reading and Interpreting Early Childhood Research

Angela C. Baum^{1,3} and Paula McMurray-Schwarz²

Studies suggest that the quality of a child care setting can have important implications for children's development (Howes, Phillips, & Whitebook, 1992).

Research demonstrates an important link between parent involvement and young children's literacy development (Fitton & Gredler, 1996).

Findings suggest that opportunities for recess can have a positive impact on children's cognitive performance and adjustment to school (Pellegini & Bohn, 2005).

Research findings, such as those in the above examples, provide us with important information. As teachers, we frequently hear or read such statements and consider them as we make daily decisions about what is best for the young children with whom we work. To those without specialized training in research methodology, however, the task of reading and interpreting original research can be intimidating and confusing. The language is sometimes difficult to understand and the format may seem incomprehensible. The purpose of this article is to help make the research reading experience more manageable. This editorial breaks the typical research manuscript down into several parts and offers a brief description of the purpose of each, as well as some tips for developing more clear interpretations and understandings.

WHY IS READING RESEARCH IMPORTANT?

Research Guides our Decision-Making

Every day, teachers of young children are faced with the task of making many decisions. These decisions range in complexity; deciding what to serve for snack may be relatively easy, but deciding how best to support a child who is struggling to develop positive relationships with her peers poses more of a challenge, one that requires careful thought and reflection. Research can be a valuable resource as we strive to provide high quality care and education for young children and their families. Consider the following example. Mr. Frank, who has taught third grade for five years, has a clearly defined guidance plan for his classroom. As a consequence for off-task behavior, he requires that children make up the wasted time during their scheduled recess period. This seems to be working well. The children love recess and will try to avoid losing even a few minutes of their favorite part of the day. Recently, however, Mr. Frank read a research article describing the positive impact that experiences during recess can have on the development of children's social skills. The article described recess as a time where children learn to negotiate, take turns, and consider another's perspective (Jarrett, 2002). After some consideration, Mr. Frank has decided to re-evaluate his recess policy. He has decided to find another method of discouraging off-task behavior; one that will not deprive children of important opportunities for social interaction. Mr. Frank found that research findings influenced his philosophy about guidance and decided to alter his practices to reflect his newfound understanding. As illustrated by this example, reading and reflecting on research can help teachers ensure that their decisions surrounding their work in the

¹Instruction and Teacher Education, University of South Carolina, 820 Main Street, 107 Wardlaw, Columbia, SC 29208, USA.

²Health and Human Services, Ohio University-Eastern, 4525 National Road, 341 Shannon Hall, St. Clairsville, OH 43950, USA.

³Correspondence should be directed to Angela C. Baum^{1,3}, Instruction and Teacher Education, University of South Carolina, 820 Main Street, 107 Wardlaw, Columbia, SC 29208, USA., e-mails: bauma@gwm.sc.edu; mcmurray@ohio.edu

classroom reflect current knowledge and understandings regarding best practice.

Research Strengthens Our Work as Advocates

Knowledge of current research is also important as we become advocates for young children by communicating with families, community members, and policymakers. In order to be effective in advocating for best practice in our schools and programs, we must be well informed and provide evidence in support of our opinions. As stated by Crosser (2005), "There must be a body of knowledge supported in research that indicates what is best practice. Decisions in classrooms and board rooms need to be based on that body of knowledge rather than on simple opinion, gut feelings, and common sense" (p. 4). In my work with preservice teachers, I often share the following example to illustrate this point. Many of us have heard comments such as, "I wish my major was Early Childhood Education. All you do is play all day." It's true...we do play... a lot. But effective educators know that play is an important part of developmentally appropriate experiences for young children (Bredekamp & Copple, 1997). Many research studies suggest that children learn most effectively through play-oriented activities (Edwards, 2002). While we, as early childhood educators, do not need to be convinced of the importance of play, we may be required to convince others. This requires us to explain *why* play is best practice. Beyond simply being fun, how does it benefit young children? Many studies have been conducted that help us answer this question and we should take advantage of this information. In a climate of increased accountability, it becomes an important responsibility to communicate these findings and their applicability as we strive to be effective advocates for young children (Crosser, 2005).

Research Enhances Our Professional Development and Growth

Research also can play an important role in our professional development and growth as early childhood educators. Katz (1995) states that after beginning teachers have become skilled at basic survival in the classroom, it is not uncommon for them to seek ways to expand their knowledge and develop a renewed sense of enthusiasm for their work with young children. Often they may become interested in

participating in professional development activities, such as professional reading, to explore new ideas, strategies, and philosophies. As high-quality teachers of young children, we have committed to a life-long learning process. Reading educational research challenges us to avoid complacency as we strive to continually improve the quality of early experiences for young children.

THE RESEARCH ARTICLE

Introductory Information

While the first thing you probably notice about a research article is its title, you should also take a moment to consider who wrote the article, as well as who published the piece. While this may seem fairly straightforward, it can offer some important information. For example, when noting the author and publisher information, it is useful to look at whether or not they may be associated with any particular interest group. It makes sense to use this information as a way to identify any possible source of bias in the research study. For example, Crosser (2005) suggests that an organization may not necessarily be likely to publish findings that are contrary to their mission or that government agencies may be more likely to report findings that reflect their political priorities or policies. While affiliation with a particular interest group does not automatically discredit or reduce the validity of the study, it is important information to consider as you make decisions about the applicability of the findings.

Abstract

An abstract provides a short (usually 100–150 words) overview of the purpose of the study. Often the abstract also contains information regarding the methods used to conduct the research, as well as some of the main findings of the project. The abstract provides a manageable way to decide if you are interested in reading the article in its entirety. Ask yourself...does this article provide the information that I am searching for in relation to my practice or interests? If so, you should move forward and read the article in its entirety. An important point to keep in mind is that reading the abstract should never substitute for reading the complete article. You should not rely on information in the abstract as the final word on the topic. It is important to read the full article in an effort to obtain a clear picture of what

the author is trying to communicate and for you to make personal judgments about the importance or quality of the research findings. In essence, an abstract is an important tool that can save you the frustration of investing precious time in reading a full article, only to find that it doesn't really provide the information you were seeking.

Literature Review and Purpose

Most research articles begin by explaining the rationale for the author's chosen topic of study. This typically involves describing what is currently known about the topic of interest, sometimes including a brief overview of other studies that have been conducted in the area. This is done to provide a framework for the current study; a reason that the topic needs to be explored. In other words, the author explains what is already known about the topic as a foundation for the next logical step of exploration. Usually, this "next step" is the purpose of the current article. It is common for this section to include (often toward the end) the research questions that the author is attempting to answer in his or her research. Upon the completion of this section, you should be able to answer the following questions: What is the researcher trying to accomplish? What is currently known about this topic? Why is this topic important to explore?

Methods and Procedures

Once the research questions are established, the researcher must decide *how* to proceed in answering those questions. It is important that these methods are clearly explained, allowing the reader to make decisions regarding the quality and applicability of the researcher's findings. Do you believe that the researcher used the best possible methods to gather the data? Do the findings of the study seem to be applicable to your situation? Consider the following scenario. Mrs. Telmer teaches second grade in an urban school district. The children in her class come from diverse backgrounds and all of their families' incomes fall below the poverty level. Mrs. Telmer has recently become interested in exploring some new strategies to help the children in her class improve their reading skills. During her research, she comes across an article describing the implementation of an innovative strategy to teach reading to young children. Upon reading the abstract, Mrs. Telmer discovers that the authors found many benefits

when implementing this new strategy, including improved scores on reading tests and an increase in children's interest surrounding reading activities. While Mrs. Telmer believes that this sounds promising as an option for the children in her class, she decides to read the full article to learn more. She makes an interesting discovery. When reading about the methods used to gather data, Mrs. Telmer found that the authors conducted their study in a suburban area primarily inhabited by Caucasian families with middle to upper income levels. After some thought, Mrs. Telmer begins to wonder if the children in her class would experience the same benefits. Their daily lives are so different from the lives of the children in the study! Would this strategy work for her children, too? While she understands that this difference doesn't necessarily mean that the study isn't worthwhile, she decides that she must do some further research before implementing this new strategy in her classroom.

Analyses and Results

After the researcher collects data, he or she must decide what the data mean. As a reader of research, this may be the place in the article where you are tempted to give up. There are endless ways to analyze data, many of them involving complicated statistical methods and analysis techniques. Entire classes are devoted to these strategies and it is beyond the scope of this article to delve into the "nitty-gritty" of statistical analysis. The goal here is to encourage you to forge on even if this information seems incomprehensible. You may ask, however, "How can I develop confidence in the researcher's findings if I don't understand the processes used to analyze the data? This is a valid question and may inspire you to pursue some additional training in the understanding of statistics. Statistics courses are not for you? This does not mean that you can't read research articles and benefit from them.

There are other ways to evaluate the quality of data analysis. One way is to examine the medium in which the article is published. Often there are measures in place to ensure that the study is statistically sound before it is published. For example, articles appearing in refereed journals are not published until they have been reviewed by a panel of experts and an editor. If there are questions related to the appropriateness of analysis techniques, it is likely that the issue will be addressed before it is even in print. This

is not a failure proof method, of course, but it should instill confidence in the reader that the article has most likely been reviewed by someone who has expertise in the area.

Discussion, Interpretation, and Implications

Once you have successfully waded through to this point, you will likely find this to be the most useful section of the research manuscript. In this portion of the article, the researcher examines his or her analysis and offers interpretations and explanations as to what the results might mean. This section often includes advice or suggestions, based on the findings, that are useful for the reader when incorporating the research into his or her work with young children. This section also allows the researcher to discuss variables that may have influenced the results and offer explanations for why the findings are significant. Additionally, this section may include suggestions for others wishing to continue this line of research in the future. After completing this section, you will have an idea of what the researcher believes is the important information to take away from the article.

After reflecting on the author's perspective, the final and most important question to ask yourself is "What does this mean to me and how does it impact my work with young children"? High quality research is useful. It should allow us to become better educators and improve experiences for young children. It should encourage us to think about current issues in the field and ways that we can apply this knowledge in our work with children and their families.

SUMMARY AND CONCLUSION

As early childhood educators, it is our professional responsibility to be aware of current advances in the field. An important piece of this involves reading, evaluating, and implementing educational research. This process may seem overwhelming at times, but remains a crucial aspect of our work with young children. This article provides information that can serve as a first step to becoming actively involved in the process of utilizing research as a means of strengthening classroom practice. When coupled with other available resources such as reviews and handbooks of research, reading research allows us to better align our practice with the field's most current knowledge and understandings of best

practice. In closing, the following list provides a summary of questions to ask while reading research and can serve as a tool to guide your thinking as you explore ways to enhance your teaching by developing a foundation of research.

Introductory Information

- Are the authors or the publishers associated with any special interest groups?

Abstract

- What information is provided in the abstract?
- Do you want to take the time to learn more about this study?

Literature Review and Purpose

- What is currently known about this topic?
- What is the purpose of the study?
- What are the research questions?

Methods and Procedures

- Who are the participants in the study? What are their characteristics?
- How did the research(s) collect data?

Analyses and Results

- How did the researcher(s) analyze the data?
- What are the results of the research study?

Discussion, Interpretations, and Implications

- How did the researcher interpret the results?

Finally, and most importantly, ask yourself...

- What does this mean to me and how does it impact my work with young children?

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