Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

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ABSTRACT

The use of data to inform instruction may appear to be instinctive, but the reality is that teachers continue to struggle with identifying the most effective ways to manage and use data that is collected for a group of students with diverse needs. Data-driven decision-making (DDDM) refers to the process by which teachers collect and use childrens' performance data to plan instruction that meets the needs of a diverse group of children. While DDDM is required by federal law and is foundational to recommended practice, there are few studies that seek to examine the use of DDDM in whole or in part, particularly as part of a comprehensive tiered instructional model. Further, of all the research that does exist regarding DDDM and/or tiered models of instruction, there are no studies that have sought to understand the meaning teachers attach to this process, or the ways in which resources and supports may impact a teachers' effective use of this process. The proposed phenomenological study will explore the experiences of six preschool teachers that use DDDM within a tiered instructional model to meet the diverse needs of their respective classrooms. Data will be collected through field observations and in-depth interviews. Results of the proposed study will provide needed context regarding the benefits and challenges of successful implementation of this practice. The study will offer a unique and valuable perspective to the limited existing literature regarding DDDM and tiered models of instruction in inclusive early childhood classrooms.

KEYWORDS: data collection, data management, data-driven decision-making, tiered model, performance monitoring, preschool

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RESEARCH NARRATIVE: INTRODUCTION

The proposed research is a phenomenological study of teachers that identify themselves as using the process of data-driven decision-making (DDDM) to inform instructional planning within a tiered model. Two main questions frame the proposed study: a) in preschool classrooms that utilize a tiered model of instruction, how do teachers experience the data collection and decision-making process?, and b) how do they perceive the supports and resources available in the school, district, or community? I have chosen these questions so that I can obtain rich, meaningful accounts of how tiered models of instruction driven by DDDM are experienced by the teachers using them. My broader, overarching goal is to better understand the extent to which these systems and processes are successful in improving the performance of preschool students; however, I believe that a contextual investigation that seeks to derive meaning from the way teachers experience implementing a tiered model using DDDM will assist the field of Early Childhood (EC) in identifying more general themes of successes, barriers, and surrounding school environments in which these systems are currently situated.

I want to focus on DDDM as part of a tiered model as opposed to other aspects of these models such as assessment, scope and sequence, or activities and instruction because I believe that data management is an integral aspect of effective teaching and therefore encompasses the aforementioned aspects of the tiered model. The collection and management of data is fundamental to all classroom activity given that that collecting performance data is necessary for both assessment and routine performance monitoring, in addition to informing the scope and sequence (as well as the selection) of activities and instruction. Not only does it reduce complication to place my focus on data collection and management specifically, but it also

serves to illustrate why it is so central to successful instruction. That said, the purpose of the study it is to examine and attempt to describe, document, and understand the contextual and situational factors, characteristics, and influences that surround classrooms that engage in tiered systems of data management. Both of the selected research questions, and the data that is gathered from them and thus the findings that emerge, will provide us with great context about how teachers using a tiered data management system implement and perceive the system as well as the types of schools they find themselves in. In an immediate sense, this can help researchers to consider ways that teachers might best be supported to implement such systems. On a larger scale, the findings can provide enlightenment regarding the use of tiered systems of data management as well as how they are perceived in relation to other methods of data collection and accountability.

Framework

The proposed study is grounded in a framework that draws upon current issues facing the field of early childhood today. It draws heavily from emerging research on the concepts of tiered instructional models and data collection practices. The proposed research is informed by an interpretive, phenomenological view of the phenomena under investigation. The following sections situate the proposed study in this framework.

Significance. Accountability is a huge political issue in the schools with serious ramifications for teachers and students alike. Unfortunately, the accountability movement has done little to improve student performance for children at-risk or with disabilities, and not because all teachers of children with special needs are ineffective. Rather, the way we hold teachers accountable is flawed and based on a narrow conception of success (i.e., standardized test performance). It can be challenging for educators to collect and use data from standardized,

norm-referenced tests. Standardized, norm-referenced tests require data to be collected on all children, at the same point in time, and on the same content or concept. Results from the test must be considered in comparison to similar children in similar circumstances. Unfortunately, often norming samples do not adequately represent minorities or children with special needs (McAfee & Leong, 2007).

Further, particularly for children at the preschool level, standardized testing is often inappropriate given young children's inability to attend for long periods of times the myriad of ways they are prone to demonstrate their skills and understanding. Therefore, it is important we provide stakeholders with an alternative means of accountability that allows teachers to best assess and determine children's functioning and thus provide instruction that sets them up for success. Utilizing systematic data management methods that evaluate students holistically and according to their level of need is key. Tiered data management is one way to do just that.

The terminology 'progress monitoring' and/or 'performance monitoring' are currently used as part of some accountability practices; unfortunately, an over-reliance on curriculum-based measurements for all students at specified times and without regard to their unique needs too often renders their results (and subsequent instructional decisions) futile. Nevertheless, routine and ongoing performance monitoring is necessary for instructional success. My personal belief is that tiered data management (as part of performance monitoring efforts) is likely to be the most effective means of providing children with the opportunity for success while simultaneously offering an alternative and more justifiable form of accountability. I know from personal experience (e.g., working with teachers that have utilized this method, consulting and speaking with experts, and collaborating on this topic for numerous manuscripts, conference presentations, etc.) that tiered data management is an exceptionally promising practice, and I

hope to provide further justification for its use. The stakes are incredibly high and the longer we allow children to lag in an educational system that does not identify and strive to meet their individual needs routinely (for children with and without disabilities), the more children will slip through the cracks and miss out on opportunities for successful learning.

The Accountability Movement. The field of early education and early intervention is under a transformational change. While still embracing the notion that all teachers have a commitment and desire to foster children's development, national, state and local entities have developed standards and outcomes for early education and early intervention (Early Childhood Education Assessment (ECEA), 2007; US Department of Education, 2002; The Early Childhood Outcomes Center, 2005). The implementation of these standards and the underpinnings of accountability for all teachers is a driving force permeating all levels of education (Obiakor, 2009). In 2000, the Administration for Children and Families required children in Head Start to work towards specific outcomes within each major content domain prior to entering Kindergarten. The outcomes included approaches to learning, creative arts, language development, literacy, mathematics, physical health and development, science, social and emotional development (Head Start Child Outcomes Framework, 2000). In 2002, Congress authorized No Child Left Behind (NCLB), which prompted the passage of the *Good Start, Grow Smart* initiative (Good Start, Grow Smart: Executive Summary, 2002). This initiative urged states to develop early learning standards within the areas of literacy, language, and mathematics. To date, 49 states and the District of Columbia have developed these standards, with additional states making strides toward developing their own early learning standards (CCSSO State Collaborative on Early Childhood Education Assessment, 2008).

The Office of Special Education Programs requires the reporting of data for all children

receiving special education services under Part C or Part B/619 of IDEA on specific child outcomes. Data on the following outcomes must be reported: (a) positive social relationships, (b) acquisition and use of knowledge and skills, and (c) whether children take appropriate action to meet their needs (Early Childhood Outcomes Center, 2005). The Division for Early Childhood of the Council for Exceptional Children (DEC) recommends that teachers and interventionists engage in data collecting to inform their instruction (Sandall, Hemmeter, Smith & McLean, 2005). Monitoring students' performance is an essential component of instruction and leads to improved student outcomes, increased fidelity of intervention, higher quality goals and objectives, improved communication between teachers and interventionists, administrators, and family members (Hojnoski, Gischlar, & Missall, 2009b; Hojnoski & Missall, 2007; Codding, Skowron, & Pace, 2005; Cooke, Heward, Test, Spooner, & Courson, 1991; Raver, 2003; Ysseldyke & Tardrew, 2007). In order to effectively monitor young children's performance, early childhood teachers and interventionists need to collect data in order to obtain a clear picture of the child's functional performance (Hojnoski, Gischlar, & Missall, 2009a; Raver, 2003).

Collecting Data. The use of information to monitor instructional strategies for teachers is a recommended practice identified by the Division for Early Childhood (Neisworth & Bagnato, 2000; Luze & Peterson, 2004; Pfeiffer-Fiala, Moore, Lyons, & Pretti-Frontczak, 2010). The act of collecting data in a manner which is effective and efficient, however, has been found to be neither routine nor widespread, and continues to be inconsistent between a teachers' and interventionists' beliefs and practices (Fuchs, Fuchs, & Warren, 1982, Sandall, Schwartz, & LaCroix, 2004; Wesson, King, & Deno, 1984). While teachers acknowledge that data collection is important and useful, they often express that it is difficult to do (Pfeiffer-Fiala, et al., 2010; Codding, et al., 2005; Sandall, Schwartz, & LaCroix, 2004). Evidence suggests that early

childhood teachers and early interventionists tend to use observational memories to make decisions about children's performance. Conversely, a number of studies have shown a functional relationship between teachers' use of child performance data and increased student outcomes (Fredericks et al., 1979; Fuchs & Fuchs, 1986).

While some studies have found that in-service training may help to change teacher data collection behaviors, others continue to note that in-service training efforts made no difference in data collection practices by teachers (Elliott,Witt, Kratochwill, & Stoiber, 2002; Farmer, Wolery, Gast, & Page, 1988). Instead, the impact of the acceptability, effectiveness, empowerment, and resistance on teacher's data collection practices continues to proliferate the evidence base (Elliott, et al., 2002; Pfeiffer-Fiala, et al., 2010).

Further impacting teacher's data collection practices are the type of assessment and performance-monitoring tools that they use. The process of what data to collect, how often, what way, and with which tool impacts teacher's data collection practices, instructional decisions, and student outcomes. Further, while research has shown that ongoing performance monitoring often improves student learning, the specific decision-making process used to inform instruction is often implicated as the reason for improvement. Little has been done in regard to the correlation, if any, between the simple teacher act of data collection and student academic outcomes, regardless of the data collection tools used or decision-making model employed.

One way of collecting data that is gaining more attention in many circles of early childhood is that of tiered data management. Tiering, or prioritizing the collection of data based on student needs, is a common aspect of tiered models of instruction. Unfortunately, there exists no published research on the connection between the act of tiering the collection and management of performance data with student performance. Although there exists a growing

number of research studies that aim to explore the relationship between tiered instruction and student performance, I believe that the field would be well served to consider the experiences and perspectives of teachers that are on the cutting edge of implementing this relatively new form of data management.

Teacher Quality and Methods of Data Collection. Regardless of the standards set forth by the state, the quality of any given teacher predicts children's development during the elementary school years for a variety of cognitive outcomes (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, Kagan, et al., 2001). Pianta & Stuhlman (2004) found that the quality of teachers is positively correlated to growth in children's receptive vocabulary and reading abilities from preschool to second grade. Likewise, Howes, Burchinal, Pianta, Bryant, Early, Clifford, et.al (2006) found that children have larger gains in academic outcomes when they have had positive relationships with teachers in the early years. In addition, Gallagher and Mayer (2008) found that preschoolers who have positive relationships with teachers have better language and literacy skills and have higher math scores while in preschool. Yet another aspect of teacher quality is the use of recommended practices.

Generally, norm-referenced assessments are not recommended for intervention development, performance monitoring, or to inform teacher practices (Bowers, 2008; McConnell, 2000). While norm-referenced assessments allow teachers to gauge how a student is performing compared to his or her peers at a moment in time, the collection of this data is unlikely to be useful for planning instruction routinely and based on unique student needs. Today, early childhood professionals are departing from traditional norm-referenced testing methods and are increasingly depending on assessments deemed more developmentally appropriate and useful for instructional planning. The National Association for the Education of

Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/SDE) recommend that early childhood educators and interventionists utilize criterion-referenced assessments (CRAs) as an alternative to standardized, norm-referenced tests (Greenwood et al., 2002; National Association for the Education of Young Children [NAEYC], 2004). CRAs can be easily documented, interpreted to assist in intervention decision-making, and deployed for classroom instructional planning. Use of CRAs allows teachers to collect data based on individual needs, instruction, and outcomes and eliminates the over-taxing effect on teachers' data collection practices of a one-size-fits-all data collection system. CRAs compare a child's performance to a predetermined set of skills or behaviors (the criterion) to determine strengths and weaknesses. By focusing on a child's patterns of strengths and weaknesses, educators can individualize classroom instruction and intervention. While there are many CRAs specifically developed for use in early childhood settings, some of them lack authenticity and do not align with early childhood teaching and learning practices (Bergholm-Petka & Pipkin, 2008; Greenwood et al., 2008; NAEYC, 2004).

Criterion-referenced measurements (CRMs) are another tool that teachers can use to improve instructional decision-making. In contrast to CRAs, however, these tools are designed to be administered routinely to monitor progress. Studies have shown that the regular use of validated CBMs has led to improved student outcomes (Stecker, Fuchs, & Fuchs, 2005; VanDerHeyden, Witt, Naquin, & Noell, 2001). As noted previously, however, teachers must be careful not to over-rely on these tools or to consider them a one-size fits all solution for all children and at all times.

Tiered instruction. Tiered instruction can be defined as a method of delivering instruction and intervention based on children's developmental needs. In a tiered model,

teachers assess children's current performance and determine whether the child is able to work towards general or universal content standards, goals, or objectives. If the child is missing a component of the skill(s) necessary to meet learning goals or objectives, or if they have yet to obtain the foundational skill(s) required, teachers provide targeted supports or individualized and intentional instruction to address the child's needs. The goal becomes twofold; to provide instruction or intervention that the child needs to succeed, and to assist the child in moving forward to obtain universal outcomes. The concept of tiering instruction has been put into practice in a variety of ways, and different models utilize different numbers of tiers in order to improve instruction and student outcomes. Three common and widely used forms of tiered instruction include Response to Intervention (RtI), Recognition and Response, and the curriculum framework.

Response to Intervention. Response to Intervention (RtI) is a tiered model of instruction that focuses on identifying students that are at-risk of academic challenges or failure, and then providing these students with interventions that will assist them in meeting general curriculum or universal goals and objectives. Within an RtI model, it is also possible that all or most children at Tier 1 (the universal or common tier) will uniformly require additional supports in order to achieve stated goals and objectives. In this case, the screening process can be understood to have identified deficits in content instruction, and as such class-wide interventions or changes to the instructional approach would be employed to improve student performance. In essence, RtI is a preventative model of instruction that seeks to improve classroom instruction and intervention, as well as- in a practical and official sense- to address student's academic difficulties quickly and proactively in an effort to reduce the number of children that are referred for special education eligibility evaluations.

Further, while RtI is a tiered model, not all tiered models are RtI. RtI as a means of reducing the amount of children identified as having learning disabilities (in specific) began with the U.S. Department of Education-sponsored 2001 Learning Disabilities Summit; RtI was recognized as a method for addressing the issue of the over-identification of children with learning disabilities (Batsche et al., 2006). In fact, a number of sites across the country have shown that RtI has been successful in reducing these numbers (Sugai & Horner, 2002; Walker et al., 1996; as cited in Hawken, Vincent, & Schumann, 2008, p. 213).

In order to evaluate the effectiveness of interventions used within RtI frameworks, ongoing performance monitoring of student achievement is necessary. Most elementary schools that have implemented RtI as a means of reducing special education eligibility and improving classroom instruction use curriculum-based measurements (CBMs) to monitor students' performance on identified objectives. CBMs were first developed through the Institute for Research on Learning Disabilities at the University of Minnesota, and Deno (1985) defined CBMs as a particular set of simple procedures for measuring student performance on basic skills. The administration of CBMs are designed to be provided to children frequently, often weekly, in order to collect performance data on children's growth on academic objectives. Despite the widespread use of CBMs to achieve the ends of RtI, other measures of performance monitoring can also be employed. These methods include, but are not limited to, anecdotal notes, teacher or district-created curricular assessments, and data collection on student IFSP or IEP goals and objectives.

Tiering Instruction in Early Childhood. Although the concept of tiering instruction for young children has begun to gain popularity within the fields of early childhood education and early intervention, the extent to which states support and fund early learning initiatives, and the

services available to the youngest children at-risk, vary state-to-state (Hebbeler, Spiker, Wagner, Cameto, & McKenna, 1999). Despites these differences, the Individuals with Disabilities Education Improvement Act (IDEIA 2004) encourages programs to engage in early intervening. As opposed to 'identifying' children as in need of remedial services, early intervening is a philosophy of prevention: the expectation is that children will be screened universally and that children in need of targeted supports will be identified and provided with the supports that they need. In this sense, early intervening is itself the utilization of RtI; how do children respond to the added supports and interventions, and does this prevent further challenges or longer-term difficulties from arising? Under IDEIA, local education agencies (LEAs) are allotted up to 15% of their annual funds under Part B (which can be used in conjunction with other funding) in order to develop programs that coordinate early intervening services for children in kindergarten through age 12, and particularly children in k-grade 3 (VanDerHeyden & Snyder, 2006, p. 520). The Division of Early Childhood (DEC) is pushing for such initiatives to be extended to children younger than age five. Further, many early childhood programs have begun to encapsulate this approach, though most do not explicitly state as this intent.

Given the call for early intervening services as called for in the language of the law of IDEIA, approaches similar to RtI have seen more widespread use in early childhood. Bayat, Mindes, and Covitt (2010) described RtI at the PreK level as distinctive from that in children's formal school years given the nature of the problem-solving approach, the reliance on play-based and curriculum-referenced assessments over standardized assessments, and the importance of the family unit in learning about the child and guiding instructional decisions. However, RtI is not the only approach to tiered instruction in early childhood.

Recognition and Response. Coleman, Buysse, & Neitzel (2006) proposed a tiered model known as Recognition and Response. In this model, four components guide the process of tiering instruction. These include an intervention hierarchy; screening, assessment, and progress monitoring; research-based curriculum, instruction, and focused interventions; and a collaborative problem-solving process for decision-making (p. 3). The Recognition and Response model has not yet been widely implemented, but the National Center for Learning Disabilities continues to support research efforts to devise manuals and resources for teachers to assist in applying the system.

Curriculum Framework. Jackson, Pretti-Frontczak, Harjusola-Webb, Grisham-Brown and Romani (2009) suggest the use of a curriculum framework to guide tiering of instruction and intervention. A curriculum framework consists of four phases that are linked together in a recursive loop; assessment, scope and sequence, activities and instruction, and performance monitoring. In this model, teachers or practitioners assess children's developmental needs in order to determine the scope and sequence of instruction for each child. In doing this, children's needs are sorted into tiers, and the activities and instruction/intervention that is provided is matched to the child's needs. Performance monitoring is used to measure children's performance on learning objectives, and the frequency and intensity with which performance is measured varies. The concept of tiering instruction within a curriculum framework occurs within three tiers. In Tier 1, universal goals and objectives are addressed and instruction is geared for all learners. In Tier 2, instruction is temporary and targeted, and focuses on addressing missing components of skills needed to achieve Tier 1 goals and objectives (Grisham-Brown, Pretti-Frontczak, Hawkins, & Winchell, 2009). Finally, in Tier 3, instruction is individualized, intensive, and intentional. Students that are missing the foundational or

prerequisite skills necessary to meet Tier 1 goals and objectives are thought to have Tier 3 needs. Although there are professional development and college programs that instruct preservice and/or inservice teachers on how to implement tiered instruction within a curriculum framework, no research studies that have investigated the extent to which this model improves student outcomes has been published to date.

Data Collection as a Part of DDDM. Teacher data collection practices are an important aspect of data management. These include a breadth of practices that teachers can use to collect data, including the use of curriculum-based assessments, curriculum-based measures, charts, data sheets, databases, etc. That said, tiered data collection can be thought of as a system of data collection wherein students with identified universal needs have data collected less often than students with targeted or individual needs. Student goals and/or objectives are likely to change based on the data. Tiered data collection is related to a tiered system of instruction and is often visualized as a pyramid with all students at the bottom (this would be where students' universal goals, outcomes, and needs fall- ALL students belong in the universal tier, because even if students need more assistance/instruction, and therefore more frequent data collection, all goals/outcomes/needs are tied back to this universal level). Targeted data collection equates to targeted instruction, and individualized instruction (the top of the pyramid) is synonymous with the most data collected. The reason the frequency of data collected changes is because the more needs, scaffolding, or assistance a student needs, the more frequently a teacher may want to monitor their performance. Further, tiered systems are fluid; students do not stay in any given tier based on any one assessment. Rather, students instructional needs change as their performance dictates; to know when a student should move to a more or less intensive tier, data must be collected to make such decisions.

Related Research

Research into the concepts of DDDM and tiered models of instruction within an early childhood context have been scant. While the impact on student outcomes through the careful use of data to drive instructional decisions has been discussed widely and explored empirically to some degree (Deno, 1985; Deno, 2003; Division for Early Childhood, 2007; Fuchs, Fuchs, Hamlett, & Stecker, 1991; Fuchs, Fuchs, & Zumeta, 2008; Grisham-Brown, Hemmeter, & Pretti-Frontczak, 2005; Macy & Bricker, 2007; Vanderheyden, 2005), there is no consensus as to a particularly effective model of DDDM. Furthermore, the research on tiered models of instruction has largely focused on grade school children- often within the context of Response to Intervention. Interestingly, the effective use of DDDM is necessary for successful implementation of a tiered model. The following section briefly describes the empirical literature on tiered models of instruction within early childhood classrooms.

Tiered Models. An examination of research focused on the relationship between tiered models and student performance helps to illuminate the study. A total of 10 studies that included about 1691 children evaluated the relationship between tiered instruction and student performance in early childhood (Burns, Scholin, Kosciolek, & Livingston, 2010; Denton, Kethley, Nimon, Kurz, Mathes, Minyi, et al., 2010; Duhon, Mesmer, Atkins, Greguson, & Olinger, 2009; Fuchs, Compton, Fuchs, Paulsen, Bryant, & Hamlett, 2005; Koutsoftas, Harmon, & Gray, 2009; McMaster, Fuchs, Fuchs, & Compton, 2005; O'Connor, Fulmer, & Harty, 2005; O' Connor, Harty, & Fulmer, 2005; Pearce, 2009; & VanDerHeyden, Snyder, Broussard, & Ramsdell, 2007). These studies had different stated primary research purposes; however, all but one of the studies monitored the performance of children in order to determine whether the tiered interventions were improving student outcomes. The study that did not monitor performance

used pretest and posttest measures to determine whether student outcomes improved over time (Denton, et al., 2010). One study centered investigation on whether aimline or dual discrepancy frameworks were more effective in RtI models (Burns, et al., 2010) and three studies evaluated whether the tiered model was useful for screening purposes (Burns, et al., 2010; Pearce, 2009; VanDerHeyden, et al., 2007). Six studies examined the effectiveness of specific interventions at various tiers of instruction as the primary research focus, while another focused on the utility of using a tiered model to improve student outcomes.

In general, studies used pretest and/or CBMs to determine whether children were in need of different instruction (classwide Tier 1 interventions) or additional supports (Tier 2 or Tier 3). Additionally, one study provided professional development to teachers and staff to improve Tier 1 instruction and evaluated its usefulness through surveys (O'Connor, Fulmer, & Harty, 2005).

Although there are a small but growing number of studies that address the efficacy of tiered models for performance monitoring, there are limited studies that specifically examine the use of tiered models in preschool. Further, there are currently no published studies that seek to understand teachers' experience of using a tiered system of data management.

Research Questions

The research questions that I have arrived at in order to pursue my goal of understanding the experiences lived by teachers implementing a tiered model of instruction through the use of DDDM must be understood with a shared meaning of the terminology that will permeate the study. Operational definitions of key terms are provided, followed by a reiteration of my research purpose and questions, in the subsections that follow.

Key terms. Prior to outlining the research purpose and questions, a summary of the key terms that will be used throughout the proposal are defined in what follows:

- ***Teacher-*** refers to the adults who work with the children, regardless of particular setting or context. A variety of terms such as early childhood educator, interventionist, direct service provider, childcare provider, and/or practitioner are commonly used to describe the adults who work with young children. Regardless of the setting in which the adult works or the type of children with whom the adult works, one common role of these individuals is that of teacher.

- ***Teacher Participant-*** refers to teachers implementing a tiered system of DDDM and whom are the focus of the study.

- ***Student-*** preschoolers (ages 3-5) who are typically developing, those with disabilities (i.e., have an identified delay or disorder and receive Part B section 619 services), and those considered at-risk of educational failure. In this study, students are those children that are under the instruction and guidance of teacher participants.

- ***Teacher data collection practices-*** a breadth of practices that teachers can use to collect data, including the use of curriculum-based assessments, curriculum-based measures, charts, data sheets, databases, etc.

- ***Data-driven decision-making (DDDM)-*** the process through which data collected on student performance is used to plan instruction based on the results. A system of DDDM includes the methods, tools, and approaches used, the frequency of collection, and the instructional decisions made as a result analyzing and interpreting the data.

- ***Tiered model of instruction-*** a method of delivering instruction and intervention based on children's developmental needs in which teachers assess children's current performance and determine whether the child is able to work towards general or universal content standards, goals, or objectives. Tiered models consist of 2 to 4 'tiers'(depending on the specific model employed) in which children are placed based on their instructional needs.

Purpose and Questions. The purpose of the study it is to examine and attempt to describe, document, and understand the contextual and situational factors, characteristics, and influences that surround classrooms that engage in DDDM using a tiered model of instruction. The practical purpose, however, is to immerse myself in environments in which tiered models are implemented through the use of DDDM, and to get an in-depth look at what teachers engaging in such a process experience. I hope to be able to witness the extent of success or challenge that teachers have with this process so that I might eventually work to develop professional development guidelines and programs that address the use of these systems. Additionally, I am also currently pursuing a grant that seeks to evaluate the effectiveness of different data collection practices on student outcomes. Findings from this study would inform the development of surveys and focus group questions provided as a course of that study. That said, I must acknowledge that I am approaching the proposed research with a bias towards teachers sharing relatively positive experiences. To account for that, and given the phenomenological nature of the study, I will bracket my presuppositions to the extent possible and ensure I consider them as I interpret the data I collect. I describe more about the bracketing process in the Research Procedures section of this proposal.

To reiterate, there are two primary research questions that drive the proposed study:

1) In preschool classrooms that utilize a tiered model of instruction, how do teachers experience the data collection and decision-making process?
2) How do they perceive the supports and resources available in the school, district, or community?

METHODS

The proposed study will be qualitative in nature and will serve to enlighten and enrich the literature on data collection practices and the use of data-driven decision-making (DDDM) to drive instructional planning. As Patton (2002) states, qualitative inquiry is associated with studying individuals within the natural environment while exploring the meaning they make of their experiences in the environment. A qualitative design was the most appropriate approach for this research given that the purpose of the study it is to examine and attempt to describe, document, and understand the contextual and situational factors, characteristics, and influences that surround classrooms that engage in DDDM using a tiered model of instruction. Although a quantitative method could have been undertaken, and a survey design utilized to explore preschool teachers' opinions, feelings, and beliefs about DDDM and tiered models, such an approach would not account for complexities and could not explore teachers' experience in-depth. Further, a quantitative approach would have required a relatively large sample size in order to draw statistically sound conclusions; unfortunately, given the paucity of potential participants as it is, such methods would not be suitable. Therefore, given the purpose of the study as well as the characteristics and availability of the sample population, a qualitative approach will be employed.

Conceptual Context

Understanding the roots of inquiry, and how our individual beliefs shape our research efforts and interpretation of facts and data, and thus the selection of particular paradigms we use to guide our inquiry, is essential. The dual purposes of my research as well as my epistemological inclinations drive my conceptual grounding. The proposed study is informed by the interpretive and phenomenological paradigms. Indeed, there are those that use these two paradigm descriptors interchangeably; philosophers advocating phenomenology and

anthropologists for interpretivism (Schram, 2006). The main aim of these paradigms is to understand the constructed and complex reality of phenomenon through the perception of the individuals that experience it. Whichever term that is used, the proposed study fits within such paradigms because I seek to understand the context, meaning, and experience of tiered instruction using DDDM through the lens of the individual, therefore placing primary importance on the meaning-making process the teachers use in an attempt to understand how they perceive and experience the situation.

Qualitative Research Method and Rationale

The proposed study will use a phenomenological approach. It will seek to examine the lived experiences of teachers implementing a system of DDDM (particularly within tiered models of instruction), including their activities and perceptions of the classroom as well as the surrounding cultural framework of the school and community. The findings of the study will endeavor to describe the phenomena of DDDM through the eyes of the teachers implementing such systems.

Operating under the interpretative/phenomenological paradigm, the study posits that the essence of everything is rooted in how it is experienced. Thus, in order to truly understand DDDM and its application within tiered models of instruction, we must have insight into the contextual significance of the way such a process is implemented. While we can certainly examine student records to assess whether there is a correlation between the use of DDDM or a tiered model and students' performance, such statistically-based evidence would not speak to the social validity of the practice or the function the practice serves in the minds of those that use it.

In phenomenology, we describe the phenomena under study without relying upon statistical data and instead allow the rich descriptive information we collect to stand on its own.

That is, we take the description of participants' experience as a given. The proposed study will derive general themes from the data during the analytical stage (please see the Data Analysis section); however, the purpose of generating such themes (referred to as essential structures in phenomenology) is to derive deeper meaning and commonalities across individual subjects' experiences. Giorgi (2009) states that phenomenology "... is not interested in an objectivistic analysis of the "given", that is, an analysis that would exclude the experiencer, but rather in a precise analysis of how the "given" is experienced by the experiencer...If science is concerned about knowledge, knowledge itself is correlated with consciousness, and phenomenology is concerned with how any "given" whatsoever, including knowledge, is related to consciousness" (p. 4-5). Phenomenology, that is, is more than just a qualitative research method, it is a philosophy of what is. In fact, Giorgi argues in his book that phenomenology isn't truly qualitative research, but is instead neutral in regard to quantitative vs. qualitative methods. It is also, however, a way one can approach research, and the methods used to engage in [descriptive] phenomenology can be argued to be as scientifically rigorous in their own right, but in a different way and for a different purpose.

Setting

Given the phenomenological nature of the proposed study, it is important that the methods employed to garner data regarding teachers' experiences be situated to the extent possible in the natural environment. That is, engaging in methods within a research context (e.g., lab, university office, etc.) would run the risk of jepordizing the richness of the experiences shared, while collecting data on the experiences of teachers within the environment in which the experiences occur may provide for more thorough, personal, and accurate data.

That said, classrooms will be located in northeastern Ohio; it is not yet known what specific localities these will constitute given that teacher participants have not yet been selected**.** The proposed study will take place during the course of one academic school year (fall through spring). It will occur in the preschool classrooms of six teachers that are currently implementing a tiered system of data management. These classrooms will be located in northeastern Ohio.

Each of these preschool classrooms will be inclusive (i.e., students with and without identified disabilities will be present) and will be collecting data as part of a comprehensive data management system. It is probable that the system will be implemented within the framework of a tiered model of instruction. Therefore, it should be understood that the participants that are selected to participate are likely to be a homogenous group; please see the section on Ethical Considerations in the subsection for Study Participants.

Sampling

Since this is a qualitaitve study and not quantiative, random selection and/or assignment are not applicable. Samples that are selected to participate will be determined using the criterion sampling method to ensure the teachers are employing a tiered system of data-driven decision making. Criterion sampling is necessary given that participants must meet certain requirements in order to be representative of the subset of the population we wish to study (Miles & Huberman, 1994). The criteria teachers must meet in order to be included in the study is the implementation of a tiered model of instruction, including using data collection to drive instructional efforts. Our definition of what constitutes a tiered system of decision-making is broad by design to allow for those individuals that self-identify as meeting this criteria to discuss their experiences. Further, criterion sampling is thought to be particularly useful in phenomenology given the necessity of selecting participants who have experienced (or are experiencing) the phenomenon of interest

(Collingridge & Gannt, 2008). In the proposed study, it is crucial participants believe themselves to be implementing a system of data-driven decision-making within a tiered model of instruction.

The target number of participants interviewed for the study is another important consideration as sampling is underway. Creswell (1998) suggests that phenomenological studies should include five to 25 participants, while Morse (1994) stated that at least six participants should be recruited. My goal is to recruit six teachers from a variety of preschools.

Study Participants

As previously stated, I will select six preschool teachers that currently employ DDDM within a tiered model of instruction. By preschool, I intend to look at teachers that are instructing children that range in age from three to five. Although these teachers are the focus of the study, there are other individuals who will be indirectly participating in the research. Students in each of the teacher participants' classrooms will be indirect participants to the extent that parental permission and child assent is obtained to observe the classroom when their child is present (please see Appendices E & H for the parental consent and child assent forms). These students are likely to be diverse in ability and will include typically developing children, children with disabilities, and children at-risk. Further, preschool administrators will be participants in the study in the sense that they must permit me to have access to the teacher participant and students (please see Appendix F for the teacher/administrator consent form).

Informed Consent. Whenever research is conducted that involves human subjects, consent to participate generally must be obtained and documented. For this study, I will provide consent forms to the teacher, administrator, and all parents of students within the selected class. In sum, each of these forms describes the nature and purpose of the research, the procedures that

will be followed and materials used, as well information and statements related to their rights to refuse to participate or to stop at any time.

Ethical Considerations. In order to gain access to the teachers I hope to observe and interview for the study, I will ultimately require permission from preschool administrators or principals before I can seek the participation and consent of teachers. Thus, there are individuals in a position of power over the participants I hope to include in the research. Knowing this is a necessary step to conduct my research, I will have to acknowledge that there is a possibility that teachers did not share fully their thoughts on the school culture given that their superiors knew of their involvement in the research. This is a significant issue that detracts qualitatively from the study, but unfortunately there is no way around it if I wish to be permitted to observe the teachers in their respective classrooms. I am presuming upfront, of course, that most classrooms that utilize this system have superiors that are supportive of their efforts. This is a presumption I must acknowledge and bracket to the extent necessary when analyzing the data.

There are no known risks associated with the materials or procedures in this study beyond those encountered in everyday life. Further, no one under the age of 18 will be interviewed for this study. No data or identifiable information will be collected from students in the classroom; only the notes of the PI and interview transcripts (including audio-recordings) will be stored for any period of time. Confidentiality and privacy will be maintained through the use of rigorous protection of audio recordings and the use of pseudonyms or codes in all written documentation. (please see Appendices E, F, G, & H for the complete informed consent/assent forms for parents and teachers).

Data Collection

I will be collecting data for this study in two primary ways. These methods include three in-depth interviews with each participant, as well as observation of the participants in the teaching context/environment. I will be using interview protocols (see Appendices A and B) to semi-structure the interviews; however, the protocols are flexible and will allow me to follow-up on specific thoughts or comments of participants as well as to add lines of questioning based upon analysis of observational data. The initial interview will last approximately one hour; subsequent interviews will occur following a period of observation by the principal investigator (twice). Interviews will be tape-recorded, though I may also take notes as I see fit. Interviews will occur face-to-face in each respective teacher's classroom at times during which children are not present. Generally, there will be an interview at the beginning, middle, and end of the study period.

I will also be observing each of the teachers in their classrooms. I will visit each classroom twice for several hours during each visit. During these observations, I will not participate or interfere with the daily activities and instruction of the classroom, but instead will use an informal observation protocol and take field notes during each visit. The observation protocol will be semi-structured and used to gather information and focus attention during observation (see Appendix C). The unit of analysis will be the data collection and management practices (including decisions made based on this data to inform instruction) and the experience of the teacher(s). The protocol may also assist in providing direction as I write field notes, which are expected to often expand upon the questions that will be listed as guiding questions in the protocol. The purpose of these observations is to inform the interviews to best get at participant experiences' of DDDM and tiered models of instruction. Finally, I will use a reflective journal throughout the study in order to

bracket my biases and assumptions. Please see the Data Analysis section for more on this process.

Interview settings. There are several important considerations for determining the specific site of the interview for each participant during every particular scheduled interview. First, maximizing the comfort of participants is crucial, as it is essential that they feel safe sharing potentially personal thoughts or feelings. As such, the privacy of each interview is essential and the selected location of each interview must be guided by this consideration. Second, given that two of three interviews will be based on the activities of a specific observation period, it is imperative that subsequent interviews be scheduled in a timely manner (e.g., ideally on the same day, but within several days time at most). Unfortunately, it is possible that there will be little time for an interview on the day of an observation dependent upon the participants' work schedule. Therefore, while interviews in a private location within the school setting may be ideal, it is ultimately up to the participant to determine the precise location of each interview (e.g., in the school/center at a specified and private location, at the participants' home, at the researcher's university office, etc.). To the extent possible, all interviews will be conducted in-person so that the participants' affect can be noted.

Interview format. Each interview will be semi-structured but I will endeavor to develop a conversational partnership (Rubin & Rubin, 2005). The conversational approach allows for more flexibility in providing clarification regarding what the intent of the question is, and therefore may provide participants with better ability to describe or relate their experience. Although there is an interview script, observational data will be used to inform additional lines of inquiry. Further, the development of a researcher-participant partnership is important in order to develop a sense of trust and openness. At the same time, one must be careful not to be too

conversational as it is quite probable that the researchers' own opinions, biases, and perspectives will color the conversation and perhaps influence the responses of participants (King, 2004).

There are two separate semi-structured protocols for interviews; one will be used for the initial interview and the other will be used for subsequent interviews that follow an observational period in the classroom (please see Appendices A & B). The structure of the initial interview protocol includes two global questions that are based on the primary research questions of the present study: a) how do preschool teachers experience the data collection and decision-making process?, and b) how do preschool teachers perceive the supports and resources available in the school, district, or community? For the first global question, there are five questions related to DDDM, each with one to two sub-questions, and two questions about tiered models of instruction, each with one sub-question. For the second global question there are three questions, each with two or three sub-questions.

During each of the subsequent interviews, the global questions remained the same but the general questions were adjusted to reflect the experiences of the participant during the most recent observation period. As such, in the second protocol, there are three questions related to DDDM, one with five sub-questions; two questions regarding tiered instruction, one of which has two sub-questions; and two questions that seek to get at the second global question, one of which has one sub-question.

Data Analysis

The three in-depth interviews that each teacher participates in will be transcribed in writing using appropriate voice-to-text software and other programs that allow invesitgators to stop, pause, and rewind/forward the recording for transcription accuracy. This data will be reviewed and

analyzed to determine the essential structures of the DDDM and tiered instructional experience of the participants.

Analysis of data generated from observational protocols, field notes, and interviews will occur concurrently in order to learn the context of the events that are described by the teachers. Findings from these analyses will provide new lines of questioning that I will use during subsequent interviews, and vice-versa. That is, the process of data collection and analyzation will be ongoing.

Bracketing of my presuppositions must also be addressed during data collection and analysis. Therefore, I will keep a reflective journal during the study in order to memo and document statements or occurrences I recognize or worry may color my interpretation of the data. As I proceed to data analysis, I will refer to my journal as I review the data and flag any data collected through interview transcripts that appears to be influenced by past experiences or biases- that is, if I provided leading questions that may have encouraged or discouraged participants in an unfavorable way. Wall, Glenn, Mitchinson, & Poole (2004) suggest engaging in four distinct activities to bracket one's assumptions: 1) pre-reflective preparation; 2) reflection; 3) learning; and 4) action from learning. As I work towards bracketing my preconceived notions, I will follow these steps.

Data Treatment. It is extremely important that we understand the way the phenomena is perceived so that we can attempt to make sense of the ways in which it has been successful or challenging through the lens of those with intimate familiarity with the phenomena. Although this study will generally follow in the Husserlian (1913) tradition of rich description, Heidegger's (1927) orientation toward interpretive phenomenology was considered at length. Phenomenology is a philosophical assumption, orientation, and paradigm in its own right, with a

continuum of interpretive and descriptive data analytical methods from which to choose. That is, phenomenology as a research design is interpretive in orientation, but phenomenological methods vary and can be interpretive or descriptive, which then dictates analytical processes (Giorgi, 1997; Finlay, 2009; Laverty, 2003; Polkinghorne, 1989). Interpretive, or hermeneutic, phenomenology often involves acknowledging one's assumptions and operating on the belief that things are already interpreted to some extent. As such, this approach may inevitably appear similar to other interpretive data analytical procedures in terms of generating hypotheses or theories based on the data. Erickson (1985) illuminates the purpose and steps necessary for use in interpretative analysis of qualitative data clearly, illustrating how such an analysis requires all meaning units to be categorized, with hypotheses and/or theories emerging as a result. In descriptive phenomenology, the researcher takes the data at its given and does little more than attempt to extrapolate the essential structure, or essence, of the lived experience of the participants (Finlay, 2009; Giorgi, 1997; Giorgi, 2009)

The decision to remain rooted to Husserl's conception of phenomenology is largely the result of the purpose of the study. As Giorgi (1997) explains, "The true significance of the descriptive task within phenomenology comes through when one considers the alternatives to description, viz., explanation, construction, and interpretation….interpretation is not description, because in order to account for a phenomenon it brings a perspective to the given, either from theory or for pragmatic reasons, that is not necessarily demanded by the intuitive evidence" (p. 241). Giorgi elaborates on this extensively in his 2009 book by explaining that, "[d]escriptions reveal more than what the describer is aware of, and that is one reason the method works...[W]hen the researcher assumes a researcher's attitude to analyze the data, the same material is viewed in a different light. To assume the phenomenological attitude means to enter

into the scientific phenomenological reduction, which means that all of the objects, persons, and states of affairs that the participants describes are taken to be phenomenal givens, that is, they are seen as subjectively construed givens, fully embedded within the subjective desires and interpretations within which the subject perceived and understood them." (p. 181).

As such, the analytical process will be undertaken using the descriptive Husserlian approach as prescribed by Giorgi (2009). “The results of the descriptive approach imply strong knowledge claims because the results include descriptions of findings rather than theories or hypotheses. The second-order descriptions that constitute structures have the strength of facts, even though they are not pure facts. They are invariant meanings that should be repeated in subsequent research, even if the data upon which the structures are based are quite different” (Giorgi, 2009, p. 131). The steps I will follow to analyze the data are as follows:

1. *Read for sense of the whole*. After all interview data have been transcribed, I will read each transcript holistically in order to best make sense of participants’ unique lived experiences. I will do this on an individual basis for each individual, but also by reading all of the full transcripts together before moving on to the next step in the analysis of the data.
2. *Determination of meaning units*. Following completion of the first step, I will go through each transcript and determine when there is a shift in the meaning of the participants’ experience. That is, working with the written transcript (which will be completed in Microsoft Office Word), I will place a bold slash mark after each instance in which the participants’ description of the experience has substantially changed in meaning. I will complete this step with the attitude that I am operating under the phenomenological reduction (e.g., suspending empirical subjectivity and bracketing my awareness of

empirical data- please see section on Data Collection), and with the acknowledgement that my establishment of such meaning units is intellectually arbitrary and much more experientially prescribed based upon my own lived experiences.

3. *Transformation of participant's natural attitude expressions into phenomenologically [psychologically] sensitive expressions*. This step is the most laborious as well as the most crucial. Starting again at the beginning of each transcript, I will return to each meaning unit individually in order to transform it into a more general statement that seeks to describe the underlying psychological implication of the description. While this is not a psychological study of the participants, the psychology of the participants' is relevant as it is through the science of psychology that we can derive the essence of an experience. As such, during this step, I will take each meaning unit and will ascertain the higher-level meaning that would be present even if very different contingent facts were the basis of the phenomenological, psychological significance. Thus, for each meaning unit, a transformative statement that gets at the heart of what the experience means to the participant will be determined.
4. *Determination of the general structure of the experience*. Although Giorgi does not include this as an explicit final step in his method, it is certainly implied, discussed, and obviously necessary. It is during this final step of analysis that more universal themes will emerge, and the invariant essential structure(s) of the experience will be identified.

Trustworthiness and Credibility

Establishing the trustworthiness and credibility of the eventual findings of the proposed research is essential in discussing the quality of the potential results. Lincoln and Guba (1985) describe four main tenets that are useful to consider to this end; these include truth

value/credibility (confidence in the truth); applicability/transferability (extent of application to other subjects or contexts); consistency/dependability (probability that the same findings would result with the same/similar subjects or contexts); and neutrality/confirmability (degree that findings are based on subjects and conditions as opposed to biases and perspectives of the researcher).

Three major methodological activities are associated with demonstrating credibility; prolonged engagement, persistent observation, and triangulation of data. The proposed study will include all three. I will be engaged with the study participants in the setting in which the phenomena of interest occurs for extended periods of time throughout an entire school year I will persistently observe teachers in their classroom environments, and given that I am using several methods to collect data (i.e., interviews, observation, etc.) concurrently, triangulation of data will be achieved.

Another way of ensuring credibility is through the use of member checks; these will be conducted with teacher participants to make certain that interview transcripts and other data collected is analyzed appropriately to the extent that it adequately represents their lived experience using the tiered system of data management. Further, a small portion of this data will not be used in the initial analyses but instead will be catalogued and archived for analysis after my initial analyses have been generated. The purpose of this activity is to provide for referential adequacy, one means of ensuring that the conclusions I draw from the analysis are appropriate. Selection of statements to be archived will be chosen based upon teacher responses to similar interview questions; more clearly, one teacher's interview response regarding a particular general interview question will be archived while the other responses will be used in the initial analysis.

This will not be done for all related interview question, but rather will be performed randomly on a small portion of the data.

To demonstrate transferability, I will use rich, 'thick' descriptions to depict the setting, the loci of the classroom (e.g., the social action within the circumstances of each observation and/or interaction), the participants, and the study findings. This process will allow readers to assess the degree to which the findings may be generalized to other settings or participants. Further, the dependability of the findings will be strengthened given my detailed account of the specific methods and procedures used,

Confirmability, particularly in phenomenology, refers to the extent to which the results are reflective of the participants' experience as opposed to the researchers' biases or judgments. To this end, the reflective research journal will be used to assist me in bracketing my personal perceptions and thinking as I seek to analyze the data for the essential structure of the participants' experience. Further, the confirmability of the study will be also be supported by careful record-keeping of data, journals, decisions, and findings that will be peer-reviewed by my co-investigator.

Given the use of the multitude of methods planned to ensure trustworthiness and credibility, it can be argued that the truth value, applicability, neutrality, and consistency of the findings is likely to be strong.

Summary and Conclusion

The ultimate goal of this project is to serve as a foundation to research related to the practice of ongoing data collection, as well as to identify any qualitative differences in efficacy of data collection as a stand-alone practice as it relates to the level at which data collection is targeted and individualized. Unfortunately, given that there is little comprehensive research- and more specifically, that the research that does exist does not consistently use a similar model- it is beyond the scope of this study to submit a proposal that seeks to examine the experiences of

preschool teachers that use a specific tiered model as the basis for tiered data management. Similarly, while there exists literature on teachers' perceptions of data collection in general, there have been no published studies that examine tiered data management as it relates to teachers' experience. The proposed study will offer illumination into the way teachers currently implementing such a system experience the task and may serve to shed light on whether such a system is perceived as more or less effective by the teachers that utilize it.

This proposed study is unique in the sense that it addresses the use of data collection at different frequencies relative to student needs, as well as routine data collection overall. Additionally, it seeks to document teachers' experiences and perceptions of using a novel system of data management. Therefore, the study offers a valuable contribution to the literature on tiered instruction and data management. Arguably most important, however, the study may provide the groundwork for reconceptualizing the way we think about accountability and measuring student performance at the preschool level. Indeed, given the great lengths I will be taking to ensure credibility and transferability, the findings that emerge will be applicable to similar classrooms and may assist in the future development of professional development programs that provide early childhood professionals with the tools needed to implement such a system successfully.

Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

APPENDIX

Appendix A
Initial Interview Protocol

Appendix A: Initial Interview Protocol

Note: This protocol is applicable to the first interview for each participant; subsequent interviews will be based on observations made during classroom visits. Subsequent interviews will continue to focus on these questions, but will situate the interview in the context of the observations of the day. The Subsequent Interview Protocol can be found in Appendix B.

Sub-Question 1: How do teachers experience the data collection and decision-making process?

Possible Prompts related to DDDM

1. What does the term data-driven decision-making (DDDM) mean to you?
    a. Do you feel you engage in this practice?

2. What ways of collecting student performance data do you feel are most useful?
    a. What ways of data collection are easiest, even if they are not the most useful?
    b. What ways of data collection are most difficult, even if they are the most useful?

3. How do you or did you design your data management system (your methods of collecting data and using that information to plan instruction)?
    a. What have you done to try to make *collecting* student performance data more manageable?
    b. What have you done to try to make *using* student performance data more manageable?
4. Do you feel you make instructional decisions based on the data collected?
    a. Tell me more about your experiences. Do you tend to adjust instruction for one child in particular or many children?
    b. Can you give an example of making an instructional decision based on performance data?

5. How do you or could you use data collected in your classroom to provide evidence to your school district as to the effectiveness of your instruction?

Possible Prompts Related to Tiered Instruction

6. What thoughts come to mind when you hear the phrase tiered models of instruction?
    a. How does the act of tiering instruction affect you, your school, or your students?

7. Have you ever changed the frequency of data collection based on children's' needs?

   a. If the frequency of data collection is different dependent on the needs of a child, how much time do you believe is necessary to re-evaluate the goals and needs of the child?

Sub-Question 2: How do preschool teachers perceive the supports and resources available in the school, district, or community

Possible Prompts

8. How would you describe the support you receive for your classroom data collection practices?
   a. How do you make use of resources available to you such as colleagues (e.g., paraprofessionals, specialists, other aides) and/or materials (hand-held computer devices, data collection sheets, etc.) to assist in data collection?
   b. What additional resources or supports would help you to better collect and use data to improve instructional efforts?

9. How would you describe the culture of your school?
   a. In what ways does the culture of the school help you use a data-driven and/or tiered system of instruction?
   b. In what ways does the culture of the school present roadblocks to using a data-driven and/or tiered system of instruction the way you see fit?

10. What words would you use to describe the atmosphere of your:
    a. Classroom?
    b. School?
    c. Community?

Appendix B
Subsequent Interview Protocol

Appendix B: Subsequent Interview Protocol

(situated in the context of the day's observations)

Sub-Question 1: How do teachers experience the data collection and decision-making process?

Possible Prompts related to DDDM

1. Do you feel you made data-driven decisions today in planning and/or responding to the events of today's lessons?

2. What are your thoughts on the way you collected data today, as well as the way you used data?
    a. What was easy?
    b. What was difficult?
    c. What kind of data did you collect and how did you collect it?
    d. How did you use data to inform your instruction today?
    e. How will you use data from today to inform future instruction?

3. Do you feel your data collection efforts today were based on student needs, why or why not?

Possible Prompts Related to Tiered Instruction

4. How well do you feel you successfully tiered instruction for your class for today's lessons?

5. Do you feel you collected data differently, or at a different frequency, for some children?
    a. If so, was this dependent on student needs?
    b. Was this a conscious, planned decision or was it spontaneous given the children's actions or needs for the activities today?

Sub-Question 2: How do preschool teachers perceive the supports and resources available in the school, district, or community

Possible Prompts

6. What resources, materials, and/or supports were available or missing today?
    a. What supports or resources do you wish you had available today, and why?

7. What words would you use to describe the atmosphere in your classroom today?

Appendix C
Observation Protocol

Appendix C: Observation Protocol

Date: _____ Time: _____

Teacher Code: _____ Routine: _____

Please take field notes in the following areas:

1. Teacher actions
    a. Demeanor (e.g., cheerful, stressed, distracted, engaging, etc.)

    b. Interactions with children

    c. Interactions with staff

2. What activities has the teacher planned?

3. Who (if anyone) collects data?
    a. What methods or tools are used to collect data?

    b. What resources, materials, or supports are available?

    c. What available resources, materials, or supports are utilized?

4. Is a tiered model apparent? In what ways?

5. Are students on-task or otherwise engaged? What does the teacher and/or staff to assist children off-task?

6. Is challenging behavior occurring?

    a. How is this addressed?

    b. Do teachers or staff seem to make note of the occurrence?

NOTES:

Appendix D: Recruitment Script

KENT STATE UNIVERSITY

College of Education: Department of Lifespan Development & Educational Sciences

Participants Needed for Research

Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

Are you implementing a tiered model of instruction ***or*** collecting data to inform your instruction? We are looking for teachers to participate in a study that will document teachers' experiences with using data to inform instructional efforts. The study seeks to demonstrate the meaning of data-driven decision-making as teachers see it, the successes and challenges teachers face, and the way available supports and resources affect this process.

As a participant in this study, you will be asked to engage in three interviews with the principal investigator; the first interview will last approximately one hour and subsequent interviews will last about half an hour. The primary investigator will also observe your classroom (but will not participate in routines and activities) on two occasions.

For more information about this study, or to volunteer, please contact:

Ashley Lyons
(330) 672-0597
Email: *anlyons@kent.edu*

Appendix E
Informed Consent for Parents

Informed Consent to Participate in a Research Study

Study Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

Principal Investigator and Co-Investigators: Ashley Lyons, M.Ed. & Sanna Harjusola-Webb, PhD

Your child's teacher is being invited to participate in a research study. As a result of this participation, a researcher will causally observe your child's classroom on several occasions. This consent form will provide you with information on the research project and the associated risks and benefits of the research. Your child's participation is voluntary. Please read this form carefully. It is important that you ask questions and fully understand the research in order to make an informed decision. You will receive a copy of this document to take with you.

Purpose: The principal investigator, Ashley Lyons, will be interviewing the teacher and observing the class in order to learn more about the teacher's experience with using student performance data to inform instruction. This study will examine how teachers use student performance data to meet the instructional needs of a diverse group of children.

Procedures: The principal investigator will visit your child's classroom two to three times between mid/late March and the end of the school year for observation. The observations will not interfere with your child's daily routine and the investigator will not participate in classroom activities. Observational notes taken will never personally identify your child, and will be destroyed at the end of the study. Your child's teacher will also engage in 3 face-to-face interviews to discuss their experience and feelings associated with using data to inform instruction as part of a data-driven decision-making process. These interviews will be tape-recorded, transcribed in writing, and destroyed at the end of the study.

Benefits*:* This research will not benefit you or your child directly. However, your child's participation in this study will help us to better understand teachers' experiences with using data to inform instruction, as well as how teachers perceive this practice as affecting children's learning outcomes. The research will contribute to the professional literature on the use of data-driven decision-making and will provide a unique perspective on teacher accountability.

Risks and Discomforts: There are no anticipated risks beyond those encountered in everyday life. Your child's typical classroom routines and activities will not be altered for the purpose of this study.

Study Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

Privacy and Confidentiality: All data related to this study (e.g., observational field notes, written and/or audio interview transcripts) will be kept in a locked room in a locked file on the Kent State campus. No identifying information will be collected about your child. Your child will remain anonymous in all notes and transcriptions though coding or pseudonyms. This parental consent form will be kept separate from study data, and responses will not be linked to your child. This consent form will be the only record linking your child to this research. Only the Principal Investigator and Co-Investigator will see this information. To the extent that the results of this study are shared or published, all identifying information (including the names of the teacher, the school, and the district) will be withheld.

We will make every effort to prevent anyone who is not on the research team from knowing that your child's teacher participated in the study. For example, if your child's name is mentioned on the audio-recording during an interview, it will be transcribed with a code and the audio-tape destroyed once transcription is complete. Students, if referenced in any capacity, will be similarly coded in the investigator field notes.

Compensation: Participation or non-participation in this research will have no effect on your child's grade in the classroom (if one is provided).

Voluntary Participation: Allowing your child to take part in this research study is entirely up to you and your child. You and/or your child may choose not to participate or may discontinue participation at any time without penalty or loss of benefits to which he/she is otherwise entitled. You will be informed of any new, relevant information that may affect your child's health, welfare, or willingness to continue participation in this study.

Contact Information: If you have any questions or concerns about this research, you may contact Ashley Lyons at 330-672-0597, or by email at anlyons@kent.edu. You can also contact Sanna Harjusola-Webb, co-investigator/faculty advisor, at 330-672-0585. The Kent State University Institutional Review Board has approved this project. If you have any questions about your rights or complaints about the research, you may call the IRB at 330-672-2704.

Consent Statement and Signature: I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to grant permission for access to my child's class records as a part of this study. I understand that a copy of this consent will be provided to me for future reference.

_____ _____

Parental Signature **Date**

Thank you for your consideration of this request. You will get a copy of the consent form

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(330) 672-2294 • Fax: (330) 672-2512 • www.ehhs.kent.edu/ldes

Appendix F
Informed Consent for Teachers and Administrators

Informed Consent for Participation in Research Study (Teachers/Administrators)

Study Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

Principal and Co-Investigators: Ashley Lyons, M.Ed. & Sanna Harjusola-Webb, PhD

WHY AM I BEING INVITED TO TAKE PART IN THIS RESEARCH?
You are being asked to participate in a qualitative research study that seeks to document teachers' experiences with using data to inform instructional efforts. The study seeks to demonstrate the meaning of data-driven decision-making as you see it, the successes and challenges you have faced, and the way you believe the supports and resources available have supported your use of this process.

WHO IS DOING THE STUDY?
Ashley N. Lyons, M.Ed., a doctoral student and graduate assistant is the principal investigator; Sanna Harjusola-Webb, Ph.D., is providing advisory support in this effort. The tentative title of the study is:

WHAT IS THE PURPOSE OF THE STUDY?
By completing this study, I hope to learn how teachers that identify themselves as embracing data-driven decision making perceive the experience, to what extent they find it successful, and the types of supports and resources they feel they have to assist in effectively implementing the process.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?
Observations and interviews will take place in your classroom over a one to two month period. Data analysis is expected to be complete by December 2012.

WHAT WILL YOU BE ASKED TO DO?

- You will be asked to engage in 3 interviews, in-person, related to your experience and feelings associated with using data to inform instruction as part of a data-driven decision-making process. The initial interview will last approximately one hour. Subsequent interviews will occur after a classroom observation and will be based on the classroom events of the day; these interviews will last about half an hour.

- Interviews will be tape-recorded and portions of these interviews will be archived for review by the researchers upon the conclusion of data analysis. This is done to ensure that the findings reached 'match' with data that was not included in the initial analysis. All audio-tapes and transcribed interviews will be destroyed at the end of the study.

- The principal investigator, Ashley Lyons, will observe your classroom two times throughout the study period. She will not participate or interfere with your instruction or assessment, but instead will simply observe your class. Subsequent interviews will take place after each observation.

I am also available to answer any questions you may have.

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Study Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

To reiterate, the presence of the researcher in your classroom during days in which the class is being observed will not interfere with your regular classroom routines and activities. Further, participating in the tape recording aspect of the interviews is entirely voluntary; there will be no pressure from Kent State University or preschool personnel to participate in this manner.

The principal investigator will take appropriate actions to assure confidentiality for you. Names of children, families, and professional staff will not appear in the research, and personally identifiable information such as names will be coded and kept in a protected and encrypted computer document. At no time will information reveal the identity of you or your classroom.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?
To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

WILL I BENEFIT FROM THE STUDY?
There is no guarantee that you will benefit from taking part in this study. Sharing your experiences with using data to inform instruction may, however, assist other teachers and it will contribute to the professional literature on the use of data-driven decision-making.

DO I HAVE TO TAKE PART IN THE STUDY?
If you decide to take part in the study, it should be because you really want to do so. You can ask to stop at any time during the study.

WHAT WILL IT COST ME TO PARTICIPATE?
There are no costs associated with taking part in this study.

WILL I RECEIVE ANY PAYMENT OR REWARDS FOR TAKING PART IN THE STUDY?
No personal compensation will be provided.

WHO WILL SEE THE INFORMATION I GIVE?
Your information (e.g., interview transcripts, written and/or audio) will be kept in a locked room in a locked file on the Kent State campus. Further, your name and other identifying information will be coded or a pseudonym used. Only the Principal Investigator and Co-Investigator will see this information. To the extent that the results of this study are shared, your name, school, and other identifying information will be withheld.

We will make every effort to prevent anyone who is not on the research team from knowing that you participated in the study. For example, if your name is mentioned on the audio-recording during an interview, it will be transcribed with a code and the audio-tape destroyed once transcription is complete. Student names, if referenced in any capacity, will be similarly coded in the investigator observation notes. Your name will be kept separate from the information collected, and these two things will be stored in different places under lock and key.

Study Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

WHAT IF I DECIDE I DO NOT WANT TO PARTICIPATE IN THE STUDY AFTER IT BEGINS?
If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop.

WHAT IF I HAVE QUESTIONS?
If you have any questions or concerns about this research, you may contact Ashley Lyons at 330-672-0597, or by email at anlyons@kent.edu. You can also contact Sanna Harjusola-Webb, co-investigator/faculty advisor, at 330-672-0585. The Kent State University Institutional Review Board has approved this project. If you have any questions about your rights or complaints about the research, you may call the IRB at 330-672-2704.

You will be told if any new information is learned which may influence your willingness to continue taking part in this study. Your consideration of participation in this study is greatly appreciated.

Respectfully,

Ashley N. Lyons
Kent State University

Sanna Harjusola-Webb, Ph.D.
Kent State University

Consent Statement and Signature
I have read this consent form and have had the opportunity to have my questions answered to my satisfaction. I voluntarily agree to grant permission to observe the classroom and to engage in interviews about data-driven decision-making. I will sign a second form regarding the recording of interviews. I understand that a copy of this consent will be provided to me for future reference.

_____ _____
Signature of teacher/principal agreeing to take part Date

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Appendix G
Audio-Recording Consent for Teachers

Title: Data-Driven Decision-Making: Teachers' Experience Using Data to Inform Instruction

Principal and Co-Investigators: Ashley Lyons, M.Ed. & Sanna Harjusola-Webb, PhD

1. I agree to participate in three separate audio-taped interviews about my feelings regarding data-driven decision-making (DDDM) to plan instruction as part of this project and for the purposes of data analysis. I agree that Ashley Lyons may audio-tape this interview. The date, time and place of each interview will be mutually agreed upon.

_____ _____

Signature Date

2. Further, I have been told that I have the right to listen to the recording of the interview before it is used. I have decided that I:

____want to listen to the recording ____do not want to listen to the recording

Sign now below if you do not want to listen to the recording. If you want to listen to the recording, you will be asked to sign after listening to them.

3. Ashley Lyons may / may not (circle one) use the audio-tapes made of me. The original tapes or copies may be used for *(check all that apply)*:

____this research project _____publication _____presentation at professional meetings

_____ _____

Signature Date

Address:

Appendix H
Informed Assent for Children

Assent Script

Procedure for obtaining assent from children

Hi, [child's name].

My name is Ms. Lyons, and I am trying to learn more about how your teacher teaches your class and helps you learn. Is it okay if I sit down and watch your class sometimes? Do you have any questions before we start? *[Clarify if necessary]*. If you want me to leave at any time, let me know.

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REFERENCES

Batsche, G., Elliot, J., Graden, J. L., Grimes, J., Kovaleski, J. F., Prasse, D., Reschly…Tilly III, W. D. (2006). *Response to Intervention: Policy considerations and implementation.* National Association of State Directors of Special Education: Alexandria, VA.

Bayat, M., Mindes, G., & Covitt, S. (2010). What does RTI (Response to Intervention) look like in preschool? *Early Childhood Education Journal, 37*, 493-500.

Burns, M. K., Scholin, S. E., Kosciolek, S., and Livingston, J. (2010). Reliability of decision-making frameworks for response to intervention for reading. *Journal of Psychoeducational Assessment, 28*, 102-114.

CCSSO State Collaborative on Early Childhood Education Assessment (n.d.). Retrieved from http://www.ccsso.org/content/PDFs/State_ECstandardsMATRIX11.27.07.pdf

Codding, Skowron, & Pace (2005). Back to basics: Training teachers to interpret curriculum-based measurement data and create observable and measurable objectives. *Behavioral Interventions, 20*(3), 165-176.

Coleman, M. R., Buysse, V., & Neitzel, J. (2006). *Recognition and response: An early intervening system for young children at risk for learning disabilities. Full report.* Chapel Hill: The University of North Carolina at Chapel Hill, FPG Child Development Institute.

Collingridge, D. S., & Gantt, E. E. (2008). The quality of qualitative research. *American Journal of Medical Quality*, *23*, 389-395.

Cooke, N., Heward, W. L., Test, D. W., Spooner, F.,& Courson, F. H. (1991). Student performance data in the classroom: Measurement and evaluation of student progress. *Teacher Education and Special Education, 14*, 155–161.

Council for Exceptional Children (n.d.). Retrieved from http://www.cec.org.

Creswell, J. (1998). *Qualitative inquiry and research design: Choosing among five traditions.* Thousand Oaks, CA: Sage.

Deno, S. L. (2003). Curriculum-based measures: Development and perspectives. *Assessment for Effective Intervention, 28*, 3-12.

Deno, S. L. (1985). Curriculum-based measurement: The emerging alternative. *Exceptional Children, 52*, 219-232.

Denton, C., Kethley, C., Nimon, K., Kurz, T., Mathes, P., Minyi, S., et al. (2010). Effectiveness of a supplemental early reading intervention scaled up in multiple schools. *Exceptional Children, 76*, 394-416.

Denzin, N. K., & Lincoln, Y. S. (2003). Introduction: The discipline and practice of qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Strategies of qualitative inquiry* (2nd Ed.) (pp. 1 - 45). Thousand Oaks, CA: Sage.

Division for Early Childhood (2007). *Promoting positive outcomes for children with disabilities; Recommendations for assessment, curriculum, and program evaluation.* Retrieved from the DEC Web site: http://www.decsped.org/uploads/docs/about_dec/position_concept_papers/Prmtg_Pos_Outcomes_Companion_Paper.pdf

Duhon, G., Mesmer, E., Atkins, M., Greguson, L., & Olinger, E. (2009). Quantifying intervention intensity: A systematic approach to evaluating student response to increasing intervention frequency. *Journal of Behavioral Education, 18*(2), 101-118. doi:10.1007/s10864-009-9086-5

Early Childhood Education Assessment (ECEA). (2007). *State early learning standards and early childhood program standards birth to third grade*. Retrieved from http://www.ccsso.org/projects/scass/projects/early_childhood_education_assessment_consortium/publications_and_products/3688.cfm

Early Childhood Outcomes Center (2005). *Family and child outcomes for early intervention and early childhood special education.* Retrieved from www.the-ecocenter.org.

Elliott, S. N., Witt, J. C., Kratochwill, T. R., & Stoiber, K. C. (2002). Selecting and evaluating classroom interventions. In M. R. Shinn, H. M. Walker, & G. Stoner (Eds.), *Interventions for academic and behavior problems II: Preventive and remedial approaches* (pp. 243–294). Bethesda, MD: NASP.

Erickson, F. (1986). Qualitative methods in research on teaching. In M. C. Wittrock (ed.), *Handbook of Research on Teaching* (3rd ed., pp. 119-160). New York: Macmillan.

Farlow, L. J., & Snell, M. E. (1989). Teacher use of student performance data to make instructional decisions: Practices in programs for students with moderate to profound disabilities. *Journal of the Association for Persons with Severe Handicaps, 14*, 13–22.

Farmer, R., Wolery, M., Gast, D. L., & Page, J. L. (1988). Individual staff training to increase the frequency of data collection in an integrated preschool program. *Education and Treatment of Children, 11,* 127–142.

Finlay, L. (2009). Debating phenomenological research methods. *Phenomenology & Practice, 3*(1), 6-25.

Fredericks, H., Baldwin, V., Moore, W., Templeman, V., Grove, D., Moore, M., Gage, M., Blair, L., Alrick, G., Wadlow, M., Fruin, C., Bunse, C., Samples, L., Samples, B., Moses, C., Rogers, G., & Toews, J. (1979). *A data-based classroom for moderately and severely handicapped* (3rd ed.). Monmouth, OR: Instructional Development Corporation.

Fuchs, L. S., Compton, D. L., Fuchs, D., Paulsen, K., Bryant, J. D., & Hamlett, C. L. (2005). The prevention, identification, and cognitive determinants of math difficulty. *Journal of Educational Psychology, 97,* 493-513.

Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984). The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement, and student awareness of learning. *American Educational Research Journal, 21,* 449–460.

Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A meta-analysis. *Exceptional Children, 53,* 199–208.

Fuchs, L. S., Fuchs, D., Hamlett, C. L., & Stecker, P. M. (1991). Effects of curriculum-based measurement and consultation on teacher planning and student achievement in mathematics operations. *American Educational Research Journal, 28*(3), 617-641.

Fuchs, L. S., Fuchs, D., & Warren, L. H. (1982). *Special education practice in evaluating student progress toward goals* (Research Rep. No. 82). Minneapolis: University of Minnesota Institute for Research on Leaning Disabilities. (ERIC Document Reproduction Service No. ED 224 198)

Fuchs, L.S., Fuchs, D., & Zumeta, R.O. (2008). A curricular-sampling approach to progress monitoring: Mathematics concepts and applications. *Assessment for Effective Intervention, 33,* 225.

Gao, X. (2008). Validity of an authentic assessment in order to report young children's accountability data on early language, literacy and pre-math areas. Unpublished doctoral dissertation, University of Kentucky , Lexington , Kentucky

Giorgi, A. (2009). *The descriptive phenomenological method in psychology: A modified Huessrlian approach.* Pittsburgh: Duquesne University Press.

Giorgi, A. (1997). Theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology, 28*(2), 235-260.

Good Start, Grow Smart: The Bush Administration's Early Childhood Initiative (2002). *Executive Summary* Retrieved from http://www.whitehouse.gov/infocus/earlychildhood/sect1.html

Gresham, F. M., & Elliot, S. N. (2008). *Social skills improvement system.* Minneapolis, MN: NCS Pearson, Inc.

Gresham, F. M., Elliot, S. N., Vance, M. J., & Cook, C. R. (2011). Comparability of the Social Skills Rating System to the Social Skills Improvement System: Content and psychometric comparisons across elementary and secondary age levels. *School Psychology Quarterly, 26*(1), 27-44. doi: 10.1037/a0022662

Grisham-Brown, J., Hallam, R., & Pretti-Frontczak, K. (in review). Measuring child outcomes using authentic assessment practices. *Journal of Early Intervention (Innovative Practices).*

Grisham-Brown, J., Hemmeter, M.L., & Pretti-Frontczak, K. (2005*). Blended practices for teaching young children in inclusive settings.* Baltimore, MD: Paul H. Brookes Publishing Co.

Grisham-Brown, J., Pretti-Frontczak, K., Hawkins, S. R., & Winchell, B. N. (2009). Addressing early learning standards for all children within blended preschool classrooms. *Topics in Early Childhood Special Education, 29*(3), 131-138.

Hawken, L. S., Vincent, C. G., & Schumann, J. (2008). Response to intervention for social behavior. *Journal of Emotional and Behavioral Disorders, 16,* 213-225.

Head Start Child Outcomes Framework (2000). Retrieved from http://www.headstartinfo.org/publications/hsbulletin76/hsb76_09.htm

Hebbeler, K., Spiker, D., Wagner, M., Cameto, R., & McKenna, P. (1999). *State-to-state variations in early intervention systems: National Early Intervention Longitudinal Study (NEILS).* Washington, DC: U.S. Department of Education, Office of Special Education and Rehabilitative Services (OSERS).

Heidegger, M. (1927/1962). *Being and Time*. Oxford: Blackwell. [1962 text J. Macquarrie & E. Robinson, Trans.].

Hojnoski, R. L., Gischlar, K. L., & Missall, K. N. (2009a). Improving child outcomes with data-based decision making: Collecting data. *Young Exceptional Children, 12,* 32–44.

Hojnoski, R.L., Gischlar, K.L., & Missall, K.N. (2009b). Improving child outcomes with data-based decision making: Interpreting and using data. *Young Exceptional Children, 13,* 2–18.

Hojnoski, R.L., & Missall, K.N. (2007). Monitoring preschoolers' language and early literacy growth and development. *Young Exceptional Children, 10,* 17–27.

Husserl, E. (1962). *Ideas: General introduction to pure phenomenology*. W. R. Boyce Gibson, trans.). London, New York: Collier, Macmillan. (Original work published 1913).

Individuals with Disabilities Education Improvement Act of 2004. Pub. L. No.108-446 § 300.115 (2004).

Jackson, S., Pretti-Frontczak, K., Harjusola-Webb, S., Grisham-Brown, J., & Romani, J. (2009). Response to Intervention: Implications for early childhood professionals. *Language, Speech & Hearing Services in Schools, 40,* 424-434. doi:10.1044/0161-1461

Koutsoftas, A., Harmon, M., & Gray, S. (2009). The effect of tier 2 intervention for phonemic awareness in a Response-to-Intervention model in low-income preschool classrooms. *Language, Speech & Hearing Services in Schools*, *40*, 116-130. doi:10.1044/0161-1461(2008/07-0101)

King, N. (2004) Using interviews in qualitative research. In C. Cassell & G. Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp. 11–22). Sage, London.

Laverty, S. M. (2003). Hermeneutic phenomenology and phenomenology: A comparison of historical and methodological considerations. *International Journal of Qualitative Methods, 2*(3). Article 3. Retrieved from http://www.ualberta.ca/~iiqm/backissues/2_3final/pdf/laverty.pdf

Lincoln, Y. & Guba, E. G. (1984). Establishing trustworthiness. In Y. Lincoln & E. G. Guba, *Naturalistic inquiry* (pp. 289-331). Beverly Hills: Sage Publications.

Macy, M. G., and Bricker, D. D. (2007). Embedding individualized social goals into routine activities in inclusive early childhood classrooms. *Early Child Development and Care, 177*(2), 107-120.

Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice, 13*(6), 522-525.

McLean, M., Wolery, M., & Bailey, D. B. (2004). *Assessing infants and preschoolers with special needs.* Upper Saddle River, NJ: Pearson Merrill Prentice Hall.

McMaster, K. L., Fuchs, D., Fuchs, L. S., & Compton, D. L. (2005). Responding to nonresponders: An experimental field trial of identification and intervention methods. *Exceptional Children, 71*, 445-463.

Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: A sourcebook of new methods. (2nd ed.). Thousands Oaks, CA: Sage Publications.

Morse, Janice M. (1994). Designing funded qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp.220-35). Thousand Oaks, CA: Sage.

National Association for the Education of Young Children & National Association of Early Childhood Specialists in State Departments of Education. (2003). *Early childhood curriculum, assessment, and program evaluation building an effective, accountable system in programs for children birth through age 8*. from http://www.naeyc.org/about/positions/cape.asp

National Research Council. (2001). Educating children with autism. Washington, DC: National Academy of Sciences.

Neisworth, J. T., & Bagnato, S. J. (2000). Recommended practices in assessment. In S. Sandall, M. McLean, & B. J. Smith (Eds.), *DEC recommended practices in early intervention/early childhood special education* (pp. 17–27). Longmont, CO: Sopris West.

No Child Left Behind Act, Title IX, General Provisions, Part A, Section 9101, 20 U.S.C. § 7801 et seq. (2001). Retrieved from http://www.ed .gov/policy/elsec/leg/esea02/pg107.html

Noh, J. (2005). *Examining the psychometric properties of the second edition of the Assessment, Evaluation, and Programming System for Three to Six Years: AEPS Test 2nd Edition (3-6).* Unpublished dissertation. Eugene: University of Oregon.

Obiakor, F. (2009). Demographic changes on public education for culturally diverse exceptional learners making teacher-training programs accountable. *Multicultural Learning and Teaching*, *4*(1), 90-110.

O'Connor, R. E., Fulmer, D., Harty, K. R., & Bell, K. (2005). Layers of reading intervention in kindergarten through third grade: Changes in teaching and student outcomes. *Journal of Learning Disabilities, 38,* 440-455.

O'Connor, R. E, Harty, K. R., & Fulmer, D. (2005). Tiers of intervention in kindergarten through third grade. *Journal of Learning Disabilities, 38,* 532-538.

Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods.* Thousand Oaks, CA: Sage Publications.

Pearce, L. (2009). Helping children with emotional difficulties: A Response to Intervention investigation. *Rural Educator*, *30*(2), 34-46.

Pfeiffer-Fiala, C., Pretti-Frontczak, K., Moore, L., & Lyons, A.N. (2010). Performance monitoring within a tiered instructional model. In J. Grisham-Brown & K. Pretti-Frontczak (Eds.) *Assessing young children in inclusive environments: The blended practices approach* (193-218). Baltimore, MD: Brookes Publishing Co.

Polkinghorne, D. E. (1989). Phenomenological research methods. In R. S. Valle and S. Halling (Eds.), *Existential-phenomenological perspectives in psychology: Exploring the breadth of human experience* (pp. 41-60). New York, NY: Plenum Press.

Raver, S. (2003). Keeping track: Using routine-based instruction and monitoring. *Young Exceptional Children, 6*(3), 12-20.

Rubin, H. J. & Rubin, I. S. (2005). *Qualitative interviewing: The art of hearing data* (2nd Edition). Thousand Oaks: Sage Publications.

Sandall, S., McLean, M. E., & Smith, B. J. (2000). *DEC recommended practices in early intervention/ early childhood special education.* Longmont, CO: Sopris West.

Sandall, S. R., & Schwartz, I. S. (2002). *Building blocks for teaching preschools with special needs.* Baltimore, MD: Paul Brookes Publishing Co.

Schram, T. H. (2006). *Conceptualizing and proposing qualitative research (2nd ed.).* Upper Saddle River, NJ: Pearson Education, Inc.

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools, 42*, 795–819.

Sugai, G., & Horner, R.H. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child and Family Behavior Therapy, 24*, 23-50.

US Department of Education. (2002). *24th annual report to congress on the implementation of the individuals with disabilities education act.* Washington, DC: US Department of Education.

VanDerHeyden, A. M., Snyder, P., Broussard, C., & Ramsdell, K. (2007). Measuring response to early literacy intervention with preschoolers at risk. *Topics in Early Childhood Special Education, 27,* 232-249.

Vanderheyden, A. M. (2005). Intervention-driven assessment practices in early childhood /early intervention: Measuring what is possible rather than what is present. *Journal of Early Intervention 28*(1), 28-33.

VanDerHeyden, A. M & Snyder, P. (2006). Integrating frameworks from early childhood intervention and school psychology to accelerate growth for all young children. *School Psychology Review, 35*(4), 519-534.

VanDerHeyden, A. M., Witt, J. C., Naquin, G., & Noell, G. (2001). The reliability and validity of curriculum-based measurement readiness probes for kindergarten students. *School Psychology Review, 30,* 363–382.

Wall, C., Glenn, S., Mitchinson, S., & Poole, H. (2004). Using a reflective diary to develop bracketing skills during a phenomenological investigation. *Nurse Researcher, 11*(4), 20-29.

Wesson, C. L., King, R. P., & Deno, S. L. (1984). Direct and frequent measurement of student performance: If it's good for us, why don't we do it? *Learning Disability Quarterly, 7,* 45–48.

Ysseldyke, J., & Tardrew, S. (2007). Use of a progress monitoring system to enable teachers to differentiate mathematics instruction. *Journal of Applied School Psychology, 24*(1), 1-28.