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The impact of early childhood instruction on children's academic self-concept outcomes

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THE IMPACT OF EARLY CHILDHOOD INSTRUCTION ON CHILDREN'S ACADEMIC SELF-CONCEPT OUTCOMES

BY

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SPelman COLLEGE

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Abstract

Early childhood education lays the foundation for academic learning and ranges on the continuum of teacher-directed and child-centered instruction. In recent years, early childhood education has shifted its emphasis from child-development to academic centered in order to improve students' achievement on standardized tests. This shift has led to much debate among early childhood professionals in regards to which instructional approach is most beneficial to children's academic success. Most of the literature compares these instructional types as it relates to academic achievement, and do not consider children's academic self-perceptions; even though they are significant predictors of achievement. Using data from the Early Childhood Longitudinal Study-Kindergarten-98-99, this research adds to the literature by examining the relationships between teacher-directed instruction, child-centered instruction, and academic self-concept. Results from the Pearson Correlations showed that both teacher-directed and child-centered instruction were significant inverse predictors of academic self-concept. The Multiple Regression analysis revealed that when both predictor variables were controlled for, only teacher-directed instruction emerged as a significant negative predictor of academic self-concept. Children who spent longer amounts in child-centered instruction were expected to have lower levels of academic self-concept. Findings from this study seeks to provide insight on teachers' contributions to children's academic self-perceptions, as well as identify the appropriate teaching strategies that should be used to promote children's development of positive academic self-perceptions, which are needed to promote the longevity of their academic achievement.

Keywords: early childhood, instruction, teacher-directed, child-centered, academics, self-concept, self-perceptions.
The impact of early childhood instruction on children’s academic self-concept outcomes

According to Morin (2014), early childhood teachers, along with parents, and other primary caregivers, lay the foundation for academic learning. During the early childhood years (approximately 5-8-years-old), children develop the cognitive, social, and emotional skills necessary for the duration of their school career and adult life (Morin, 2014). These years are especially critical for children’s cognitive development, as these are the years in which students establish a sense of personal identity, self-concept, and an orientation towards achievement that play a significant role in shaping their success in school, work, and life (Eccles, 1999). Statistical reports show that on average, children in the United States spend approximately 1,096 hours per year learning in early childhood classrooms (Burgess, 2013). Because students spend most of their developmental years in the presence of teachers, it is expected that teachers play a significant role in shaping the trajectory or direction of their academic outcomes.

Aware of the significant influences that teachers have on students’ development and academic experiences, education experts continue to seek effective pedagogies that foster active learners and high academic achievers (Guthrie & Klauda, 2013). Early childhood education ranges on a continuum of teacher-directed and child-centered instruction (Berk, 2010). Berk (2010) briefly defines teacher-directed and child-centered instruction stating that, “in child-centered instruction, much of the learning takes place through play and child selected activities; whereas, in teacher-directed instruction, the teacher structures all of the children’s learning.” Although these approaches differ in the type of support teachers provide to students, the techniques used for classroom management, and activity structure, both of these approaches require active teacher participation (Stipek & Byler, 2004; Kikas, Peets & Hodges, 2014). Moreover, there are vast amounts of empirical evidence that supports both the positive and
negative impacts that these approaches have on children’s development and achievement (Haalar, Deater Thompson, DeThorne, & Petrill, 2014; Pyle & Deluca, 2013).

Schools are putting pressures on teachers to mold children into becoming more academically competitive in order to excel on standardized tests. Such pressures have shifted the emphasis of early childhood education from child development to more academic focused (Berk, 2010; Heydon & Wang, 2006). As a result of this shift, teachers and researchers have become more focused on the effectiveness of these instructional approaches to improve students’ achievement on standardized tests, and less focused on the influences that these approaches may have on students’ academic self-perceptions; particularly their perceived competence and interest.

Dictionary.com defines competence as, “one’s perceived level of ability, mastery, or confidence in a specific content. Interest is defined as one’s intrinsic motivation or enjoyment for a specific content. Academic self-concept is the term that has been coined in the literature that collectively describes children’s perceived level of academic competence and interest (Marsh, Trautwein, Lüdtke, Köller & Baumert, 2005; McGrew, 2007). Therefore, the term academic self-concept is used interchangeably throughout the text to refer to children’s perceived competence and interest as a whole.

Before teachers can assess and promote the longevity of academic achievement, they should ensure that students have established a strong academic self-concept (Marsh, Trautwein, Lüdtke, Köller & Baumert, 2005). Understanding students’ perceptions of their own academic competencies, feelings, and experiences in these instructional activities are important because their perceptions will influence how they in turn value academics. Students’ value of academics will ultimately determine how well or poorly they perform academically (Peterson,
Miller, & Jeffrey, 2004). Therefore, the current study seeks to investigate the relationships between teacher-directed instruction, child centered instruction, and academic self-concept.

**Literature Review**

The following review of literature presents an overview of teacher-directed and child-centered instruction, and discusses the existing literature relevant to the debate between these two instructional types. This review also introduces the literature related to academic self-concept by: exploring its origins, providing an overview of the term, assessing its components (i.e. perceived competence and interest), and investigating its influence on students’ academic outcomes. Lastly, the final section of this literature review summarizes the discussed literature and concludes with the purpose for the current study.

Please note that the participants included in the studies that appear this literature review vary between the ages from preschool (3-years-old) to undergraduate (approximately 23 years-old). The current study solely focuses on participants in the early childhood years (5-8 years-old). Early childhood years are the most critical years, as this is the period where there is precedence in children’s development.

**Teacher Directed Instruction**

Teacher-directed instruction is a didactic practice or approach rooted from the behaviorist perspective of learning. This is a more strict approach in which teachers utilize reinforcement and/or punishment to manage children’s classroom behaviors (Parker & Neuharth-Prichett, 2006). This approach is also individually-based, meaning the children learn by themselves through operant conditioning practices like repetition, drill, and practice (Berk, 2010). For example, at the beginning of the week, the instructor presents a set of vocabulary words for the students to memorize for the upcoming spelling test. For the duration of the week,
the children familiarize themselves with the words by completing assignments that involve defining the words, reciting words from a word wall, using the words in a sentence, or writing each word ten times each. By seeing and using the words repetitively, the students are able to broaden their vocabulary acquisition skills (Sweeny & Mason, 2011).

**Positive Effects of Teacher-Directed Instruction.** Teacher-directed instruction places an emphasis on students’ academic performance, the instructors’ ability to prepare students for standardized tests and academic evaluation, and the enhancement of students’ behavioral engagement and extrinsic motivation (Cho & Cho, 2014; Wong, 2014). Wong (2014) found that Chinese students were extrinsically motivated to learn in teacher-directed classrooms as opposed to child-centered classrooms. The students believed that their teacher would be more serious and would create a classroom setting that would be effective in enhancing their discipline preparing for the upcoming standardized exam.

Studies have also found correlations between the teacher-directed approach and students’ academic outcomes (Chien et al., 2010; de Haan, Elberm & Leseman, 2011). For example, Chien et al. (2010) found that kindergarteners showed higher gains in reading and math when their teachers directed their assignments compared to those kindergartners whose teachers used child-centered instruction.

**Negative Effects of Teacher-Directed Instruction.** On the other hand, findings from previous research suggest that the teacher-directed approach can be detrimental to children’s motivations for learning and attitudes about school (Berk, 2010; Lerkkanena et al., 2012). When Lerkkanena and colleagues (2012) examined young students’ interest outcomes, they found that children expressed less interest to learn math and reading when their teachers utilized teacher-directed instruction in comparison to the child-centered approach. Such a strict approach, limits
children's abilities of creative expression, and increases anxiety, which causes them to lose self-confidence and desire to engage (Hirsh-Pasek, Hyson, & Rescorla, 1990).

Hirsh-Pasek and colleagues (1990) found that children who learned in teacher-directed preschool programs showed higher levels of test anxiety and measured less in creativity compared to children in child-centered programs. Furthermore, Stipek, Fieler, Daniels and Milburn (1995) found that children who sat and completed worksheets instead of actively engaging in learning activities, showed less confidence in their abilities and preferred less challenging tasks. Children's lack of self-confidence eventually leads to the formation of negative attitudes about school (Mitchell & Bradshaw, 2013). In sum, the teacher-directed approach is shown to have positive and negative outcomes on student's learning. The next section will present the positive and negative aspects of child-centered instruction.

**Child-centered Instruction**

Child-centered instruction is often referred to as student-centered instruction. Nie and Lao (2010) noted that this instructional approach takes on a more constructivist view and is grounded in the theoretical frameworks of Piaget and Vygotsky. It allows children to develop their own knowledge and make connections to real life situations through their independent exploration of the world (Parker & Neuharth-Prichett, 2006). Teachers act as guides to support and facilitate students' learning through scaffolding or directing instruction to the child as needed, showing support for autonomy, providing children with options, and encouraging children to share ideas and learn from their peers (Haalar et al., 2011; Lerkkanena et al., 2012). This type of approach strongly emphasizes children's mastery of an in-depth understanding of academic materials and essential learning skills (Cho & Cho, 2014).
An example of an educational philosophy that incorporates the child-centered approach is Reggio Emilia. Created by Loris Malaguzzi who believed that children had “100 languages of learning” or learned in many ways, Reggio Emilia is a prominent child-centered approach centered in pre-and primary schools throughout Italy (Edwards, Gandini, & Foreman, 1993). Lewis (2014) described this philosophy to infuse art, culture, community, responsibility, and respect, through a self-directed curriculum. This curriculum allows children independently discover learning through exploration and play, while their teachers observe, document, and showcase the students’ creative thoughts.

**Positive Effects of Child-Centered Instruction.** Studies show that when teachers create a classroom environment based upon a child-centered philosophy, they are promoting positive teacher-student relationships, increasing students’ intrinsic motivation, and showcasing students’ talents and creativity (Thompson & McDonald, 2007; Wong, 2014). For example, Thompson and McDonald’s (2007) investigated the relationship between gifted and advanced 6th graders’ perceptions of a teacher-constructed and student-constructed written assignment. Student reports showed that the students enjoyed the student-constructed assignment because it gave them the opportunity to showcase their talents and creativity; something that they rarely got to do with teacher-constructed assignments. Also, the results from Wong’s (2014) study revealed that students were able to build relationships with their teacher who used the child-centered approach because the teacher created a fun and more intimate learning environment.

In child-centered classrooms, teachers are aware that children learn and develop at different rates, and thus, differentiate or modify their instruction to tailor to students’ individual needs (Berk, 2012; Ireson & Hallam, 2001; Tomlinson, 2000). Tomlinson (2000) simply defines differentiated instruction as, teachers’ efforts to adhere to the variances among learners’
readiness levels, interests, and modes of learning in order to make for the best possible learning experience (Tomlinson, 2000). Child-centered teachers modify their instruction through the use of small-groups (Berk, 2012). When teachers use small-groups, they break the whole class up into subgroups (maximum of 5 children per group) and provide instruction based on a clear learning objective or goal (Ireson & Hallam, 2001).

Although research on small-groups is limited, findings do reveal the benefits of implementing small-groups in child-centered classrooms (Wasik, 2008; Yackel, Cobb & Wood, 2008). For example, Phillips and Twaedosz (2003) observed a small group of preschoolers during story time and found that small-groups promote language development. When the preschoolers read the story in small groups, they were able to expand their verbal acquisition due to the increased opportunities for dialogue with their teachers. In small groups, the children were able to respond to teacher’s feedback and questions.

In another study, Yackel and colleagues (2008) found that small groups provided students with opportunities for cooperative learning. In the study, children were placed into small-groups to solve a mathematical task. Observations showed that, in efforts to find the correct answer, students collaborated with their peers to solve problems, often asking questions, giving suggestions, and explaining or justifying their approach to the solution. These results are supported by Wasik's (2008) assertion that small-groups promote cooperate learning and diversity because children are able to interact and learn from one another. Furthermore, small-groups enable opportunities that are often impossible to experience in large group settings.

In short, researchers propose that child-centered instruction allots teachers more time to: devote more attention to the student, closely assess their individual performance, and tailor their instruction to fit the specific needs of each child (Berk, 2010, Wasik, 2008). However, there are
some limitations to using this instructional approach. The following section of this review will highlight the negative aspects of child-centered instruction.

**Negative Effects of Child-Centered Instruction.** Although the previously discussed studies show the child-centered approach to be more favorable on student outcomes in comparison to the teacher-directed approach, these studies also revealed the negative aspects of child-centered instruction. For example, students from Wong’s (2014) study did not take the child-centered instruction seriously, believing that they were only having fun and not learning because the classroom setting was too relaxed. Furthermore, although the students in Thompson & McDonald’s (2007) study perceived the child-constructed assignment to be interesting, they considered this assignment to be more challenging. The students felt more comfortable with the teacher-constructed assignment because it required less effort to complete, as the directions and expectations of the assignment were made clear by the teacher. The findings from these studies suggest that students may misinterpret the goal of the child-centered instruction for recreational play, and not for learning purposes, which can ultimately place them at higher risks of academic failure (Chien et al., 2010; Wong, 2014).

**Teacher-Directed versus Child-Centered Debate Conclusions**

The literature presents the advantages and disadvantages of both instructional approaches, thus continuing the ongoing debate about which approach is most appropriate to use in classrooms. Researchers argue that neither approach is more effective over the other. The literature reveals that teachers vary in their use of either approach depending on their personal preferences, beliefs and experiences (Ikhlef & Knight, 2013; Van Fleet, 1979). According to Stipek and Byler (2004), teachers vary in whether they dominantly use one approach over the other, or use a combination of both approaches to structure classroom activities, depending on
the situation, what is being taught, and student differences. Tok and Sinan (2014) indicate that teachers' tendencies to use either approach is dependent upon their own beliefs and teaching philosophies. Other researchers also point out that teachers may use one approach over the other to meet the demands of the school district's requirements or address students' learning needs (Heydon & Wang, 2006; Nichols, Zellner, Rupkey, Wilson, Kim, Mergen, & Young, 2005; Parker & Neuharth-Prichett, 2006).

Moreover, researchers express that the use of both approaches are optimal to children's learning (Ikhlef & Knight, 2013). Pyle and Deluca (2013) affirmed that each approach enhances specific student outcomes. The results from the study highlighted that the teacher-directed approach promotes students' academic achievement, and the child-centered approach fosters student's cognitive, social and emotional development. In a comparison between both approaches, Haalar, Deater Thompson, DeThorne and Petrill (2014) affirmed that the teacher-directed approach increases the child's attention towards the teacher, enforces the child's drive for self-regulation, and gives the child the opportunity to mimic and practice what they have learned. On the other hand, the child-centered approach provides children with the opportunity share their ideas and learn from their peers.

Based upon these findings, the literature suggests that early childhood instructors to use a combination of both pedagogies inside their classrooms to create a balance of the child's social and emotional development, and academic growth (de Haan et al., 2014; Pyle & Deluca; 2013). An example of a teaching philosophy that combines both pedagogies is the Ausubelian approach. Developed by David Ausubel (1964), this teaching method alternates formal teacher-directed instruction, and child-centered discovery and play. This approach not only improves student
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achievement, but it encourages students to form positive attitudes towards academics (Sefdar, 2013).

Sefdar (2013) compared the effectiveness of the Ausubelian approach and the traditional (teacher-directed) approach on Pakistani 8th graders' science achievement. At the start of the week, the students were pretested on their current science knowledge. For one school week, the students were randomly assigned and taught in one of the two science classes: the one where teachers used the experimental approach, or the class that used the traditional approach. At the end of the week students took a posttest. Results from the posttest showed that the students who were taught using the Ausubelian approach, had significantly higher gains in achievement compared to the students who were taught using the traditional approach.

The findings from this study serves as supporting evidence to the literature that suggests using a combination of both approaches to promote achievement. Researchers further explain the importance of incorporating both teaching pedagogies. Kikas et al. (2014) declare that the roles teachers play in classroom instruction are likely to vary on a daily basis because students may need certain types of instruction, depending on what is being learned. For example, one day, a class may struggle to learn a difficult academic concept, and may benefit most from the teacher-directed instruction. In contrast, the next day, students may seek more independence and want to explore learning the concept themselves. In this instance, the students would benefit most from child-directed instruction (Wentzel & Watkins, 2002). In short, teachers’ instructional approaches should change to best-fit the student’s needs.

What happens to students’ academic outcomes when teachers over or underuse the approaches in their classroom instruction? De Haan, Elbers & Leseman (2014) answered this question when they examined the contribution of teacher-and child-managed everyday classroom
activities to preschoolers’ and kindergarteners’ school readiness. Extensive observations in eight early childhood classrooms over a one year period, revealed a significant difference across classrooms in the amount of time spent in teacher-managed activities. The occurrence of teacher-managed activities was relatively low, especially in math. Despite the low occurrence, the results revealed that children showed higher gains in math skills when their teacher initiated their math activities. Child-managed activities promoted students’ literacy gains, but were not associated with their emergent math skills. These findings suggest that both approaches are beneficial to children’s academic success and utilizing one over the other would be detrimental to their learning experience.

The literature suggests that both approaches contribute to achievement outcomes, but does not account for the use of these approaches in its relation to children’s academic self-concept. Addressing students’ self-concept is important because the way students interpret their own academic experiences play a major role in shaping their academic success or failure. The remainder of this literature will review will focus on academic self-concept by: providing historical contexts of the term, detailing the components of academic self-concept (i.e. perceived competence and interest), and investigating its significance to student academic outcomes.

**Origins of Academic Self-Concept**

In general, the literature has examined individual’s self-perceptions using Self-Perception theory (SPT). Developed by psychologist Daryl J. Bem (1972), the SPT posits that individuals use their overt behaviors to make inferences about or justify their inner feelings. This theory provides an alternative explanation for cognitive dissonance, or the contradictions between one’s actions and beliefs. Festinger and Carlsmith’s (1959) experiment is one of the most renown studies used to support the Self-perception theory. In the study, researchers paid the participants
either $1 or $20 dollars to lie about a repetitive task being interesting and fun. The participants who received $1 internalized the lie to be true, because their behavior of telling the lie did not match up with characteristics of the task, nor the low-compensation they received. The participants who received $20 were able to justify their reasons for telling the lie because they were highly compensated (Bem, 1972). In short, people form self-perceptions based from their behaviors and experiences.

Since Self-Perception theory was introduced, many forms of this theory have derived in the literature. In particular, the literature has proposed numerous theories and concepts relative to children’s perceptions of their developmental competencies and experiences. In regards to early childhood education, a variety of constructs are used to explain children’s self-perceptions of their competencies related to their school and academic experience. Terms most commonly presented in the current literature includes: Self-Concept and Self-Efficacy. These terms are often used interchangeably which is problematic, given these terms have their own distinct meaning and play out differently within students (Wilkinson, 2009).

Self-efficacy refers to an individual’s own perceptions of their ability to master specific academics tasks (Bandura, 1997). According to Wilkinson (2009), self-efficacy places less emphasis on the abilities that students’ believe they possess and more emphasis on how students perceive their ability to use those skills to accomplish certain tasks. The author distinguishes self-concept from self-efficacy stating that, the former explains students’ perceived level of ability, success, or difficulty for academic subjects as a whole; while the latter also includes an affective judgment related to individual’s interest or how much they like or enjoy a domain (Bong & Skaalvik, 2003).
Self-Concept- Self-concept includes a combination of an individual’s perceived competence and feelings. The current study is interested in assessing the outcomes of children’s perceived competence and interest for academic subjects. Therefore, this study uses the term academic self-concept as the outcome variables of interest. This review will further discuss the literature pertaining to self-concept, specifically academic self-concept.

Self-concept, first noted by Carl Rogers and Abraham Maslow, describes how an individual view themselves in regards to their capabilities, attitudes, values, and uniqueness (Pastorino & Doyle-Portillo, 2013; Weiten, Dunn, & Hammer, 2012). There are three components of self-concept including, self-image (how one sees themselves), self-esteem (how one values their own worth), and the ideal-self, or how one wishes he could be (Soboleva, 2011). Bracken (1992) suggested 6 specific self-concept domains: competence, social, family, affect, physical, and academic. However, other researchers have specified academic, physical, and social self-concepts as the three domains relative to children’s scholastic experience (Cole et al., 2001; Harter, 1982). For the purposes of this study, the domain of academic-self-concept will be highlighted.

Academic Self-Concept

Academic self-concept or global academic self-concept, is referred to as the students’ overall perceived ability and enthusiasm to learn and do well academically (Guay, Marsh, & Boivin, 2003; McGrew, 2007). Many researchers have argued that academic self-concept is multidimensional and varies across school subjects. Shavelson, Hubner and Staton (1976) posited that academic self-concept is multifaceted, meaning students could perceive competence for specific subjects. Recognizing that students’ self-concept may vary relative to specific subject domains, many researchers have drawn distinctions between academic self-concept. For
example, math self-concept would be described as students’ belief that they can do well in mathematics, and reading self-concept would constitute students’ belief that they can do well in reading or language arts (Rosen, Glennie, Dalton, Lennon, & Bozick, 2010).

Components of Academic Self-Concept - Children’s perceived academic competence and interest are so strongly associated, that these variables are often measured as an integral whole (Marsh et al, 2005; McGrew, 2007). Hence, the reason academic self-concept is the term used to collectively describe student’s perceived academic competence and interest. Some research have affirmed that children must be intrinsically motivated or interested before they can develop a self-concept for a subject (Bouffard et al., 2003). Other research have shown that increased levels of self-competency lead to increased levels of intrinsic motivation (Deci & Ryan, 1985, cited in Marsh et al., 2005).

More than often children’s perceptions of their academic abilities influence their academic interests (Archambault, Eccles & Vida, 2010; Roebers, Cimeli, Rothlisburger & Neuenswander, 2012). If teachers present academics in a way that is too tedious or challenging, children may become deterred, feel incompetent and form a dislike for learning. For example, Roebers and colleagues (2012) found that when children are faced with challenging tasks, their perceived competence is sometimes hampered, and their interest is then decreased. Such a decline in perceived competence and interest can have a significant effect on students’ academic outcomes. The following section will present literature that explores the relations between academic self-concept and academic outcomes.

Academic Self-Concept and Students’ Academic Outcomes. Interestingly, the relationship between academic self-concept and achievement has become very prominent in the literature. Rittmayer and Beier (2009) describe and give an example of the overall steps of academic self-
concept's contribution to achievement. When children are confident in their ability to be academically successful, their self-concept will influence their interest, making them more excited about learning. When children show interest or excitement for learning, they will be more likely to become intrinsically motivated to learn, which will lead to them to push for goals of academic excellence (Rittmayer & Beier, 2009).

Rosen et al. (2010), describes the three models (skill-development, self-enhancement, and reciprocal effects) that have been used to explore the relationships between academic self-concept and achievement. The skill development model describes academic self-concept as an outcome of prior achievement. For example, when children are rewarded for their outstanding work, this experience of achievement translates to their strong beliefs in their academic ability. The self-enhancement model suggests that students who are already confident their academic competence, are likely to perform well academically. The reciprocal effects model argues that once a student's positive academic self-concept has been established, it will persist and predict subsequent achievement (Marsh &, Craven, 2006).

Researchers find it quite difficult to effectively measure children's academic self-concept using the skill-development model. Nicholls (1978) declares that children, especially younger aged, tend to mistakenly equate their efforts with ability. These children positively evaluate their own abilities with the belief that trying hard is what makes them smart. In efforts not to discourage children, and promote the development of a high self-concept, teachers generally give younger students praises for their work, and good grades for their effort. Such positive feedback may not be an accurate reflection of students' achievement or ability (Wilkinson, 2009).

Numerous studies support the self-enhancement model's explanation of the relations between academic self-concept and achievement (Bouffard, Marcoux, Vezeau & Bordeleau,
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2013; Valentine, DuBois & Cooper, 2004; Pasiri, 2013). Pasiri (2013) measured the academic self-concept and academic achievement of 28 kindergarten children. The researcher found that children who perceived high academic competence had high academic achievement and students who had lower perceived competence had low achievement. Bouffard et al. (2013) found that students who had high perceived competence in reading also had high achievement in reading. In Valentine, DuBois and Cooper’s (2004) study, the results showed that students who had high self-concept for math also had high math scores. All of these studies provide evidence that when children feel competent in a given subject they typically perform well in that subject (Valentine, DuBois & Cooper, 2004).

Studies support the idea of the reciprocal relationship between academic self-concept and achievement. For example, Marsh et al., (2005) examined the longevity between students’ competence, interest and achievement. The results revealed that students’ perceived competence and interest were short lived when teachers failed to promote achievement, and students’ achievement was short lived when teachers failed to promote their perceived competence and interest.

Stringer and Heath (2008) used the reciprocal effects model in their attempts to explore the casual relationship between students’ academic self-concept and achievement over a one year period. At the start of the study, researchers measured 152 disabled fourth and fifth grade students’ initial academic self-concept, and then tested them in reading and math. A year later, researchers administered the same math and reading tests, and measured students’ academic self-concept again.

The results showed that children’s initial academic self-concept did predict their future academic performance. However, students’ academic performance remained stable over time.
Students’ changes in their perceived academic competence did not reflect their later academic achievement. Thus, no causal relationship has been identified to support the reciprocal effects model’s explanation of the relationship between academic self-concept and achievement.

The majority of the mentioned studies identify academic self-concept as a significant contributor to achievement. Yet, researchers do not take student’s academic self-concept into account when examining teacher’s instructional influences on students’ academic outcomes. The lack of studies’ exploration of the relationship between instructional approaches and academic self-concept gives way to the purpose of the current study.

**Purpose of the Current Study**

In sum, previous research has established strong, positive relationships between teacher-directed instruction, child-centered instruction and achievement, concluding that both instructional types are equally significant predictors of achievement. The current study seeks to add to the literature by investigating whether or not both of these instructional types will remain significant predictors when the outcome of achievement is replaced with academic self-concept (i.e. perceived competence and interest). The purpose of the current study attempts to use secondary data provided by the Early Childhood Longitudinal Study- Kindergarten 1998-1999 (ECLS-K) to conduct a Multiple Regression analysis in order to answer the following research questions:

1.) Are teacher-directed and child-centered instruction significant predictors of academic self-concept?

2.) If they are significant, what are the independent contributions of teacher-directed instruction and child-centered instruction to the prediction of students’ academic self-concept?
It is hypothesized that both independent variables will emerge as significant predictors, but will have different patterns of predicting academic self-concept:

(a) Teacher-directed instruction will emerge as an inverse predictor of academic self-concept; meaning that the more time children spend in teacher-directed instruction, the lower their academic self-concept is expected to be.

(b) Child-centered instruction will emerge as a positive predictor of academic self-concept, meaning that the more time children spend in child-centered instruction, the higher their academic self-concept is expected to be.

Based upon the literature, child-centered instruction is centered on students’ cognitive, social, and emotional development, and is identified as the instructional type that places strong emphasis on enhancing students’ in-depth understanding and academic drive. Therefore, this study will also test the hypothesis that, when each predictor, child-centered and teacher-directed instruction is evaluated with the other statistically controlled for, child-centered instruction will emerge as the significant predictor for academic self-concept, but teacher-directed instruction will not. Thus, child-centered instruction will responsible for the relationship between teacher-directed instruction and academic self-concept.
Method

Design

This study uses a correlational research design to investigate the relationships between children's academic self-concept (i.e. perceived competence and interest), teacher-directed instruction and child-centered instruction through secondary data from the Early Childhood Longitudinal Study- Kindergarten Class of 1998-1999 (ECLS-K). The ECLS-K focused on the education and development experiences of a representative sample of 22,000 school-aged children from diverse racial, socioeconomic, and ethnic backgrounds across the United States. Researchers followed their academic and learning development progress as they transitioned from Kindergarten through eighth grade.

Data were collected from the students, parents, teachers and schools in regards to students’ characteristic, approaches to learning and social, emotional and physical development during the following periods: base year when students were in kindergarten (1998-1999), fall/spring first grade (1999-2000), spring third grade (2002), spring fifth grade (2004) and spring eight grade (2007).

Participants

Initially, only 68 participants were needed to conduct this study. The subset sample size was generated from the G-Power 3.1.9.2 analysis for a Multiple Linear Regression with two predictor variables, 0.15 effect size, 0.8 power, and .05 error probability. However, participants for this study includes all of the third grade students (13,482 in total) from Early Childhood Longitudinal Study- Kindergarten Class of 1998-1999 (ECLS-K) who completed the Self-Description Questionnaire, and whose teachers responded to the Teacher Questionnaire. This study uses a larger sample size to ensure larger and/or more significant effects.
Materials

Data were collected from the participants of the ECLS-K using multiple approaches. Professional assessors provided one-on-one in school assessments to children in order to examine their reading, math, social studies, and science and general knowledge skills. As students transitioned to third, fifth and eighth grade, they completed the Self-Description Questionnaire in which they provided information on their perceptions, attitudes and interest towards math and reading. Data were collected from parents through over the phone interviews, and teachers and school administrators completed pencil and paper questionnaires.

Measures

Teacher Questionnaire. This questionnaire was used to examine kindergarten, first grade and eighth grade teachers’ self-reports of their classroom environment, curriculum, and methods they use to effectively teacher their students. Each kindergarten teacher received a self-administered questionnaire consisting of three distinct parts (Tourangeau et al., 2001). The first section, part A, was composed of classroom demographics and teacher’s background. Part B addressed more specific questions related teacher’s classroom characteristics such as organization, activities, and evaluation methods. This section also contained items related to the teacher’s views on kindergarten readiness, school environment, and overall school climate. Lastly, Part C of the questionnaire asked teachers to report about each sampled child in their classroom (Tourangeau et al., 2001).

For the purpose of this study, only the kindergarten teacher questionnaire from the base year of the ECLS-K (fall, 1999) was assessed because it was the only early childhood teacher data available for public use that asked teachers about which instructional approach they use in their classrooms.
The current study focuses on question number 8 from Part A of the questionnaire which asked teachers rate their frequency to utilize either child-centered or teacher-directed approaches in classroom activities on a scale from 1 (*no time*) to 5 (*three or more hours*). Teachers corresponded to following items: (A2 Q8A) Teacher-directed whole class activities, (A2 Q8B) Teacher-Directed small-group activities, (A2 QBC) Teacher-directed individual activities, and (A2 Q8D) Child-Centered activities. Items A2 Q8B and A2 Q8C were omitted from the study in order to maintain the nature of teacher-directed instruction approach which is usually instructed to the whole class. Only teacher-directed whole class instruction (A2WHLCLS) and child-centered instruction (A2CHCLDS) items were considered for this study.

Measurements of reliability were only taken in to account for the social and academic scale items provided in the questionnaire. Therefore, it is unknown whether or not this study’s measurement of teacher instructional approaches is reliable or valid.

*Self-Description Questionnaire (SDQ).* The SDQ was used to measure students’ perceptions of their academic and social experiences when they were in the third, fifth, and eighth grade. This study specifically examines the children’s responses from the SDQ completed in the third grade (spring, 2002), as this was the first time that children were able to rate their academic self-concept (i.e. perceived competence and interest for academics). Students responded to 42 items and rated 6 subscales (reading, math, all subjects, peers, internalizing and externalizing problems) items on a scale from 1 (*not at all true*) to 4 (*very true*).

Some example items include, “Work in math is easy for me,” or “I get good grades in reading. Most of the items in the questionnaire pertained to reading and math, with eight items respectively. Therefore, this study only assesses students’ ratings for these particular subjects.
Since reading and math were assessed together, the ratings for each subject was averaged together in order to obtain an overall rating score.

The questionnaire was adapted from the (Marsh, 1990) Self-Description Questionnaire I. The measures for students’ perceived interest/competence for reading were reliable with a .90 alpha coefficient, 3.00 weighted mean, and .74 standard deviation. The measures for students’ perceived interest/competence for math were reliable with a .92 alpha coefficient, 2.92 weighted mean, and a .78 standard deviation (Pollack et al., 2005).

Procedure

During the base year of the study (fall, 1999), researchers mailed letters to the participating schools to confirm participation and parental consent. School coordinators were asked to prepare a list of kindergartners for the selected sample. Teachers of those kindergartners selected to participate in the study were called into a meeting and asked to complete all parts (A, B, and C) the self-administered teacher questionnaire and to return during the researcher’s upcoming child assessment visit (Tourangeau et al., 2001). Lastly, once the sampled kindergarten students transitioned to the third grade, researchers administered the Self-Description Questionnaire for completion.

Data Analysis and Reduction

In order to test the null hypotheses that there are no relationships between teacher-directed instruction, child-centered instruction, and children’s academic self-concept, public data from the Child Dataset (i.e. all data from the Teacher Questionnaire and SDQ) provided by the Early Childhood Longitudinal Study were manipulated using SPSS 20 Statistical Software. First, the items of interest from the teacher questionnaire were renamed so that distinct instructional types could be easily identified in the dataset. Item A2 Q8A which asked teachers to
report the amount of time they spend using teacher-directed whole class instruction was
originally named “A2WHLCLS.” This variable was renamed to “Teacher-Directed Instruction.”
Item A2 Q8D which asked teachers to report the amount of time they spend doing child-selected
activities was originally labeled as “A2CHCLDS.” This variable was renamed to “Child-
Centered Instruction.”

Next, the variables “C5SDQRDC,” and “C5DQMTCC” were originally used to identify
each 3rd grader’s response on the Self-Description Questionnaire of their perceived
competence/interest ratings for reading and math respectively. This study was interested in
examining the children’s perceived competence and interest for academics overall. Therefore,
these variables were averaged together and recoded into a new variable named, “Academic-Self-
Concept.”
Results

Pearson correlations were conducted to examine the relationships between academic self-concept, teacher-directed instruction, and child-centered instruction. Table 1 summarizes the descriptive statistics and analysis results. The results show that: (a) teacher-directed instruction and child-centered instruction were inter-correlated, (b) teacher-directed instruction was negatively correlated with academic self-concept, and (c) child-centered instruction was negatively correlated with academic self-concept. Each predictor variable had a significant inverse relationship with the criterion, indicating that the more time children spent in either type of instruction, the lower their academic self-concept tended to be.

Table 1.

*Descriptive Statistics and Pearson Correlations*

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>S. D.</th>
<th>TD</th>
<th>CC</th>
<th>ASC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher-Directed (TD)</td>
<td>3.32</td>
<td>1.91</td>
<td></td>
<td>.41*</td>
<td>-0.03*</td>
</tr>
<tr>
<td>Child-Centered (CC)</td>
<td>2.34</td>
<td>2.00</td>
<td>.41*</td>
<td></td>
<td>-0.02*</td>
</tr>
<tr>
<td>Academic Self-Concept</td>
<td>3.18</td>
<td>0.71</td>
<td>-0.03*</td>
<td></td>
<td>-0.02*</td>
</tr>
</tbody>
</table>

*p ≤ 0.05

A multiple regression was conducted to analyze the patterns for predicting academic self-concept when all two independent variables were included in the model. The results from the analysis are presented in Table 2. Together, the predictor variables produced $R^2 = 0.001$, $F (2, 13479) = 5.34$, $p < 0.05$, accounting for an estimated 0.1% of the variation in academic self-concept. However, only teacher-directed instruction ($\beta = -0.03$, $p < 0.05$) emerged as a significant
predictor of academic self-concept. Teacher-directed instruction had a significant inverse regression weight, indicating that, after controlling for child-centered instruction, children who spent longer amounts of time in child-centered instruction were expected to have lower levels of academic self-concept. Child-centered instruction did not significantly contribute to the model.

Table 2.

Hierarchal regression analysis predicting academic self-concept

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S. E.</th>
<th>β</th>
<th>ΔR²</th>
<th>FΔ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1: df = 2, 13479</td>
<td></td>
<td></td>
<td></td>
<td>.001</td>
<td>5.344*</td>
</tr>
<tr>
<td>Child-centered instruction</td>
<td>-.002</td>
<td>.003</td>
<td>-.005-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher-directed instruction</td>
<td>-.010</td>
<td>.003</td>
<td>-.026*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p ≤ .05
Discussion

Few studies have examined the relationships between teacher instructional approaches and children's academic self-concept. Using a correlational research design, this study investigated whether there were significant relationships between two of the most commonly used instructional approaches in early childhood classrooms—teacher-directed instruction and child-centered instruction—and children's academic self-concept. The results revealed that both teacher-directed and child-centered instruction were negatively correlated with children's academic self-concept, meaning, the more time children spend in either type of instruction, the lower their academic self-concept is expected to be. However, when each predictor variable was examined simultaneously and controlled for, only teacher-directed instruction emerged as a significant inverse predictor of children's academic self-concept.

When examined individually, both teacher-directed and child-centered instruction emerged as inverse predictors of children's academic self-concept. Thus, our hypothesis was partially supported. Such findings may have arisen as due to the nature of the dependent variable. Academic self-concept includes measures of both student's self-perceptions of their competence and interest (Bong & Skaalvik, 2003). However, each instructional type only encompasses one component of academic self-concept.

Findings from previous research have highlighted that teacher-directed instructions is structured to enhance students' academic competence and mastery, while child-centered instruction is structured to enhance students' academic interest and engagement (Ikhlef & Knight, 2013; Pyle and Deluca, 2013). If children are spending the majority of their classroom time in either type of instruction, their perceived competence or interest may be increasing, but at the expense of the other. The only way that a child can have a high academic self-concept is if they have both a strong level of competence and interest. In this sense, findings from this
research suggests for teachers to use both types of instruction so that students have the opportunity to establish both a strong sense of competence and interest.

The emergence of teacher-directed instruction as the only significant inverse predictor of academic self-concept once all variables were controlled for, is accurate under the assumption of the nature of teacher-directed instruction. This type of instruction is considered to be the more strict approach as opposed to child-centered instruction. Generally, teacher-directed instruction is used to govern a large body of students at one time. Teachers rarely have the opportunity to adhere to each of the learners' individual needs, which results in a decline of students' confidence (Lerkkanena et al., 2012). Moreover, when teachers use this type of instruction, they are usually interested in ensuring that students master the academic concepts. In turn, these teachers initiate and structure all of the students' learning. Students are given little to no control over their learning, and the academic lessons become more of a routine, in which students gradually withdraw their interest and engagement.

The significant inverse associations between the amounts of time the children spend in both teacher-directed and child-centered instruction and their academic self-concept closely resembles the results from de Haan, Elbers & Leseman's (2014) study. In this study the researchers examined teachers' utilization of teacher- and child-managed activities, and found that utilizing one type of instruction more than the other significantly decreases students' achievement. In the case of the current study, spending too much time in one type of instruction significantly decreases students' academic self-concept.

Moreover, inferences from Wong's (2014) study best explains why spending too much time in either type of instruction is detrimental to students' academic self-concept. In child-centered instruction, the classroom atmosphere is usually relaxed and the students are given full
autonomy over their own knowledge acquisition. In most cases, students lose sight of the learning objective and become distracted. In teacher-directed instruction, students have to remain disciplined at all times, and often have to compete with one another. Furthermore, Hirsh-Pasek, Hyson, & Rescorla (1990) conclude that these students either become bored or succumb to the academic pressures, showing high levels of stress and anxiety.

The current study had quite a few notable limitations that may have played a role in the minute significant findings. First, this study has an extremely low R squared value of .001, which indicates that the very small significant findings are only probably due to the extraordinarily large sample size. This study also used secondary data. The variables from the original study did not exactly depict our variables of interest. Therefore, the original variables had to be manipulated and interpreted a little differently in order to closely resemble the variables that we were interested in analyzing as much as possible.

Second, this study omitted two variations of teacher-directed instruction that were included in the original study. Teacher-directed individual instruction, and teacher-directed small group instruction bears a close resemblance to child-centered instruction as they incorporate the use of small-groups. These two types of teaching approaches includes a balanced combination of both teacher-directed and child-centered instruction. Had these variables been included in the study, these variables would have possibly yielded different results and emerged a positive predictors of academic self-concept.

Third, this study did not take into account other factors that may influence children’s academic self-perceptions. Previous studies have shown that factors outside of the classroom, such as home environment, parental involvement, or prior achievement are essential in shaping
students’ academic experiences. (Morin, 2014). By controlling for other contributing variables, larger and more significant effect sizes could have emerged in the results.

Fourth, academic self-concept has been described as being context specific (Shavelson, Hubner and Staton, 1976). Yet, this study only measures children’s overall academic self-concept for all subjects. If academic subjects were examined separately, then each instructional approach may have emerged as a significant positive or negative predictor of academic self-concept relative to a specific subject.

Lastly, this study uses a correlational design which gives us little to no control over the study. Participants’ self-reports are not always reliable as participants may give “politically correct” responses. In the case of this study, teachers may have rated their use of either instruction dependent upon their school’s requirements, and not necessarily by how much they actually used that instruction inside of the classroom. Also, the children’s responses to SDQ may have inaccurately reflected their perceptions. For instance, a child may have thought that their good grades in subjects translated to their enjoyment for academics.

By using an experimental design, we could have eliminated participant bias, by actually observing teachers in their natural classroom environment, and made sure that the student participants understood what they were being asked. Furthermore, an experiment would have allotted for more control over the study, better analysis, and the opportunity to make casual inferences.

Despite all of the limitations, the study was one of the first to explore the relationships between instructional approaches and children’s academic self-concept outcomes. Although the findings were of very small significance, this study still reveals that the way teachers teach, does hold a significant influence on the way students perceive academics, nonetheless. Now that the
significant relationships between the variables have been established, the next step for future research is to go more in depth in examining the relationships between these variables. For example, future research can conduct experimental analyses to collect original data, and draw casual inferences. Researchers can also conduct more specific investigations on which type of instruction best promotes students’ academic self-concept relative to a specific subject domain.

As for teachers, findings from this study supports the current literature’s suggestion of incorporating both types of instruction into the classroom. Moreover, this study seconds the past researchers’ ideas of balancing and alternating the use of both approaches dependent upon students’ needs at that moment (Kikas et al., 2014; Stipek & Byler, 2004). Our research furthers the conclusion drawn from previous research.

Implementing both instructional types in classroom activities will not only improve students’ achievement, but will also promote their development of positive academic self-perceptions, because it allows for the balance in the establishment of both a strong sense of competence and interest. When students are aware of and confident in their abilities, they more likely to uphold a positive academic perception, which in turn, will drive their motivation to excel academically. Thus, teachers will reach their ultimate goal of nurturing active learners and high academic achievers.
References


APPENDIX A

Fall 1999 Kindergarten Teacher Questionnaire (Part B, Item 8)

CLASS ORGANIZATION, CLASS ACTIVITIES, AND EVALUATION

8. In a typical day, how much time do the children spend in the following activities?

CIRCLE ONE NUMBER ON EACH LINE. DO NOT INCLUDE LUNCH OR RECESS BREAKS. IF YOU TEACH MORE THAN ONE CLASS, CONSIDER ALL CLASSES WHEN MARKING YOUR RESPONSES.

<table>
<thead>
<tr>
<th></th>
<th>No time</th>
<th>Half Hour or Less</th>
<th>About 1 Hour</th>
<th>About 2 Hours</th>
<th>Three Hours or More</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Teacher-directed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>whole class</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Teacher-directed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>small group</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>activities?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Teacher-directed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Child-centered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX B

SPRING 2004
SELF-DESCRIPTION QUESTIONNAIRE

Prepared for the U.S. Department of Education
National Center for Education Statistics by:

Westat
1650 Research Boulevard
Rockville, Maryland 20850

Assurance of Confidentiality

The collection of information in this survey is authorized by Public Law 107-279 Education Sciences Reform Act of 2002, Title I, Part C, Sec. 151(b) and Sec. 153(a). Participation is voluntary. You may skip questions you do not wish to answer; however, we hope that you will answer as many questions as you can. Your responses are protected from disclosure by federal statute (PL 107-279, Title I, Part C, Sec. 183). All responses that relate to or describe identifiable characteristics of individuals may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose, unless otherwise compelled by law. Data will be combined to produce statistical reports. No individual data that links your name, address, telephone number, or identification number with your responses will be included in the statistical reports.
<table>
<thead>
<tr>
<th></th>
<th>PUT AN &quot;X&quot; IN THE BOX UNDER YOUR ANSWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have lots of friends ..........</td>
</tr>
<tr>
<td>2</td>
<td>I am good at all school subjects ..........................................</td>
</tr>
<tr>
<td>3</td>
<td>I feel angry when I have trouble learning .........................</td>
</tr>
<tr>
<td>4</td>
<td>I get good grades in reading ................................................</td>
</tr>
<tr>
<td>5</td>
<td>I often argue with other kids ................................................</td>
</tr>
<tr>
<td>6</td>
<td>Work in math is easy for me ..................................................</td>
</tr>
<tr>
<td>7</td>
<td>I worry about taking tests .... ..............................................</td>
</tr>
<tr>
<td>8</td>
<td>I enjoy doing work in all school subjects ................................</td>
</tr>
<tr>
<td>9</td>
<td>It's hard for me to pay attention .........................................</td>
</tr>
<tr>
<td>10</td>
<td>I like reading .................................................................</td>
</tr>
<tr>
<td></td>
<td>SDQ (continued)</td>
</tr>
<tr>
<td>---</td>
<td>-----------------</td>
</tr>
<tr>
<td></td>
<td>PUT AN &quot;X&quot; IN THE BOX UNDER YOUR ANSWER</td>
</tr>
<tr>
<td></td>
<td>Not at all true</td>
</tr>
<tr>
<td>11.</td>
<td>I make friends easily</td>
</tr>
<tr>
<td>12.</td>
<td>I cannot wait to do math</td>
</tr>
<tr>
<td></td>
<td>each day</td>
</tr>
<tr>
<td>13.</td>
<td>Work in reading is easy for</td>
</tr>
<tr>
<td></td>
<td>me</td>
</tr>
<tr>
<td>14.</td>
<td>I often feel lonely</td>
</tr>
<tr>
<td>15.</td>
<td>Work in all school subjects</td>
</tr>
<tr>
<td></td>
<td>is easy for me</td>
</tr>
<tr>
<td>16.</td>
<td>I get good grades in math</td>
</tr>
<tr>
<td></td>
<td>....</td>
</tr>
<tr>
<td>17.</td>
<td>I get distracted easily</td>
</tr>
<tr>
<td>18.</td>
<td>I am interested in reading</td>
</tr>
<tr>
<td>19.</td>
<td>I get along with kids easily</td>
</tr>
<tr>
<td>20.</td>
<td>I feel sad a lot of the time</td>
</tr>
<tr>
<td>Question</td>
<td>Not at all true</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>21. I cannot wait to read each day</td>
<td></td>
</tr>
<tr>
<td>22. I am interested in math</td>
<td></td>
</tr>
<tr>
<td>23. It's hard for me to finish my school work</td>
<td></td>
</tr>
<tr>
<td>24. I am easy to like</td>
<td></td>
</tr>
<tr>
<td>25. I worry about doing well in school</td>
<td></td>
</tr>
<tr>
<td>26. I can do very difficult problems in math</td>
<td></td>
</tr>
<tr>
<td>27. Other kids want me to be their friend</td>
<td></td>
</tr>
<tr>
<td>28. I like all school subjects</td>
<td></td>
</tr>
<tr>
<td>29. I worry about finishing my work</td>
<td></td>
</tr>
<tr>
<td>30. I like math</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Not at all true</td>
</tr>
<tr>
<td>----------</td>
<td>----------------</td>
</tr>
<tr>
<td>31. I have more friends than most other kids</td>
<td></td>
</tr>
<tr>
<td>32. I worry about having someone to play with at school</td>
<td></td>
</tr>
<tr>
<td>33. I am good at reading</td>
<td></td>
</tr>
<tr>
<td>34. I get in trouble for talking and disturbing others</td>
<td></td>
</tr>
<tr>
<td>35. I like reading long chapter books</td>
<td></td>
</tr>
<tr>
<td>36. I enjoy doing work in math</td>
<td></td>
</tr>
<tr>
<td>37. I get in trouble for fighting with other kids</td>
<td></td>
</tr>
<tr>
<td>38. I look forward to all school subjects</td>
<td></td>
</tr>
<tr>
<td>39. I enjoy doing work in reading</td>
<td></td>
</tr>
<tr>
<td>40. I feel ashamed when I make mistakes at school</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all true</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>41. I am good at math ..................</td>
<td></td>
</tr>
<tr>
<td>42. I get good grades in all school subjects ..................</td>
<td></td>
</tr>
</tbody>
</table>