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# Early Adolescent Development: A Content Analysis of Adolescent Development Textbooks

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Early Adolescent Development:  
A Content Analysis of Adolescent Development Textbooks

By

Leslie Jasmine Djang

Proposal presented to the Graduate and Research Committee

of Lehigh University

in Candidacy for the Degree of

Doctor of Education

in

Educational Leadership

April 2011

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Date April 2011

## DISSERTATION SIGNATURE SHEET

Approved and recommended for acceptance as a dissertation in partial fulfillment of the requirements for the degree of Doctor of Philosophy/Education.

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## Abstract

The purpose of this study was to determine how and what teachers learn about early adolescence based on what was described within four frequently used textbooks. Several sources from the four textbooks provided the information for the content analysis: (a) the questions within each chapter of each textbook, (b) the topics referred to in chapter titles, headings, and subheadings, and (c) references in each textbook. The key categories of physical, psychosocial and intellectual development were used to describe each author's textbook emphasis.

Best-selling textbooks were identified through contact with publishers in 2008 and confirmed two years later using Amazon.com sales rankings. Coders categorized textbook questions into the three major areas of early adolescent development, physical, psychosocial and intellectual. Chapter titles, headings and subheadings were tallied to determine their frequency. References were limited to chapters about adolescence and then analyzed according to the first two authors of each reference, year of publication, source and type of reference. Chi square tests determined that significant differences existed among textbooks in the types of chapter questions, types of references and reference sources. Psychosocial development questions were emphasized significantly more often than physical or intellectual development. Textbooks presented different topics, key theorists and reference authors. Textbooks cited primary sources such as journal articles at different rates than secondary sources such as book and chapters within books. Textbook references contained minimal author overlap. Only two of the textbooks had a majority of references published from 2000 to 2008, the largest percentages of references for the other two textbooks were from 1990 to 1999.

Overall, the results showed that these best-selling textbooks presented different versions of adolescent development. Although essential to inclusion and diversity, topics like disabilities, race, socio-economic status, and tracking were not emphasized across all textbooks. Although essential to intellectual and social development, Piaget, Vygotsky, Erikson and Kohlberg were not emphasized across all textbooks. As new teachers begin their careers, school administrators and staff developers need to understand the different versions about adolescent development that textbooks present as they interact with and further plan professional development activities with them.

## Chapter I

### Introduction

Schools have an impact on the achievement, behavior, and social norms of students (Rutter, Maughan, Mortimore, Ouston, & Smith, 1979). This finding has made it imperative for educational leaders to make effective schooling the primary focus of their work. One component of effective schooling is for teachers to understand the development of the intellectual, affective, and physical characteristics of their students. Understanding each student and their behaviors helps teachers choose the most effective instructional strategies to increase student learning (Tomlinson, Brimijion & Narvaez, 2008). Federal and state mandates have heightened the need to find effective and efficient instructional strategies to teach students. Students need to meet the benchmarks created nationally, by their states, and by their school districts. Teachers must guide students to meet these benchmarks while fostering students who are life-long learners, who are ready to participate in society, and who are prepared for their next level of education. For early adolescents, a long line of educators and some researchers have suggested strategies to build an ideal culture and structure for learning.

Two documents, *Turning Points 2000: Educating Adolescents in the 21<sup>st</sup> Century* (Jackson & Davis, 2000) and *This We Believe: Successful Schools for Early Adolescents* (NMSA, 2003) are the seminal resources that outline strategies in order to create effective and efficient schools for early adolescent learners who are generally enrolled in middle schools. Both these resources identify key components of education for middle level students. The first, *Turning Points 2000*, presented empirically-based educational

strategies and structural changes that included teaching a rigorous curriculum, using instructional methods that help students achieve higher standards in order to become lifelong learners, organizing relationships for learning, governing democratically, providing a safe and healthy environment, and involving parents and community. Effective middle schools appear to employ all of these strategies to develop a supportive environment to enhance the effectiveness and efficiency of student learning. The second, *This We Believe* (1995), is a position statement that combined the available research and the opinions of early adolescent education experts in order to determine which middle level school characteristics were most related to early adolescents' success in school. In order to understand early adolescents, educators should appreciate the uniqueness of this developmental period as well as the age appropriateness of content for the subject matter that they teach (NMSA, 1995; McEwin & Dickinson, 2001). Both of these resources identified one key element necessary to develop an effective middle school experience for early adolescents: teachers should understand the key components of adolescent development. The most effective teachers need to match their instructional choices to those developmental needs (NMSA, 1995; Jackson & Davis, 2000; Brodhagen, 2001; Anafara, Andrews, Hough, Mertens, Mizelle, & White, 2003).

The first experience that most teachers have in formally learning about adolescent development is during their teacher preparation programs at the bachelor's or master's degree levels. In a survey developed by the National Institute of Child Health and Human Development (NICHD) and the National Council for Accreditation of Teacher Education (NCATE), 80 percent of teacher preparation programs included courses in child and adolescent development. However, 50 percent of these schools responded that

additional coursework was needed (NICHD & NCATE, 2006). Given the range of content that pre-service programs must present within a circumscribed degree program, limited time is available to teach thoroughly all of the components of early adolescent development. College instructors must make choices about what to present in their classes. One of the key decisions about what content is taught is made when the instructor selects a textbook. One way to determine what content about adolescent development is taught is to determine the most widely published textbooks. Depending upon what textbook is chosen, teacher education candidates at one college may receive different information from those at another. Thus, it is important to know what ideas are presented in the instructional resources available to teacher education instructors. What concepts about adolescent development are discussed in the most frequently used textbooks? To what extent do the textbooks cover the same concepts? Knowing what concepts and ideas that teacher education candidates are potentially exposed to in these textbooks, college instructors and professional development staff in school districts can begin to identify what critical concepts have been discussed and what additional ideas need to be presented to both pre-service and practicing teachers.

The next sections of the chapter outline the history of middle level education, a movement developed with the goal of improving the learning of early adolescent students. The second part of the chapter examines the historical understanding of schools for the 10-14 year old age group. The final part of this chapter examines the characteristics of adolescent development within the areas of physical, psychosocial, and intellectual development and concludes with the presentation of the research questions for this study.

## Middle School Movement

### History of the Middle School Movement

Educators have tested strategies to maximize learning and development for early adolescent students since the first junior high schools opened in 1909 (Clark & Clark, 1993). In the early 1900s, an initiative to change the way educators delivered instruction to early adolescent children began. The idea was to move grades seven and eight from the elementary school setting to one modeled after the high school that promoted curricular-based departments and tracking students by ability and achievement. These changes did not meet the needs of the early adolescents in the United States (Clark & Clark, 1993; Toepfer, 1997). These departments emphasized content rather than designing curriculum and instructional strategies to meet the developmental needs of early adolescent students (Clark & Clark, 1993). This focus of schooling, based on G. Stanley Hall's work, assumed that the beginning of adolescence is a time he called "storm and stress" (Anfara, Andrews & Mertens, 2005). Curriculum was presented to students with little expectation of long-term learning because adolescence was considered to be beyond the reach and understanding of educators. Many educators came to think of this developmental stage as something to survive, not a time during which understanding the learner was of particular importance.

Individuals began developing criteria for creating schools to meet the needs of early adolescents after the first junior high schools opened in 1910. The Committee on Economy of Time in Education determined in 1913 that schools needed to address the dropout rate of students and decrease the number of students retained in a grade level

during early adolescence (Clark & Clark, 1993). In 1918 the Commission on the Reorganization of Secondary Education of the National Education Association broadened the goals of the junior high schools to include meeting the needs of all early adolescents, not just those who were retained or dropping out of school. Educators continued to develop recommendations for these schools throughout the 1920s and 1930s. In 1947, *The Modern Junior High School* was published. This book for educational leaders included the most comprehensive statements of the functions of the Junior High School to date (Gruhn & Douglass, as cited in Clark & Clark, 1993). These statements brought to the forefront the importance of focusing on the developmental needs of early adolescent learners. These initiatives centered on organizational changes, such as reducing tracking, ability grouping and departmentalization, and increasing the role of guidance counselors. Over time these initiatives were lost as the focus of schools moved away from the needs of the students and again toward less flexible structures that increased tracking and departmentalization.

At the start of the 1960s, fewer than 11 middle level schools existed, but by 1970 the number had grown to 2,298 and by 1980 to 4,088 (Anfara & Waks 2000). With the publication of *A Nation at Risk: the Imperative for Educational Reform* (National Commission on Excellence in Education, 1983) and the focus on education as the key to improving the economic and intellectual future of the United States, educators and politicians developed a renewed interest in effective education for early adolescents with what they termed “middle schools.” The National Middle School Association (NMSA) and The Carnegie Foundation independently began constructing philosophical documents focusing on what early adolescent education should include. As more and more middle



schools opened, authors cited the need for research to support the general belief that middle level initiatives worked (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; George & Shewey, 1994; Lee & Smith, 1993; Mergendoller, 1993). These newly named “middle schools” shared many of the same goals and initiatives of earlier education movements. With the development of philosophical documents and support from educators, researchers, and politicians focused on adolescence, these recommendations have continued to influence the way today’s schools are structured and organized (Caskey & Anfara, 2007; George & Shewey, 1994).

Accompanying politicians’ and educators’ interest in improving middle level education was a need to understand the cause of reckless adolescent behavior, and whether or not schools could play a role in deterring it. The authors of *Turning Points* concluded that schools could deter teenagers’ reckless behaviors. The recommendations called upon educators to decrease their focus on discipline, and, instead, increase the students’ instructional time devoted to developmental changes and information about violence, physical development, and the dangers of drug use (Carnegie Council on Adolescent Development, 1989).

#### Identification of Middle Level Priorities

The central documents that have come to define what middle schools should aspire towards are *This We Believe: Developmentally Responsive Middle Level Schools* (NMSA, 1995) and *Turning Points: Preparing American Youth for the 21<sup>st</sup> Century* (Carnegie Council on Adolescent Development, 1989). These two documents outlined key features of middle level education. *This We Believe: Developmentally Responsive*

*Middle Level Schools* (NMSA, 1995) proposed standards of academic excellence, high expectations for all students, development of community partnerships, positive school climate, and hiring and cultivation of committed educators. Similarly, *Turning Points 2000: Educating Adolescents in the 21<sup>st</sup> Century* (Jackson & Davis, 2000) refined the objectives and updated the work of *Turning Points: Preparing American Youth for the 21<sup>st</sup> Century* (Carnegie Council on Adolescent Development, 1989). These objectives for middle schools included the following: delivering rigorous standards-based curriculum, creating a climate of intellectual development, using effective instructional methods, hiring and training a staff expert in adolescent development, leading the learning in classrooms democratically, involving parents and community, creating a safe and healthy environment, and conducting ongoing and targeted staff development. While all publications used slightly different language, the focus of the recommendations was largely the same. It included maintaining a rigorous academic curriculum, involving the community, and hiring and training educators who are knowledgeable about the development of adolescents and the strategies needed to engage them as active learners (Carnegie Council on Adolescent Development, 1995; Erb, 2001; Jackson & Davis, 2000; NMSA, 1995).

Implementation of middle level practices has been found to increase achievement for adolescent learners (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997; George & Sweeny 1994; Lee & Smith, 1993). The seminal research on the implementation of middle level practices followed three different cohorts of students over a period of five years. As schools implemented the structural, instructional, and cultural changes recommended by the authors of the NMSA document and *Turning*

*Points* 1989, student academic achievement improved, as measured by nationally normed examinations (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997). Improvements in student behavior and socio/emotional adjustment accompanied the increases in student achievement (Felner, Jackson, Kasak, Mulhall, Brand, & Flowers, 1997). The researchers identified four key structural components of middle level schools that led to these higher levels of achievement for students: creating teams of students taught by the same group of teachers, ensuring that the teachers taught a smaller number of students, enacting an advisory program four or five times a week, and implementing teacher meetings in which educators focused on the achievement and needs of individual students.

Having ascertained that implementing structural changes at the middle level of school yields positive results, the next step was to evaluate the instructional strategies teachers apply, the rigor of the content they teach, and the tone they set in the classroom. In order to make effective changes in classroom practice, teachers need to understand adolescence from physical, psychosocial, and intellectual/learning perspectives (Jackson & Davis, 2000; NMSA, 1995). Investigations into the degree to which teachers understand adolescent development were few (Petzko, 2002; Paulson, Rothlisberg & Marchant, 1999). When 258 secondary and middle school teachers in the Midwest answered a Likert-type survey, they reported that intellectual development was the most important information to know. However, they rated their fellow teachers as only moderately knowledgeable in intellectual areas of adolescent development (Paulson, Rothlisberg & Marchant, 1999). In a second study, a national sample of 1400 middle level principals completed the same survey. Seventy-seven percent of those principals surveyed indicated concern over the lack of teacher knowledge about adolescent

development. Twenty-five percent of principals were highly concerned and 51% of principals were somewhat concerned with teachers' willingness to use developmentally appropriate practices. Seventy-eight percent of the principals surveyed were concerned about their teachers' lack of instructional strategies like authentic, interdisciplinary or integrated instruction (Petzko, 2002). These studies indicated that both administrators and teachers needed to know more about adolescent development and that this knowledge needs to cover all three areas of development: physical, psychosocial and intellectual.

## Adolescent Development

### Identification of Early Adolescent Development

Jean-Jacques Rousseau first described early adolescence, the time during which children are described as straddling childhood and the older adolescence typically seen in high school, in the middle of the eighteenth century when he wrote *Emile*, a commentary on education (Kaplan, 1984). G. Stanley Hall, the first president of Clark University, who was credited with first inviting Sigmund Freud to the United States, followed Rousseau's work (Kaplan, 1984). Both Rousseau and Hall described adolescence as the time people moved to a higher level of development, highlighting their belief that childhood is a time when humans have a lower level of ability and thinking than in adulthood which is a more sophisticated stage of human development (Kaplan, 1984). Their work stands alongside the work of Freud, Erikson and Piaget. These three scientists described development through stages, detailing the behaviors, thinking or conflicts adolescents progressed through. Although Freud, Erikson and Piaget greatly influenced educators'

understanding of learning and social development, none identified early adolescence as a developmental stage separate from the broader stage between childhood and adulthood.

Both Freud and Erikson focused their developmental stages on the psychosocial development of children. Freud focused on human development beginning in infancy. He developed five stages in chronological order beginning with the oral stage, the anal stage, the phallic stage, the latency stage, and ending with the genital stage. Through each of these stages, children changed the focus of their attention on objects or people around them. Freud believed that a person needed to progress through all of the stages in the described order as they developed. Erikson's work focused on a person's contrasting feelings; for example, he identified a variety of ongoing conflicts within a person. These conflicts needed to be addressed as a person develops. Any conflict that was not resolved within each pairing led to a less healthy adult. The areas of conflict Erikson identified included: basic trust versus mistrust, autonomy versus shame and doubt, initiative versus guilt, industry versus inferiority, identity versus identity diffusion, intimacy and solidarity versus isolation, and the three stages of adulthood (Erikson, 1959).

Piaget defined four different stages of development that began at birth with the sensory-motor stage, the preoperational stage, the concrete operations stage, and ended with the formal operations stage for those ranging in age from 11 to 16 (Singer & Revenson, 1978). The stages identified by Piaget focused on how people process their ideas and develop more sophisticated thinking as they matured. Piaget highlighted that progression through the stages occurred at different ages for different people, and at different rates for each type of knowledge, but they always occurred in the same

sequence and students did not move back and forth among the stages (Piaget & Inhelder, 1969; Singer & Revenson, 1978).

Freud, Erikson and Piaget all identified stages of development in which people progressed through during their development from infancy to adulthood. While Piaget specifically identified 11 to 16 year olds, he did not identify this age group as separate from fully grown adults. Although Rousseau and Hall both began addressing adolescence as a separate developmental stage from adulthood, their ideas did not take hold across education for many years.

Thornburg (1980) brought renewed credibility to the idea of early adolescence as a separate stage of development when he wrote about schooling middle level students. He tied the developmental characteristics of early adolescents to the type of learning environment that they needed. He identified three areas that marked early adolescence as friendships with peers, physical changes associated with puberty and a growing sense of autonomy in planning their own learning experiences (Thornburg, 1980). Teachers who were knowledgeable about these issues and positive about working with adolescent students would then be motivated to focus instruction on social responsibility, and thus, would use this knowledge to develop topics that students see as functional or relevant to them. Thornburg (1983) subsequently identified three areas that should be the focus of understanding early adolescence: physical, social and intellectual growth. As such, educators moved away from the phase theories of development that Freud, Erikson and Piaget endorsed and began to define early adolescent behavior as a set of interactive phases which students entered and exited multiple times depending on the nature of the task being completed (Thornburg, 1983).

As the definition and understanding of early adolescent development grew, common characteristics emerged. Students continuously developed physically, psychosocially, and intellectually (Eichhorn, 1969). These changes accelerated when students entered adolescence around the age of 10. No adolescent was alike; however, they did experience a similar progression in physical changes. Students became more sophisticated intellectual thinkers while retaining their exuberance. Risk-taking behavior increased, social relationships develop, and adolescents became more independent from adults. What do these changes mean for educators? The specific pedagogical methods have not been extensively tested. What we do know is that students need to have choice in what they do in the classroom and appropriate autonomy for learning. We also know that student learning needs to focus on critical, essential and broad ideas. As such, educators need to increase the amount of instructional time students are engaged in challenging thinking activities. When teachers understand the characteristics of early adolescent development, they are able to develop classroom experiences that make learning more effective and that make for more effective middle schools.

### Characteristics of Early Adolescent Development

Developmental changes mark the adolescent period and affect the way students learn (Gutheinz-Pierce & Whoolery, 1995; Linn & Songer, 1991). These changes can be examined in three categories: physical, psychosocial, and intellectual (Brighton, 2007; Caskey & Anfara, 2007; Clark & Clark, 1993; Eichhorn, 1969; Jackson & Davis, 2000; Manning, 1993; Thornburg 1980, 1983). In the 1980's and 1990's, middle level education incorporated these three areas of development by linking teacher understanding

of adolescent development to the effective teaching of early adolescents (Manning, 1993; NMSA, 1995). Manning wrote a textbook for educators that identified instructional practices that enhanced middle level teaching based on students' physical, psychosocial, and intellectual development (Manning, 1993). This methods textbook succinctly described adolescent development in the context of teaching and learning. The textbook was frequently referenced in documents produced for the National Middle School Association (Brighton, 2007; Caskey & Anfara, 2007). The link between teaching strategies and adolescent development was revisited again when the updated edition of *Turning Points* was released. In this update to the 1989 document, 62 pages or 27% of the book was devoted to instructional strategies that directly referenced students' physical, psychosocial, and intellectual development and are believed to maximize student learning (Jackson & Davis, 2000).

### Physical Development

Physical development can be described by tangible, measurable and observable changes that happen within the body including growth of the skeleton and body organs, fine and motor skill development and biological development (Brighton, 2007; Caskey & Anfara, 2007). Manning (1993) writes about characteristics describing physical development of early adolescents. These characteristics begin at the start of puberty and include a growth spurt that causes a rapid increase in body size and physiological changes including the development of the reproductive system. Adolescent bodies change rapidly and follow the same developmental sequence, albeit at different rates. Female growth typically begins at age 10 and reproductive capability is reached by ages 13 and 14



(Thornburg, 1982). Males typically begin their physical development about 18 months later and finish about two years after females (Thornburg, 1982). The result of these rapid changes leads to the early adolescent feeling self-conscious and clumsy (Gutheinz-Pierce & Whoolery, 1995; Manning, 1993).

Cultivating an understanding of what teachers should know about adolescent physical development is a key component in increasing the effectiveness of teaching and student learning. In the past, many educators thought that raging hormones controlled early adolescent development (Gutheinz-Pierce & Whoolery, 1995; Rutter, 2007). While hormones are a key ingredient in the process, the development of the brain defines and controls the progress and rate of adolescent development. New synaptic connections that occur throughout the brain beginning with the brain stem speed up students' processing ability. The brain then continues to change in areas where language and communication skills are further refined. Lastly, changes in the frontal lobe, which houses reasoning and decision making, complete the process (Luciana, Conklin, Hooper & Yarger, 2005).

Understanding the physical development of the early adolescent should guide each teacher's planning. For example, space and time in the classroom can be provided for students to move around, thus addressing how uncomfortable some students are as their skeletons grow. Understanding that the brain is changing from the start of puberty encourages teachers to develop activities that provide opportunities for students to stretch their abstract thinking and practice skills so that the students retain what they are learning.

## Psychosocial Development

Psychosocial development is the emotional and psychological changes that occur as the ability for more mature interactions increases (Caskey & Anfara, 2007). Early adolescent preoccupation with self leads to self-reflection. Both school and home influence students' changing self-esteem. The need for acceptance by peers also increases during this stage of development. As such, the adolescent's ability to make friends and interact socially is crucial (Manning, 1993). Continuing research supports the relationship between these characteristics. Students with low peer acceptance also have lower academic self-concepts that lead to lower sixth grade academic performance (Flook, Repetti, & Ullman, 2005). The willingness to take new risks leads to students who will try to face new challenges such as joining the football team, auditioning for a play or considering new perspectives in social studies class. Popularity and social acceptance can lead to a healthier mental state, to more openness to new experiences, and to a more positive view of future relationships. However, popularity can also lead to delinquent behavior (Allen, Porter, McFarland, March, & McLane, 2005). Risky behaviors have been found to increase during the adolescent period possibly because of the increase of dopamine levels in the brain combined with the desire for social acceptance (Jackson & Hornbeck, 1989; Steinberg, 2007b). These risky behaviors can also cause more dangerous consequences as teenage sexual experimentation and drug use occur (Hamburg & Takanishi, 1989).

Physical and psychosocial developmental changes often work against one another. For example, the need for acceptance and increased contact with peers conflicts with the increasing sense of clumsiness and self-consciousness that accompanies the physical

changes occurring during adolescence (Manning, 1993). Internal conflict also accompanies adolescents' preoccupation with themselves. Internal conflict occurs when self-reflection leads adolescents to identify themselves including their social group, political affiliations, hobbies, or race differently than in the past. They worry about gaining both peer and adult acceptance. In one extreme example, when reporting racial identity twice, with a five-year interval between the two reports, students with lower self-esteem and higher cognitive development were more likely to change their self-reported racial identity (Hitlin, Brown, & Elder, 2006). At the center of these internal conflicts is the adolescents' struggle to gain independence from family and other authority figures while also retaining the security that childhood dependence represents. Successful middle level educators understand the complex interplay of these developmental changes and incorporate techniques that create a caring, secure classroom environment (Meece, 2003; NMSA, 1996; Osterman, 2000; Rutter et al, 1979; Thornburg, 1982; Weinberger & McCombs, 2001).

### Intellectual Development

Intellectual development is the changing ability to comprehend, reason, learn, adapt and apply new information (Caskey & Anfara, 2007). Manning noted that early adolescents develop from the concrete stage to the formal operations stage at different rates for different concepts. During adolescence, most early adolescents begin to think abstractly, reflectively and critically. Early adolescents also develop the ability to make thoughtful moral and ethical decisions at their own pace (Manning, 1993). Besides experiencing a wider array of stimuli, medical and scientific findings have shown the

ongoing changes in the structure of the brain as it develops during adolescence (Caskey & Ruben, 2003; Kwon & Lawson, 2000; Price, 2005). We now understand that the brain's processing speed increases during adolescence (Caskey & Ruben, 2003; Giedd, 2008; Price, 2005). Students are able to reason more abstractly. Thus, teachers need to develop varied instructional strategies to enable their students to learn because this period of intellectual development includes changes in the brain and changes in the ability to process more abstract information (Eccles, Buchanan, Flanagan, Fuligni, Midgley, & Yee, 1991; Petzko, 2002).

In addition, the onset of digital technology and our new immersion in the digital media of video games, blogs, wikispaces, online research, and access to information 24 hours a day, seven days a week have affected how the current generation of adolescents' intellectual development is occurring. Adolescents have the opportunity to develop their ability to multitask on low-level cognitive tasks. Twenty-first century adolescents are accustomed to engaging in an interactive learning environment and moving quickly from website to website in order to gather information from different perspectives (Philip, 2007; Tapscott, 2009).

### Purpose of the Study

The purpose of the study was to determine how and what teachers learn about early adolescence based on what was described within four frequently used textbooks. Several sources from the four textbooks provided the information for the content analysis: (a) the questions within each chapter of each textbook, (b) the topics referred to in chapter titles, headings, and subheadings, and (c) references in each textbook. The key

categories of physical, psychosocial and intellectual development were used to describe each author's textbook emphasis. Principals and teachers believe that teachers do not have a strong understanding of the physical, psychosocial, and intellectual adolescent development (Paulsen, Rothlisberg, & Marchant, 1999; Petzko, 2002). Teacher preparation programs are the first formal venue for most educators to develop their knowledge of adolescent development. A summary of two round table discussions, augmented by research summaries compiled jointly by the National Institute of Child Health and Human Development (NICHD) and the National Council for Accreditation of Teacher Education (NCATE) (2006) found that few teacher preparation programs include more than one limited course about adolescent development. These courses typically do not include teaching approaches or activities that account for our empirically-based knowledge about adolescent characteristics.

This study reviewed a set of the most widely assigned early adolescent development textbooks commonly used among college-based teacher preparation programs as determined through sales rank. While other sources for researching the focus on adolescent development could have been considered including the appropriate Praxis tests, or surveying individual teacher preparation professors for the materials they include in their courses, textbooks provided a consistent source across a wide range of teacher education programs. Textbooks included a comprehensive reference source to better describe the research base of adolescent development. Textbooks were a readily available source of scholarly and applied knowledge on topics presented in teacher preparation programs. New editions are frequently released that purport to have the newest and best information about a field of knowledge. Thus, a sample of selected textbooks was

analyzed to determine what topics in physical, psychosocial and intellectual development were described in these textbooks. Overlaps among textbook content was also recorded and analyzed. The analysis of textbooks specializing in early adolescent development provides professionals with information about what ideas the textbooks include or do not include. This information is useful to college instructors, educational leaders and practitioners in knowing what content was or was not included in major textbooks used in teacher preparation programs. Such information is helpful in modifying what is currently presented and in designing staff development programs beyond those offered in teacher preparation programs

The research questions for this study were as follows:

1. What textbooks about adolescence were most frequently purchased in 2008, 2010, and 2011?
2. How frequently were the categories of physical, psychosocial and intellectual development presented in the question sections of the sampled textbook chapters?
3. What were the specific topics presented in the chapter titles, headings, and subheadings of the sampled textbook chapters?
4. What authors of scholarly works were most frequently cited in these textbooks? Do frequently cited authors appear in more than one textbook? What was the overlap of these authors across textbooks?
5. Were these works journal articles, books or chapters and from what sources? Did the journal articles report empirical findings or were they non-empirical? In what years were they published?

## Definition of Terms

1. Adolescence – The period of life from the onset of puberty to maturity, terminating legally at the age of majority, generally the ages of 12-20, although young or early adolescence may start as soon as age 9 (Kellough and Kellough, 2008).
2. Early Adolescence – Early adolescence is the period beginning at age 10 to age 14 that marks the beginning of a child's change into a full grown adult (Carnegie Council on Adolescent Development, 1995; Eichhorn, 1969; Manning, 1993; Thornburg, 1982).
3. Intellectual Development - Intellectual development is the changing ability to comprehend, reason, learn, adapt and apply new information (Caskey & Anfara, 2007; Manning, 1993).
4. Middle Schools – Schools that include a series of characteristics that represent best instructional and structural strategies for teaching early adolescents including: educators committed to early adolescents, a shared vision, high expectations, classroom based guidance, interdisciplinary teaming, common planning time, flexible scheduling, heterogeneous grouping, and varied instructional approaches (George & Shewey, 1994; Brodhagen, 2001).
5. Physical Development - Physical development can be described by tangible, measurable and observable changes that happen within the body including growth of the skeleton and body organs, fine and motor skill development and biological development (Brighton, 2007; Caskey & Anfara, 2007; Manning, 1993).

6. Pre-Service Teachers – College and graduate level students who are enrolled in a program leading to certification in teaching.
7. Psychosocial Development - Psychosocial development is the emotional and psychological changes that occur as the ability for more mature interactions increases (Caskey & Anfara, 2007; Manning, 1993). This category also includes the area of moral development.



## Chapter II

### Method

#### Text Selection

In order to identify the textbooks most frequently used in teacher preparation programs two methods were used. The first was contacting the sales representatives from twelve college/university publishers. The publishers were as follows: Addison-Wesley, Allyn and Bacon, Cengage Learning, Harcourt, Harper Collins, Holt Rinehart and Winston, Houghton Mifflin, McGraw-Hill, Merrill, Prentice Hall, Pearson, and Thomson Learning. Over time, many college textbook publishers merged or were taken over by other corporations. Cengage Learning became Thomson Learning. Pearson Higher Education came to include Allyn and Bacon, Addison-Wesley, Merrill, and Prentice Hall. Harper Collins and Holt, Rinehart and Winston sold off their college text divisions. Thomson Learning purchased Harcourt. Thus, four of the 12 college-level textbook publishers listed above remained in business in March 2008: Cengage Learning, McGraw Hill, Pearson, and Wadsworth.

The sales representatives of the four publishers were contacted by phone or email. They were asked for the publisher's best selling textbooks used by teacher preparation programs for early adolescent development. Every sales representative named one or two texts that were their best sellers, none of the textbook identified focused solely on early adolescent development. The sales representatives reported that textbooks sold for early adolescent coursework all covered the larger span of adolescent development or child and adolescent development. The sales representatives identified six textbooks in total.

These six textbooks were evaluated using Amazon.com sales rankings on February 1, 2010. These textbooks were ranked according to their sales on Amazon.com. Their rankings ranged from #4,175 to #1,469,528. The two top-selling textbooks remained the same as those reported by sales representatives in March 2008. They were Steinberg's eighth edition of *Adolescence* (#4,175) and Santrock's twelfth edition of *Adolescence* (#4,787). Two textbooks had sales rankings of #57,401 and #168,862. The final textbooks had sales rankings #790,000 and above. Given the large gap between the fourth and fifth textbooks, only textbooks with a sales ranking above #200,000 were selected for the study.

Table 1 presents the named textbooks along with the Amazon.com sales rank, publisher, author, and Library of Congress ISBN number.

Table 1.  
List of Textbooks Identified by Sales Representatives on Adolescence by Amazon Sales Rank, Publisher, Author, Title, and ISBN Number Amazon.com Data Collected 2/1/2010

Amazon.com Sales Rank	Publisher	Author	Title	ISBN
#4,175	McGraw Hill	Steinberg	<i>Adolescence 8<sup>th</sup> edition</i>	0-07-340548-5
#4,787	McGraw Hill	Santrock	<i>Adolescence 12<sup>th</sup> edition</i>	0-07-338261-6
#57,401	Wadsworth/ Thomson	Bukatko	<i>Child and Adolescent Development: A Chronological Approach 1<sup>st</sup> edition</i>	0-618-34920-0
#168,862	Cengage Learning	Rathus	<i>Childhood and Adolescence: Voyages in Development 2<sup>nd</sup> edition</i>	0-495-00444-8
#790,230	Wadsworth/ Thomson Learning	Owens	<i>Child &amp; Adolescent Development: An Integrated Approach 1<sup>st</sup> edition</i>	0-534-36618-X
#1,469,528	Wadsworth/ Thomson Learning	Hughes	<i>Paving Pathways: Child and Adolescent Development 1<sup>st</sup> edition</i>	0-534-34809-2

## Textbooks Selected

From the textbooks listed in Table 1, the four most commonly purchased were included for further analysis. The texts selected included Steinberg's *Adolescence*, Santrock's *Adolescence*, Bukatko's *Child and Adolescent Development: A Chronological Approach*, and Rathus' *Childhood and Adolescence: Voyages in Development*. Each of the four textbooks was uniquely formatted and appeared to include different levels of information about early adolescent development. All four textbooks included a series of questions embedded throughout the text that were intended to prompt the reader to revisit the key ideas in the chapter. Each textbook author emphasized topics differently through the use of references, questions, and topic subheadings information.

The first textbook, Steinberg's *Adolescence* eighth edition (2007), included 466 pages about adolescent development. Twenty-one pages were devoted to physical development, 272 pages to psychosocial development and 59 to intellectual development of early adolescents. The questions embedded into the chapters were divided into sections titled "Food for Thought." The textbook included 77 pages of 3,215 references.

The second textbook, Santrock's *Adolescence* twelfth edition (2008), included 510 pages about adolescent development. Thirty-eight pages were devoted to physical development, 259 pages to psychosocial development and 41 pages to the intellectual development of early adolescents. The questions embedded in each chapter were divided into sections entitled "Review and Reflect." This textbook included 58 pages of 2,470 references.

The third textbook, Bukatko's *Child and Adolescent Development: A Chronological Approach* (2008), included 196 pages about adolescent development. The

remaining 381 pages were devoted to child development at younger ages. Of those pages dedicated to adolescent development, 16 were dedicated to physical development, 48 to psychosocial development and 24 to intellectual development. The questions embedded into each chapter were divided into sections “For Your Review” and end of chapter question sections “Summary of Developmental Themes.” This textbook included 65 pages of 2,955 references. 1,207 of the references were used in the pages about adolescent development.

The fourth textbook, Rathus’ *Childhood and Adolescence: Voyages in Development* (2006), included 212 pages about early adolescent development. Sixty-four pages were devoted to the physical development, 64 pages to the psychosocial development and 70 pages to the intellectual development of early adolescents. The remaining 369 pages were devoted to child development at younger ages. The questions embedded into each chapter are divided into sections titled “Active Review” and end of chapter question sections “Recite: An Active Summary.” Forty-seven pages of text list 2,116 references of those references 879 were used in the pages about adolescent development.

### Coding

The textbooks used three different ways to organize, highlight, review and present information: chapter questions embedded throughout questions, topics (chapter titles, heading and subheadings), and the total references from each textbook. First, volunteers sorted chapter questions into the three categories of development: physical, psychosocial and intellectual (Neuendorf, 2002). The chapter questions highlighted which topics the

authors emphasized in the three areas. Second, topics were listed in the same categories as chapter questions. Third, references from each textbook were categorized by: type, author, highest frequency journals, and year of publication.

*Chapter Question Coding.* The researcher collected chapter questions from each textbook that focused on adolescence. Four chapter question coders were recruited via email and personal contact from a pool of teachers and administrators in the northern Philadelphia suburbs. Each coder had at least three years of experience working with early adolescents and each had attained one or more post-graduate degrees. The coders represented a wide-range of experience with adolescents. Two had parented children through adolescence. Coder A was a middle school guidance counselor with nine years of experience. Coder B was a principal at an approved private school working with children ages five to 16 for six years. Coder C was an emotional support teacher for students in grades four to six for 18 years and has been a principal for grades three to five for the past 22 years. Coder D taught students in grades seven and eight before becoming a middle school assistant principal and principal for six years.

The coders met for a four-hour period to code the 871 questions from the four textbooks. Using a codebook, the coders were trained in the three areas of early adolescent development (see Appendix A). Physical development was defined as tangible, measurable and observable changes that happen within the body including growth of the skeleton and body organs, fine and motor skill development and biological development (Brighton, 2007; Caskey & Anfara, 2007). Psychosocial development encompassed the emotional and psychological changes that occur as the ability for more mature interactions increases (Caskey & Anfara, 2007). Intellectual development was

defined as the changing ability to comprehend, reason, learn, adapt and apply new information (Caskey & Anfara, 2007). In order to code, the researcher provided examples for each of these categories. Coder training included the common definitions for each of the three major categories of early adolescent development and topics that were commonly used within each of those categories. The fourth coding category was classified as “other,” and accommodated those questions that did not fit into the three primary categories. The coders then reviewed four common questions, working together and with the researcher to determine the proper coding. To identify the proper coding category, coders employed the process detailed in Appendix A. Coders first used the definitions and keywords from the training guide to determine the appropriate category code. If the code could not be determined and further information was needed, coders examined the subheadings and chapter headings that corresponded to the question. If the correct category code still could not be determined, the coder then looked at the text inside the section of the textbook using the page number given on the coding sheet. If a category code still could not be determined, the coder consulted with the researcher to review the definitions of each of the categories and clarify any vocabulary in the section headers and chapter titles. Finally, if a category could not be determined, the coder placed the question in the “other” category.

Ten common questions were then used to determine the level of reliability and if more training was needed. The first reliability test led to 65% inter-rater agreement. Additional training, review of key terms and analysis of questions took place. On a second reliability test the coders achieved 93% reliability.

*Textbook Questions.* Following their successful training, coders began to analyze the chapter questions from each textbook that focused on adolescence. The breakdown of questions per textbook was as follows: Steinberg - 111 questions, Santrock - 235 questions, Bukatko - 178 questions, and Rathus - 347 questions, equaling 871 total questions. Coders were given randomly assigned questions so that each completed 25% of the questions from every author. The coding was completed in two parts. Each coder categorized 50% of their assigned questions from each textbook. After this coding was completed, an additional test for inter-rater reliability was administered with a 93% result. After all coding was completed, inter-rater reliability was found to be 98%. A chi square test was used to determine significance between the number of questions within each category and textbook author.

*Textbook Topics.* Textbook authors used chapter titles, headings, and subheadings to organize and emphasize the key ideas in each chapter. These topics were intended to help readers understand the sequential logic of the textbook and to help readers locate important topics quickly. Each topic was recorded and listed in the categories of physical, psychosocial, and intellectual development using the same definitions the coders used to categorize the textbook questions above.

*Textbook References.* In order to determine the degree to which the body of knowledge about early adolescent development was built upon a common research base, the references used in each textbook were recorded on a document including the names of the two first authors, publication year, title, journal or source, and the author of the textbook in which each reference was found. Each reference was coded based upon its type such as journal article, chapter, book, or government/agency information sheet. The

date when each reference was published was grouped by decade: pre-1970, 1970-79, 1980-89, 1990-99, and 2000-08.

The most frequently cited authors based upon the first two authors of each reference were identified. Authors with more than 20 citations combined from the four textbooks were analyzed to determine to what extent they appeared in each of the four textbooks. The percentages of each type of reference were calculated for each of the textbooks and for all of the textbook references; a chi-square test was used to determine whether the textbook writers used different types of references more frequently than others. The most frequently cited journals from the four textbooks were analyzed using a chi square test to identify significant differences in their use between textbooks.

*Journal Reference Coding: Empirical or Non-Empirical Article.* Ten percent of the journal references from each of the studied textbooks were randomly selected. The breakdown of references was as follows: Steinberg, 258 journal references; Santrock, 113; Bukatko, 79; and Rathus, 65 respectively, totaling 515 journal references. Using the abstracts from each reference, the two coders coded the 515 journal abstracts separately into two categories: empirical and non-empirical research. Empirical research was defined as research that involves the collection of first-hand information (Wallen & Fraenkel, 2001) whereas non-empirical articles offered meta-analysis or no first-hand data in its content. Coding began with a one-hour training session in which a reliability test achieved 90% (See Appendix D). The two coders each coded 25% of the references separately and then completed a mid-way reliability test, achieving 86% reliability. The coders each then coded the second 25% of the reference abstracts and completed an additional reliability test, achieving a 98% agreement.



## Chapter III

### Results

*Question 1: What textbooks about adolescence were most frequently purchased in 2008, 2010, and 2011?*

The top four best-selling textbooks from 2008 were identified at the beginning of the study according to contacts with sales representatives. Amazon.com sales rankings from February 1, 2010 updated this list. Amazon.com updated their sales rank figures again on February 1, 2011.

Table 2.  
Comparison Sales Rank of Four Selected Textbooks

Author	Amazon.com Sales Rank		Title
	2/1/2010	2/1/2011	
Steinberg	#4,175	#71,928	<i>Adolescence 8<sup>th</sup> edition*</i>
Santrock	#4,787	#7,263	<i>Adolescence 12<sup>th</sup> edition**</i>
Bukatko	#57,401	#78,546	<i>Child and Adolescent Development: A Chronological Approach 4<sup>th</sup> edition***</i>
Rathus	#168,862	#114,351	<i>Childhood and Adolescence: Voyages in Development 2<sup>nd</sup> edition</i>

\* Updated 9<sup>th</sup> edition sales rank #3,683.

\*\* Updated 13<sup>th</sup> edition sales rank # 4,601.

\*\*\*Original edition no longer available new, newest editions' sales rank provided.

The same editions of three of the four textbooks were still available on Amazon.com for purchase. One textbook, Bukatko's *Child and Adolescent Development: A Chronological Approach* was no longer available in the 1<sup>st</sup> edition; the updated 4<sup>th</sup> edition was used for current comparisons. All of these textbooks still met the criteria of a

sales rank better than #200,000 for inclusion in the study. These four textbooks remained the highest-selling and most widely-used textbooks. Also, the two top textbooks, Santrock's *Adolescence* and Steinberg's *Adolescence* have switched places with Santrock's 12<sup>th</sup> edition outselling Steinberg's 8<sup>th</sup> edition. However Steinberg's 9<sup>th</sup> edition had a sales ranking of #3,683 and Santrock's 13<sup>th</sup> edition had a sales ranking of #4,601. Steinberg continues to outsell Santrock when their most recent editions are compared.

*Question 2: How frequently were the categories of physical, psychosocial and intellectual development presented in the question sections of the sampled textbook chapters?*

A total of 871 questions were presented in the four textbooks. Among all four textbooks, the least percentage of questions was assigned to physical development (11.5%), followed by intellectual development (15.6%). By far, the majority of the questions focused on the area of psychosocial development (63.6%). Other questions included research methodology questions such as, "What are the different research designs that researchers might employ to study child development?", or questions that involve more than one early adolescent developmental area such as, "How do nature and nurture interact in physical, cognitive, and language development in middle childhood?" The 871 total questions were also categorized according to textbook: Steinberg, 111 (12.7% of questions from all textbooks); Santrock, 235 (26.6%); Bukatko, 178 (20.4%); and Rathus, 347, (39.4%).

Table 3 presents the questions according to their assigned content category by textbook. Although Steinberg’s textbook posed the fewest number of questions, almost 85% of his questions were psychosocial, the largest percentage of psychosocial questions posed in the four textbooks. The emphasis on psychosocial development is clear for all authors ranging from 179 (51.6%) to 94 (84.7%). However, Table 3 shows that Rathus posed significantly more questions about physical and intellectual questions in proportion to the other three textbook writers. Physical development, psychosocial development, and intellectual development were all found at significantly different rates than those that would be expected using a chi-square test ( $df = 3, p < .001$ ). Intellectual development questions were the second most frequent across all 4 textbooks (15.6%). Rathus included the most intellectual based questions (19.6%) while Bukatko included the least (2.1%).

Table 3.  
List of Questions by Topic, Organized by Textbook Author

Topic	Steinberg <i>n</i> (%)	Santrock <i>n</i> (%)	Bukatko <i>n</i> (%)	Rathus <i>n</i> (%)	Total <i>n</i> (%)
Physical***	3( 2.7)	17( 7.2)	10( 5.6)	70(20.2)	100(11.5)
Psychosocial***	94(84.7)	172(73.2)	109(61.2)	179(51.6)	554(63.6)
Intellectual***	7( 6.3)	24(10.2)	37( 2.1)	68(19.6)	136(15.6)
Other	7( 6.3)	22( 9.4)	22(12.4)	30( 8.6)	81( 9.3)
Total by Textbook	111(100.0)	235(100.0)	178(100.0)	347(100.0)	871(100.0)

Note. Percentage of total questions was calculated based upon the total questions for each author divided by all questions from the four authors.

\*\*\* $p < .001, df=3$ .

*Question 3: What were the specific topics presented in the sampled textbook chapters?*

Table 4 presents some of the common topics in each of the textbooks. While many overlaps in the categories were found across textbooks, the emphasis given to each

topic was notably different according to chapter titles, headings, and subheadings found in the detailed table of contents. None of the physical development topics were found in all of the textbooks. Within the category of psychosocial development, gender, moral development, family and identity were common in all four of the textbooks. Within intellectual development both cognitive development and Piaget were named in every textbook. Brain development and information processing were named. Brain development is a topic that was described in both the physical and intellectual categories depending on the text. Bukatko text cited it in both categories. Finally, four researchers were specifically named in the chapter titles, headings and subheadings: Piaget, Kohlberg, and Vygotsky in the intellectual category and Erikson in the psychosocial category. Piaget was cited in all four textbooks; Erikson, in three; and Kohlberg and Vygotsky, in two, respectively.

*Question 4: What authors of scholarly works were most frequently cited in these textbooks? Do frequently cited authors appear in more than one textbook? What was the overlap of these authors across textbooks?*

The four textbooks cited 10,756 references. Steinberg's textbook included a total of 3,215 references, Santrock's 2,470, Bukatko's 2,955 and Rathus' 2,116. However, Bukatko and Rathus covered child development broadly whereas every chapter from Steinberg and Santrock covered adolescents starting at 10 years of age. Thus, references were taken only from textbook chapters that included ages 10-21. Thus, the final total number of references was 7,771: Steinberg, 3,215; Santrock, 2,470; Bukatko, 1,207; and Rathus, 879.

Table 4.  
List of Topics Presented in Textbooks, Organized by Textbook Author

Category/Topics	Steinberg	Santrock	Bukatko	Rathus
<b>Physical</b>				
<b>Puberty</b>	X	X		X
HIV/AIDS	X			X
Sleep		X	X	
Sexually Transmitted Infections		X		X
Growth Spurt		X		X
Brain Development			X	
Height				X
Disabilities				X
ADHD				X
<b>Psychosocial</b>				
<b>Gender</b>	X	X	X	X
<b>Moral Development/Morality</b>	X	X	X	X
<b>Family</b>	X	X	X	X
<b>Identity</b>	X	X	X	X
<b>Parenting</b>	X	X	X	
<b>Self Esteem</b>	X	X	X	
<b>Erikson</b>	X	X		X
<b>Culture</b>		X	X	X
Race/Ethnicity	X	X		
SES/Poverty	X	X		
Prosocial	X		X	
Relationships	X			
Clique	X			
Nurture			X	
<b>Intellectual</b>				
<b>Cognitive Development</b>	X	X	X	X
<b>Piaget</b>	X	X	X	X
<b>Information Processing</b>	X	X	X	
<b>Brain Development</b>	X	X	X	
Vygotsky		X	X	
Kohlberg			X	X
Metacognitive				X
Tracking	X			
ADHD			X	
<b>Other</b>				
Research Methods			X	
Scientific Method				X
Correlation				X

Note: Topics appear in three or more textbooks are in bold (**bold**).

Table 5 presents a list of first or second authors of the references who were uniquely cited 20 or more times in total from the four textbooks. Twenty-eight authors were cited a minimum of twenty times.

Table 5.  
List of Authors Cited 20 or More Times in the Total References

Author	Steinberg <i>n</i> (%)	Santrock <i>n</i> (%)	Bukatko <i>n</i> (%)	Rathus <i>n</i> (%)	Total <i>n</i> (%)
Steinberg, L.	72(2.2)	2(0.1)	6(0.5)	1(0.1)	81(1.0)
Eccles, J.	22(0.7)	20(0.8)	15(1.2)	5(0.6)	62(0.8)
Larson, R.	29(0.9)	19(0.8)	5(0.4)	2(0.2)	55(0.7)
Brooks-Gunn, J.	19(0.6)	15(0.6)	9(0.7)	2(0.2)	45(0.6)
Hetherington, E.	17(0.5)	13(0.5)	9(0.7)	3(0.2)	42(0.5)
Harter, S.	9(0.3)	16(0.6)	9(0.7)	6(0.5)	40(0.5)
Conger, R.	28(0.9)	3(0.1)	6(0.5)	2(0.2)	39(0.5)
Brown, B.	17(0.5)	14(0.6)	5(0.4)	1(0.1)	37(0.5)
Eisenberg, N.	5(0.2)	9(0.4)	3(0.2)	18(1.5)	35(0.5)
Smetana, J.	21(0.7)	7(0.3)	5(0.4)	2(0.2)	35(0.5)
Furman, W.	11(0.3)	11(0.4)	10(0.8)	2(0.2)	34(0.4)
Sternberg, R.	3(0.1)	15(0.6)	9(0.7)	6(0.5)	33(0.4)
Phinney, J.	10(0.3)	10(0.4)	7(0.6)	3(0.2)	30(0.4)
Dodge, K.	7(0.2)	9(0.4)	12(1.0)	0(0.0)	28(0.4)
Fulgini, A.	12(0.4)	9(0.4)	6(0.5)	1(0.1)	28(0.4)
Furstenberg, F.	15(0.5)	7(0.3)	3(0.2)	1(0.1)	26(0.3)
Bandura, A.	2(0.1)	14(0.6)	6(0.5)	3(0.2)	25(0.3)
Caspi, A.	15(0.5)	6(0.2)	3(0.2)	1(0.1)	25(0.3)
Berndt, T.	10(0.3)	5(0.2)	4(0.3)	5(0.6)	24(0.3)
Allen, J.	12(0.4)	7(0.3)	4(0.3)	0(0.0)	23(0.3)
Graber, J.	10(0.3)	11(0.4)	0(0.0)	2(0.2)	23(0.3)
Arnett, J.	9(0.3)	8(0.3)	1(0.1)	4(0.5)	22(0.3)
Savin-Williams, R.	8(0.2)	12(0.5)	0(0.0)	2(0.2)	22(0.3)
Collins, W.	10(0.3)	5(0.2)	3(0.2)	3(0.3)	21(0.3)
Larsen, B.	10(0.3)	5(0.2)	5(0.4)	1(0.1)	21(0.3)
Richards, M.	12(0.4)	7(0.3)	1(0.1)	1(0.1)	21(0.3)
Centers for Disease Control and Prevention	3(0.1)	8(0.3)	5(0.4)	4(0.5)	20(0.3)
Greenberger, E.	17(0.5)	2(0.1)	1(0.1)	0(0.0)	20(0.3)
Total References	3215(100.0)	2470(100.0)	1207(100.0)	879(100.0)	7771(100.0)

Three authors were cited more than 50 times: Laurence Steinberg ( $n=81$ ), Jacquelynne Eccles ( $n=62$ ), and Reed Larson ( $n=55$ ). Steinberg's research on adolescent development was the most often cited; however, most citations were found in his own

textbook. Eccles has studied education and the changes that occur in the lives of adolescents. Larson's research focuses on the emotional development of adolescents. Twenty-three of the top 28 authors were cited in all textbooks. Of the five who were not, two were from Bukatko's and three were from Rathus's textbooks.

However, none of the top 28 authors was cited 10 or more times in all four of the top-selling textbooks. Two authors were cited 10 or more times in three textbooks: Eccles and Wyndol Furman. Cited more than 10 times in two of the selected textbooks were: Larson, Jeanne Brooks-Gunn, E. Mavis Hetherington, B. Bradford Brown, Jean S. Phinney, and J. Graber. Eighteen authors were cited more than 10 times in only one of the four textbooks. Two of the authors were not cited more than 10 times in any textbook. Finally, most of the 28 authors were primarily cited in a single textbook. Only eight authors were cited 10 or more times in both Steinberg and Santrock textbooks; two were cited between Steinberg-Bukatko; and two were cited between Santrock-Bukatko. No overlap was found between Rathus and the other textbooks.

*Question 5: Were these works journal articles, books or chapters and from what sources?*

*Did the journal articles report empirical findings or were they non-empirical? In what years were they published?*

Table 6 shows 93% of all the reference types were journals, books, and chapters. Chi squares were completed for those reference types with more than 50 total references. All of those reference types differed significantly by textbook ( $p < .001$ ). Sixty-six percent of all the references came from journals that were mostly peer-reviewed, as determined by review of the most frequently cited journals, from between 45.9% of the references in

Santrock to 80.2% in Steinberg ( $\chi^2=254.6$ ,  $df=3$ ,  $p<.001$ ). Another significant contrast was that Steinberg did not include a single chapter reference whereas Santrock and Bukatko relied more heavily on them ( $\chi^2=722.1$ ,  $df=3$ ,  $p<.001$ ) than Rathus or Steinberg. Also, Steinberg and Santrock more frequently cited papers than did Bukatko and Rathus ( $\chi^2=103.4$ ,  $df=3$ ,  $p<.001$ ).

Table 6.  
List of Types of References by Author and in Total Row Number (Percentage Within Textbook)

Reference Type	Steinberg <i>n</i> (%)	Santrock <i>n</i> (%)	Bukatko <i>n</i> (%)	Rathus <i>n</i> (%)	Total <i>n</i> (%)
Journal***	2577(80.2)	1133(45.9)	794(65.8)	641(72.9)	5145(66.2)
Book***	461(14.3)	512(20.7)	146(12.1)	87( 9.9)	1206(15.5)
Chapter***	0( 0.0)	576(23.3)	225(18.6)	95(10.8)	896( 11.5)
Paper***	121( 3.8)	150( 6.1)	0( 0.0)	8( 0.9)	279( 3.6)
Newspaper/Magazine***	18( 0.6)	32( 1.3)	3( 2.5)	26( 3.0)	79( 1.0)
Web-based***	6( 0.2)	12( 0.5)	11( 0.1)	21( 2.4)	50( 0.6)
Monograph/Report	15( 4.7)	11( 4.5)	16( 1.3)	1( 0.1)	44( 0.6)
Unpublished	6( 0.2)	20( 0.1)	1( 0.1)	0( 0.0)	27( 0.3)
Other	3( 0.1)	13( 0.5)	5( 0.4)	0( 0.0)	21( 0.3)
Government Source	6( 0.2)	4( 0.2)	2( 0.2)	0( 0.0)	12( 0.2)
Video/Speech	2( 0.1)	4( 0.2)	3( 0.2)	0( 0.0)	9( 0.1)
Dissertation/Thesis	0( 0.0)	3( 0.1)	0( 0.0)	0( 0.0)	3( 0.0)
Total References	3215(100.0)	2470(100.0)	1207(100.0)	879(100.0)	7771(100.0)

Note. Chi square calculations only for reference types with 50 or more total. Percentage of total references was calculated based upon the total references for each author divided all references from the four authors.

\*\*\* $p < .001$ ,  $df=3$ .

In terms of peer-refereed journals listed in Table 7, 14 journals were cited more than 75 times combined in the four textbooks. *Child Development* and *Developmental Psychology* were the top cited sources. Bukatko included the largest percentage of *Child Development* and *Developmental Psychology* references when citing peer-reviewed journals (18% and 13% respectively). Although the percentages of journals in each textbook differed, these two journals were cited most often by all textbook writers.



Coding of a 10% sample of journal references showed that 82% of the sample were empirical research, defined as research using first-hand data (Wallen & Fraenkel, 2001).

Table 7.  
Journals Cited 75 or More Times in the Textbook References. Listed as Totals and Percentages by Author

Journals	Steinberg <i>n</i> (%)	Santrock <i>n</i> (%)	Bukatko <i>n</i> (%)	Rathus <i>n</i> (%)	Total <i>n</i> (%)
Child Development***	305(9.5)	81(3.3)	220(18.2)	30(3.4)	636(8.2)
Developmental Psychology***	217(6.7)	61(2.5)	157(13.0)	33(3.8)	468(6.0)
Journal of Research on Adolescence***	167(5.2)	49(2.0)	7( 0.6)	7(0.8)	230(3.0)
Journal of Youth and Adolescence***	191(5.9)	26(1.1)	8( 0.7)	5(0.6)	230(3.0)
Journal of Adolescent Health***	85(2.6)	49(2.0)	2( 0.2)	9(1.0)	145(1.9)
Journal of Marriage and the Family***	113(3.5)	15(0.6)	5( 0.4)	10(1.1)	143(1.8)
American Psychologist***	42(1.3)	32(1.3)	31( 2.6)	25(2.8)	130(1.7)
Journal of Early Adolescence***	66(2.1)	1 (0.5)	11( 0.9)	2(0.2)	92(1.2)
Journal of Adolescent Research***	74(2.3)	8(0.3)	7( 0.6)	2(0.2)	91(1.2)
American Journal of Public Health***	74(2.3)	8(0.3)	1( 0.1)	2(0.2)	85(1.1)
Journal of Personality and Social Psychology**	53(1.6)	14(0.6)	4( 0.3)	10(1.1)	81(1.0)
Development and Psychopathology***	69(2.1)	4(0.2)	5( 0.4)	0(0.0)	78(1.0)
Pediatrics**	49(1.5)	16(0.6)	8( 0.7)	2(0.2)	75(1.0)
Psychological Bulletin	37(1.2)	13(0.5)	15( 1.2)	10(1.1)	75(1.0)
Total Journals	2577(50.1)	1133(22.0)	794(15.4)	641(12.5)	5145(100.0)

Note. Percentage of total references was calculated based upon the total references for each author divided all references from the four authors.

\*\*  $p < .05$ ,  $df = 3$ . \*\*\* $p < .001$ ,  $df = 3$ .

Chi square tests found that frequencies of citing differed for 13 of the 14 journals with 75 or more references. Eleven of the 14 journals listed were significant ( $p < .001$ ) level, two of the 14 journals were significant ( $p < .05$ ). Only *Psychological Bulletin* did not differ among the textbooks. Three of the top five journals exclusively focused on adolescent development *Journal of Research on Adolescence*, *Journal of Youth and Adolescence* and *Journal of Adolescent Health*. Steinberg used these sources for 14% of

his journal references; Santrock for 5.1%; Bukatko 1.5%; and Rathus, 2.4%, respectively. Overall, Steinberg clearly used peer-reviewed journals more often than the other three textbook writers. Additionally, Steinberg included the most empirical research articles from journals with 87%. Rathus had the least with 69% followed by Santrock and Bukatko with 75% and 80% respectively.

Finally, Table 8 presents the year in which references in the selected textbooks were published. The oldest reference was from 1859 (Darwin). Most of textbook references, 48.4%, were from the years 2000 to 2008. The majority of references included in Santrock's (66.7%) and Rathus' (61.0%) textbooks were from that period whereas the plurality of references from Steinberg's (45.9%) and Bukatko's (42.9%) textbooks were from 1990-1999.

Table 8.  
List of Citation Years From Each Textbook by Author and in Total Raw Number  
(Percentage Within Textbook)

Reference Years	Steinberg n (%)	Santrock n (%)	Bukatko n (%)	Rathus n (%)	Total n (%)
Pre 1970	52( 1.6)	45( 1.8)	55( 4.6)	24( 2.7)	176( 2.3)
1970-1979	87( 2.7)	52( 2.1)	80( 6.6)	19( 2.2)	238( 3.1)
1980-1989	350( 10.9)	228( 9.2)	226( 37.4)	66( 7.5)	870( 11.2)
1990-1999	1,475 ( 45.9)	498( 20.2)	518( 42.9)	234( 26.6)	2725( 35.1)
2000-2008	1,251 ( 38.9)	1,647( 66.7)	328( 27.2)	536( 61.0)	3762( 48.4)
Total References	3,215(100.0)	2,470(100.0)	1,207(100.0)	879(100.0)	7,771(100.0)

## Chapter IV

### Discussion

Teachers should know and understand the unique characteristics of early adolescence (NMSA, 2003; Jackson & Davis, 2000). However, what information is presented to pre-service teachers to help them understand who early adolescents are? This research took the first step in answering that important question. The most consistent and available resources from which teacher candidates first learn about early adolescents are textbooks with long track records of high sales rankings. The four textbooks used in this research were Steinberg's *Adolescence* 8<sup>th</sup> edition, Santrock's *Adolescence* 12<sup>th</sup> edition, Bukatko's *Child and Adolescent Development: A Chronological Approach* 1<sup>st</sup> edition, and Rathus' *Childhood and Adolescence: Voyages in Development* 2<sup>nd</sup> edition. This study found how the textbooks used chapter questions, the topics presented in the table of contents, and what textbook references were cited in chapters about adolescent development. Based on these three measures, significant differences were found among each of the textbooks demonstrating that while textbooks purport to be the most up-to-date and comprehensive sources of information, they actually present different versions of adolescent development. Instructors should be aware of how the textbooks they are using meet the objectives of their courses. Staff developers in schools should be mindful when planning in-service experiences because their teachers may have different understandings about the children whom they teach.

## Psychosocial Development

All four textbooks stressed the area of psychosocial development in the questions embedded within and at the end of each chapter. Psychosocial questions encompassed 64% of the total questions for the four textbooks. The psychosocial area of development focuses on the emotional and psychological changes that occur as the ability for more mature interactions increases (Caskey & Anfara, 2007). This area of development includes moral development, parenting, race, popularity, peer pressure, identity, temperament and attachment. No doubt, these areas of development are all essential to understanding the emotional state and changing needs of early adolescents. For example, teachers need to keep in mind these important topics as they create cooperative groups and as they listen and respond to their students.

Yet, understanding the psychosocial needs of students is only the first step in planning instruction. One of the most difficult tasks in teaching is determining what instructional strategies will work for particular students so that they are able to master specific content objectives. Academic objectives do not always seem personally meaningful and relevant to adolescent students. Thus, teachers need to provide those connections for students in a manner that is relevant to them. Pre-service teachers need early adolescent textbooks that include information that requires them to understand how psychosocial development coincides with intellectual and physical development. Only with this knowledge are teachers able to make learning meaningful at every student's developmental point.

Steinberg and Santrock included the highest percentages of psychosocial questions in their textbooks, 85% and 73% respectively. Although the psychosocial

category appears to be the most important area covered, could such overweighting in these two textbooks reduce access to essential information about how students develop intellectually thus affecting a future teacher's skills in making instruction relevant? As college instructors develop future classes, they may consider merging the topics of early adolescent development and instructional methodologies. They may also consider supplementing textbooks with additional readings that focus on pedagogy. These strategies may enhance the adult learners' ability to connect the theories they are learning with practice by applying early adolescent characteristics to instructional decisions.

#### Updated Topic Emphasis

Although some topics were common across the textbooks, each also focused on different topics that provided notably different views of early adolescent development. Similar topics emphasized in at least three of the textbooks included puberty, gender, moral development, family, cognitive development, and information processing. These topics represent each of the three overarching areas of physical, psychosocial and intellectual development. Topics that appeared in only one or two of the textbooks included HIV, disabilities, race, socioeconomic status, and tracking.

Given the increased attention on inclusion and diversity, it was surprising that some of the textbook writers did not emphasize issues such as disabilities, race, socioeconomic status, and tracking. These topics are essential for future educators to understand the differences among the students in increasing diverse schools and how to address these differences. Perhaps textbook textbooks are written to present the most general concepts of development that may take a substantial amount of written text to

cover adequately. Discussion about smaller samples of children may not be part of the textbook writer's expertise or they may feel that other more specialized texts could cover these topics more satisfactorily. It would be informative to investigate the extent to which instructors use supplementary materials to present these issues to students.

Four authors and theorists were referred to by name in the textbooks' table of contents. Piaget and Erikson were listed in three of the four textbooks. Vygotsky and Kohlberg were each listed in two textbooks. Piaget and Vygotsky both described intellectual development. However, they focused differently on the role of social interactions in learning. Piaget described individual development while Vygotsky described the necessity for social interaction in order to reach higher levels of knowledge and understanding. The role of social interaction with adults and peers is an essential concept for educators. When does one hold students accountable for learning individually? When does one develop mechanisms to support adolescent learning such as cooperative groups, working in pairs, conferencing with peers or teachers and providing direct lecture with individual practice? What should the balance be between individual work and work with others? These authors provide the theory and understanding necessary to answer these questions. Thus these textbooks have provided some of the key concepts that serve as a foundation for educational methodology courses.

Erikson and Kohlberg described a stage process of individual development and moral development for students. Each student is said to progress through these stages based on their own experiences and their physical and psychosocial development. Realizing that all students are in different developmental stages is the key to understanding that teachers need to know all of their students as individuals in order to

best understand their needs. This information provides a context for working with early adolescents. This context does not lead to direct action with students, but rather informs the culture of learning teachers build in a classroom. In short, these theorists are essential figures in the understanding of intellectual and social development of the early adolescent but are discussed in varying degrees across the textbooks.

Instructors for pre-service teachers need to take into account the different content presented in textbooks. Teachers entering the profession are expected to deal with every aspect of the job and take responsibility for the learning of students from the first day of school. The analysis of what questions textbook authors posed and of what topics they present should sensitize professionals as to what information is or is not included.

Controversial issues of race, tracking and disabilities are not included in some of the textbooks. Yet, teachers are expected to understand and implement complicated documents like individualized education plans and Section 504 documents from the first day they work with students needing these accommodations. Without understanding these complex and difficult issues, teachers may be less prepared for understanding significant subgroups of their students and meeting their needs.

#### Researchers from References

In the study of authors from the adolescent development references in all four textbooks, unique citations of only four authors were made 45 or more times within the 7,771 references. These four authors, Steinberg, Eccles, Larson, and Brooks-Gunn represent the research most frequently cited about adolescent development. However, differences were found in how many times each author was cited among the textbooks.

Steinberg was cited most frequently in his own textbook and only once in Rathus' textbook. Eccles was cited most evenly among the textbooks, but was still cited 22 times in Steinberg and only five times in Rathus' textbook. This review of authors does not produce a clearly defined set of researchers who represent adolescent development.

This lack of a clearly defined group of researchers about adolescence may be because none of the best-selling textbooks were solely about early adolescent development. When publishers were contacted for the best-selling textbooks regarding early adolescence, they identified two textbooks about adolescence as a whole and two textbooks that included both childhood and adolescent development. Childhood covers an age range of 2 to 9 while adolescence usually encompasses years 10 to 21. These bands are quite lengthy and thus raise the issue of whether concepts more specific to early adolescence, the ages typically found in middle schools, are adequately covered. One solution would be for textbooks to focus exclusively on early adolescent development. As these textbooks about early adolescence are written, their references may produce a more comprehensive set of common authors who specialize on key learning and development issues confronting this age group. Meanwhile, additional resources from the National Middle School Association will provide staff developers and administrators important and useful information to enhance their programs.

### Primary and Secondary Sources

Further analysis of textbook references found that most of the sources were journals, books, chapters and papers. The majority of references came from journals. An additional analysis determined that 82% of the journal references were empirical



research. Yet, a significant difference ( $p < .001$ ) was found in the use of different types of source across each textbook. Primary sources are the most direct and accurate way to report information about a topic. Primary sources allow the reader the opportunity to review and evaluate research findings without another person's interpretation. In the references of each of the textbooks, journals, papers, dissertations and thesis represented primary sources. These resources are the most important for teachers and pre-service teachers to access because readers can make their own assessment of the worthiness of the results. A textbook already represents a layer of interpretation because the authors organize and more importantly interpret the information in the references from their perspectives. When textbooks use secondary resources such as books and chapters in books, additional layers of interpretation and editing of results occur.

In this study, primary and secondary sources are emphasized differently within each textbook. Steinberg included the largest percentage of primary source references, 80%, from journals in his textbook and Rathus, the second largest percentage, 73%. Santrock and Bukatko were more frequent users of secondary sources than Steinberg or Rathus at 44% and 34% respectively. The reliance on using secondary resources may increase the likelihood that pre-service teachers who may refer to these secondary sources will not appreciate the limitations of the research presented. They may become more accepting and less critical of the findings in research they read. Educational research about middle schools is heavily laden with experiential descriptions and anecdotal research. Textbook authors need to provide their users with as much primary source material as possible and include information about research methods so pre-service teachers can learn to interpret and be critical readers of research. In this study, the sources

used and the degree of primary and secondary resources were different in each textbook. It is thus reasonable to expect that the emphasis on critical understanding of research is also different.

### Publication Dates

Finally, textbooks purport to contain the newest and most current information available. The need for frequent updates is a primary cause for multiple editions of textbooks. An analysis of the publication dates of the references revealed a difference in the number of up-to-date resources in each textbook. Santrock and Rathus included the largest number of the most up-to-date references. Most of Steinberg's and Bukatko's references were from 1990 to 1999. Staff developers should carefully review textbook references to ensure that the textbooks contain the most current information available. New findings emerging about the brain and physical development as well as new strategies for meeting the learning needs of students should be shared and applied to classroom practice in order to enhance each student's learning experience. However, both Steinberg and Santrock have more recent editions to their textbooks. Another study can investigate to what extent references in those and other textbooks are more recent.

Overall, the data gathered demonstrated that these best-selling textbooks were built from different research sources, emphasized different topics, and used different citation authors. These differences highlight the need for college professors and staff developers to consider carefully the objectives of the course for which they are selecting a textbook. The textbooks also need to be examined thoroughly to determine that they meet the intended objectives of the course.

## Future Research

However, these findings must be interpreted within the methodology used. This research focused on the topics authors emphasized through chapter questions and table of contents. It did not delve to a deeper level of inspection in which a content analysis of specific passages would have determined whether specific topics such as brain research, students with disabilities, socioeconomic status, race and ethnicity were found to a great extent within the text. Perhaps these topics were covered but were not featured as part of the table of contents. Nevertheless, future textbooks, may emphasize these topics more fully as more research findings are reported. For example, brain research is listed in two different broad developmental categories, physical and intellectual, in three of the four reviewed textbooks. Understanding of this topic is still developing but may hold considerable promise in helping teachers develop strategies to promote the intellectual development of early adolescents.

Other topics may be more often included such as students with identified learning and emotional disabilities and those who are not achieving at grade level. We know that teachers need to check with these students more frequently to identify whether learning objectives are achieved. Pedagogy is often modified to address these students' learning styles and motivational levels in order to increase their chances of demonstrating what they have learned. Coverage of these students and their learning issues in textbooks appears warranted given the longstanding practice of mainstreaming students with disabilities and the more recent focus on achievement gaps of minority students.

In addition to textbooks, other artifacts from pre-service course work could be examined such as course syllabi used in teacher preparation programs. Recently, colleges

of education in Pennsylvania must now submit them to the state Department of Education for approval of programs certifying early adolescent teachers. As part of this inquiry, professors could be asked what criteria are used to choose textbooks. Do professors look at the table of contents, questions and references? Do professors use the questions in textbooks or write their own? Do professors consider the topics within the table of contents or do they look at how the textbook is organized? These questions will help develop an understanding of how professors are working to develop effective pre-service courses and the role textbooks play in them. Secondly, professors could be asked what resources they are using in their courses beyond textbooks, what percentage of course work they spend on theory versus pedagogy, the degree to which they consult one another in developing pre-service teacher courses, and the degree to which their pre-service teacher courses contain the same content about the three areas of adolescent development.

Finally, practitioners and staff developers now need to continue to build on what educators know about adolescent development. With most references dating back no further than 1990, teachers with 20 years of experience may have missed the bulk of research that guides what our current pre-service teachers learn. It is critically important that teachers know their students and understand the scope of the field of early adolescent development. *Turning Points 2000* was written only ten years ago. Given that many teachers' careers last 30 to 35 years even those with only a decade of experience may not have the most up-to-date information about early adolescent development.

Future research regarding what pre-service teachers remember about early adolescent development could benefit staff developers. Additional research could also

include a content analysis of middle level conference presentations, professional development topics across Pennsylvania school districts, or a survey of teachers and administrators determining critical topics for staff development.

As such, The National Middle School Association and the Carnegie Corporation Council (NMSA, 1996; Jackson & Davis, 2000) have advocated for a renewed emphasis on understanding and meeting the needs of early adolescents. Educators, school districts and state departments of education have responded. Pennsylvania has begun to develop certifications focusing on grades 4-8. As this movement continues, more and more higher education providers will be looking for resources that will prepare teachers to better meet the needs of early adolescents. These resources will need to emphasize the three key areas of early adolescent development and also teach teachers how to apply this knowledge to middle school learners.

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Appendix A  
Codebook

Good Day,

Welcome and thank you for your assistance today. The following information outlines the key ideas we will be working with today and the procedure for coding the questions you are assigned. We will begin by coding some questions together, so you may familiarize yourself with the process before you code questions independently.

Physical, psychosocial and intellectual development are considered the three key categories for adolescent development. The definitions and keywords associated with each category are listed below.

**Physical Development** - Physical development can be described by tangible, measurable and observable changes that happen within the body including growth of the skeleton and body organs, development of fine and motor skills and biological development (Brighton, 2007; Caskey & Anfara, 2007).

**Physical Keywords:** Puberty, Brain Development, Height, Secondary Sex Characteristics, Sleep Patterns, Evolution, Health Services, HIV, STI, Growth Spurt

**Psychosocial Development** - Psychosocial development is the emotional and psychological changes that occur as the ability for more mature interactions increases (Caskey & Anfara, 2007).

**Psychosocial Keywords:** Moral Development, Morality, Nurture, Society’s influences, Social Learning, Secular, Socialization, Empathy, Prosocial, Parenting, Race, Resilience, Popularity, Peer Pressure, Social, Family Relationships, Clique, Cultural, Self Esteem, Ethnic Identity, Egocentrism, Identity, Emotions, Temperament, Attachment

**Intellectual Development** - Intellectual development is the changing ability to comprehend, reason, learn, adapt and apply new information (Caskey & Anfara, 2007).

**Intellectual Keywords:** information processing strategies, Cognitive Development, Reasoning, Metacognitive, Critical Thinking, Tracking, Ability Grouping

**Other** – Questions which cannot be sorted into the three categories. Examples include the following. “Define correlation and causation.” “What do case study and naturalistic observation mean?”

Each coding page has the same headers.

Coder	Author	Chapter	Page	Section	Question Code	Question
Coder letter Part number Question number	Author of the textbook	Chapter number for this question	Page number for this question	Title of section this question came from	This is the spot to record the code for each question	The question worded as it is in the text. Some questions are true and false or cloze activities, so they are in statement form instead of question form.

You will focus on the question section of the table

1. Read each question on each page of questions.
2. Using the given definitions for each of the Early Adolescent Developmental areas, circle the best code for each question using the following designations
  - a. Physical Development
  - b. Psychosocial Development
  - c. Intellectual Development
  - d. Other

If you are not certain which code to select for a question:

1. Reread the definitions for each area of development for clarification.
2. Read the question before and after to determine if there are context clues.
3. Review the title of the chapter and chapter subheadings for more information.
4. Get a copy of the textbook and review the text to determine if the code can be determined from a context clue.
5. Consult with the researcher to see if clarification can be determined.
6. If you are still uncertain about how to code a question, add it to the “other” category indicating that the category is not able to be determined.

Thank you for helping me with my dissertation research!

Leslie Djang

Appendix B  
Coding Examples

Coding Training Page #1

<b>Author</b>	<b>Chapter</b>	<b>Page</b>	<b>Section</b>	<b>Question Code</b>	<b>Question</b>
Bukatko	Chapter 1	62	For Your Review	Physical Psychosocial Intellectual Other	What four research tactics allow researchers to address questions about developmental change? What are the strengths and weaknesses of each tactic?
Rathus	Chapter 11	375	Active Review	Physical Psychosocial Intellectual Other	Gains in height and weight are generally (Abrupt or Steady?) throughout middle childhood.
Santrock	Chapter 3	124	Review and Reflect	Physical Psychosocial Intellectual Other	What theories of multiple intelligences have been developed? Do people have one intelligence or many intelligences?
Steinberg	Chapter 6	227	Food For Thought	Physical Psychosocial Intellectual Other	Based on the criteria of good schools discussed in this chapter how would you rate the high school that you attended?

Appendix C  
Coder Reliability Tests

Coding Training Page #2

Author	Chapter	Page	Section	Question Code	Question
Santrock	Chapter 13	505	Review and Reflect	Physical Psychosocial Intellectual Other	Why might risk taking in adolescence have more serious consequences than in the past?
Santrock	Chapter 13	503	Review and Reflect	Physical Psychosocial Intellectual Other	Imagine that you have just been appointed to head in the U.S. President's Commission on Adolescent Drug Abuse. What would be the first program you would try to put in place? What would its components be?
Santrock	Chapter 12	457	Review and Reflect	Physical Psychosocial Intellectual Other	What are some social policy recommendations regarding media use by adolescents?
Rathus	Chapter 11	388	Active Review	Physical Psychosocial Intellectual Other	ADHD (Does or Does not?) tend to run in families.
Rathus	Chapter 11	379	Active Review	Physical Psychosocial Intellectual Other	Reaction time gradually (Increases or Decreases?) from early childhood to about age 18.
Bukatko	Chapter 1	5	For Your Review	Physical Psychosocial Intellectual Other	What is developmental psychology?
Bukatko	Chapter 1	17	For Your Review	Physical Psychosocial Intellectual Other	What were John Locke's and Jean Jacques Rousseau's views of childhood?
Bukatko	Chapter 1	34	For Your Review	Physical Psychosocial Intellectual Other	What characteristics distinguish information-processing approaches from other theories of development?
Steinberg	Chapter 3	98	Food For Thought	Physical Psychosocial Intellectual Other	In your view, is adolescence a social invention?
Steinberg	Chapter 4	158	Food For Thought	Physical Psychosocial Intellectual Other	Most research on economic conditions, family functioning, and adolescent development has focused on poverty. Do you think there are negative effects of growing up under extreme affluence?



Author	Chapter	Page	Section	Question Code	Question
Santrock	Chapter 4	145	Review and Reflect	Physical Psychosocial Intellectual Other	What is self-understanding? What are the key dimensions of self-understanding in adolescence?
Santrock	Chapter 4	158	Review and Reflect	Physical Psychosocial Intellectual Other	What does it take to be emotionally competent in adolescence?
Rathus	Chapter 11	375	Active Review	Physical Psychosocial Intellectual Other	(Boys or Girls?) are slightly heavier and taller through the age of 9 or 10.
Rathus	Chapter 11	388	Active Review	Physical Psychosocial Intellectual Other	Did you know any children with disabilities who were "mainstreamed" in your classes? How were they treated by other students? How were they treated by teachers? Do you believe that mainstreaming was helpful for them?
Bukatko	Chapter 1	65	For Your Review	Physical Psychosocial Intellectual Other	What ethical concepts should guide researchers who discover that children in their research projects may be experiencing some form of risk in their lives?
Bukatko	Chapter 11	398	For Your Review	Physical Psychosocial Intellectual Other	What are the major ways in which children show changes in problem-solving skills as they develop?
Bukatko	Chapter 11	410	For Your Review	Physical Psychosocial Intellectual Other	What are some examples of children's metalinguistic awareness?
Steinberg	Chapter 13	435	Food For Thought	Physical Psychosocial Intellectual Other	Why do you think stereotypes of problem behavior in adolescence differ from reality? What are some dangers of holding on to the stereotypic view?
Steinberg	Introduction	9	Food For Thought	Physical Psychosocial Intellectual Other	In contemporary society, we do not have formal ceremonies that designate when a person has become an "adult." Do we have more informal ways to let individuals know when they have made the transition?
Steinberg	Chapter 2	90	Food For Thought	Physical Psychosocial Intellectual Other	Many have criticized schools for failing to promote critical thinking. But do you think that most adolescents really want educational practices to change?

Coding Training Page #4

Author	Chapter	Page	Section	Question Code	Question
Santrock	Chapter 4	155	Review and Reflect	Physical Psychosocial Intellectual Other	What developmental changes characterize identity?
Santrock	Chapter 6	202	Review and Reflect	Physical Psychosocial Intellectual Other	What was your exposure to sex in the media during adolescence? Do you think it influenced your sexual behavior? If so, how?
Santrock	Chapter 6	232	Review and Reflect	Physical Psychosocial Intellectual Other	How sexually literate are U.S. adolescents?
Rathus	Chapter 11	388	Recite: An Active Summary	Physical Psychosocial Intellectual Other	How does run-of-the-mill failure to "listen" to adults differ from attention-deficit/hyperactivity disorder?
Rathus	Chapter 12	399	Active Review	Physical Psychosocial Intellectual Other	Concrete-operational children are (More or Less?) egocentric than preoperational children.
Rathus	Chapter 12	411	Active Review	Physical Psychosocial Intellectual Other	I asked, "How is information transferred from short-term memory to long-term memory?" How is the process analogous to placing information in a computer's "memory" into a computer's "storage" device? What happens if you forget to "save" information in the computer's memory?
Bukatko	Chapter 12	419	For Your Review	Physical Psychosocial Intellectual Other	How does culture play a role in emotional development?
Bukatko	Chapter 12	440	For Your Review	Physical Psychosocial Intellectual Other	How do cross-cultural differences in child rearing influence displays of prosocial behavior?
Steinberg	Chapter 3	95	Food For Thought	Physical Psychosocial Intellectual Other	Which fundamental change of adolescence - biological, cognitive, or social - do you think has the most powerful effect on psychological development? Why?
Steinberg	Chapter 6	203	Food For Thought	Physical Psychosocial Intellectual Other	How do you feel about vouchers? About charter schools? What are the costs and benefits of each, to students and to society?

Author	CH.	Page	Section	Question Code	Question
Bukatko	CH. 11	383	For Your Review	Physical Psychosocial Intellectual Other	What are the concerns about short stature and obesity in many cultures?
Bukatko	CH. 11	385	For Your Review	Physical Psychosocial Intellectual Other	What are Piaget's ideas about concepts of causality during the middle childhood years?
Bukatko	CH. 11	410	For Your Review	Physical Psychosocial Intellectual Other	In what ways does language influence cognitive processing? What are the particular effects of bilingualism on cognition?
Rathus	CH. 1	43	Recite: An Active Summary	Physical Psychosocial Intellectual Other	What is an experiment?
Rathus	CH. 1	43	Recite: An Active Summary	Physical Psychosocial Intellectual Other	How do researchers study development over time?
Rathus	CH. 15	535	Active Review	Physical Psychosocial Intellectual Other	Do you know people who dropped out of high school? Why did they drop out? What were the consequences of dropping out?
Santrock	CH. 3	117	Review and Reflect	Physical Psychosocial Intellectual Other	What characterizes the development of cognitive resources?
Steinberg	CH. 12	420	Food For Thought	Physical Psychosocial Intellectual Other	Many immigrant adolescents in the United States achieve more in school than their counterparts from the same ethnic group who were born in America - despite the fact that adolescents who are immigrants often arrive without proficiency in English or familiarity with American culture. How do you account for this?
Santrock	CH. 8	296	Review and Reflect	Physical Psychosocial Intellectual Other	What are some issues involved in relationships between emerging adults and their parents?
Santrock	CH. 11	407	Review and Reflect	Physical Psychosocial Intellectual Other	How is mentoring beneficial in adolescence?

Appendix D  
Abstracts from Journal References Codebook

Good Day,

Welcome and thank you for your assistance. The following information outlines the key coding concepts and the procedure for coding the selected abstracts. We will begin by coding some abstracts together, so you may familiarize yourself with the process before you code abstracts independently.

Research is divided into many areas. For the purpose of this study, we will be using the following areas to code. The definitions and keywords associated with each area are listed below.

- 1. Empirical Research** – Research that involves the collection of first-hand information.  
(Wallen & Fraenkel, 2001)  
**Example** – Study of effectiveness of a social learning program, comparison of the effectiveness of behavior therapy as compared with client-centered therapy  
(Wallen & Fraenkel, 2001)
- 3. Commentary/Opinion** – Articles that share an informed opinion about a topic or a response to another’s work

Text	Orig #/Rand()	Author 1/ Author 2	Year	Title/ Source	Code	Abstract
Text Author	Coding numbers for random selection	Authors of articles	Year of publi- cation	Reference citation information		Brief description of the article

You will focus on the code and abstract sections of the table

3. Read each Abstract
4. Using the given definitions for each of the types of research, type in the code for each abstract using the following designations
  - a. Empirical Research (**E**)
  - b. Commentary/Opinion (**C**)

If you are not certain which code to select for a question:

7. Reread the definitions for each category for clarification.
8. Read abstract and article title for context clues.
9. Consult with the researcher for clarification.

Thank you for helping me with my dissertation research!

Leslie Djang

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## **Leslie Jasmine Djang**

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### **PROFESSIONAL PROFILE**

Leslie Djang was born in Manchester, New Hampshire. She earned her undergraduate degree at Cornell University in Psychology and then completed her Master's degree in elementary education at the University of Pennsylvania. Earning her K-12 principal certification at Lehigh University in 2003 lead to her current position as Assistant Principal for Curriculum and Instruction at Upper Moreland Middle School in Hatboro, Pennsylvania.

### **EDUCATION**

M.S. Education, August 1992  
B.A. Psychology, May 1991

University of Pennsylvania, Philadelphia PA  
Cornell University, Ithaca NY

Pennsylvania Certifications: Elementary Education, Level II, Middle School Mathematics, Supervisor of Curriculum and Instruction, K-12 Principal

### **EMPLOYMENT HISTORY**

Assistant Principal for Curriculum and Instruction, Upper Moreland Middle School,  
Hatboro PA (2008-Present)

Program Specialist, Upper Moreland Township School District, Willow Grove PA  
(2006-2008)

Grade 6 Teacher, Sandy Run Middle School, Upper Dublin School District, Dresher PA  
(1994 - 2006)

Academically Talented Program Teacher, Rose Tree Media School District, Media PA  
(1993- 1994)

Grade 3 Teacher, The Country School, Easton MD  
(1992 - 1993)

Grade 1 Student Teaching, J.R. Lowell School, The Philadelphia Public School District  
(1991-1992)

### **PROFESSIONAL ASSOCIATIONS**

National Middle School Association  
National Council of Teachers of Mathematics  
Association for Supervision and Curriculum Development

### **PROFESSIONAL ACTIVITIES**

- Member of the standing committee whose responsibilities are to develop, review, and revise questions for the fourth/eighth grade NAEP (National Assessment of Educational Progress or the Nation's Report Card) test in mathematics (1999-2005)
- Member of Phi Delta Kappa and Alpha Delta Kappa