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Research Summary: Young Adolescents' Developmental Characteristics

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YOUNG ADOLESCENTS' DEVELOPMENTAL CHARACTERISTICS

In support of *This We Believe* characteristics:

- Educators who value working with this age group and are prepared to do so
- Curriculum that is relevant, challenging, integrative, and exploratory
- Organizational structures that support meaningful relationships and learning

Early adolescence is a distinct period of human growth and development situated between childhood and adolescence. During this remarkable stage of the life cycle, young adolescents (10- to 15-year-olds) experience rapid and significant developmental change. Recognizing and understanding the unique developmental characteristics (traits associated with human growth) of early adolescence and their relationship to the educational program (i.e., curriculum, instruction, and assessment) and to the structure of the middle school (e.g., flexible block scheduling, advisory programs, and team teaching) are central tenets of middle grades education.

Early adolescence gained acceptance as a distinct developmental period during the 20th century. G. Stanley Hall (1904), American psychologist and father of the child study movement, identified preadolescence as a unique growth stage. Hall's study of adolescence captured the interest of scholars and the public (Arnett, 2001). Decades later, the work of other notable psychologists and theorists (Flavell, 1963; Havighurst, 1968; Piaget, 1952, 1960) advanced the credibility of early adolescence and other developmental stages. Researchers and academics (Kagan & Coles, 1972; Tanner, 1973; Thornburg, 1983) further heightened awareness of early adolescence through dissemination of research articles and books. Donald Eichhorn (1966), considered a founding father of the middle school movement, called upon educators to consider young adolescents' developmental characteristics when planning curriculum, instruction, and assessment and when structuring the environment of the middle school. Professional organizations (Association for Supervision and Curriculum Development, 1975; National Association of Secondary School Principals, 1989; National Middle School Association, 1982, 1995, 2003) articulated position statements and recommendations about educational programs and practices to address young adolescents' developmental needs. Joan Lipsitz (1984), a distinguished middle grades researcher, also asserted that schools for young adolescents "must be responsive to their developmental needs" (p. 6).

Before examining the developmental characteristics of young adolescents, two cautions are important to note. First, while the developmental characteristics of young adolescents include physical, intellectual, emotional/psychological, moral/ethical, and social domains, these characteristics are interrelated and overlap. Depending on who is writing about young adolescents, the categories can vary and be somewhat arbitrary (Scales, 2003). Second, although educators, academics, and researchers often use these categories to portray youth ages 10 to 15, they need to be mindful of generalities and oversimplification (Kellough & Kellough, 2008). Cognizant of these cautions, a summary of each of the developmental characteristics follows.

Physical Developmental Characteristics

Physical development encompasses bodily changes including growth, improved gross and fine motor skills, and biological maturity. During early adolescence, the body undergoes more development than at any other time, except the first two years of life. Young adolescents' growth is accelerated and uneven (California State Department of Education, 1987; Kellough & Kellough, 2008; Manning, 2002; Scales, 1991, 2003; Wiles, Bondi, & Wiles, 2006), with growth spurts occurring about two years earlier in girls than boys (Tanner, 1973). Developmental growth includes significant increases in height, weight, and internal organ size as well as changes in skeletal and muscular systems (Kellough & Kellough). Since bones are growing faster than muscles, young adolescents may experience coordination issues. Actual growing pains result when muscles and tendons do not adequately protect bones (Kellough & Kellough; Wiles, Bondi, & Wiles). Fluctuations in basal metabolism cause these youth to experience periods of restlessness and lassitude (Kellough & Kellough). Additionally, young adolescents tend to "have ravenous appetites and peculiar tastes" (Kellough & Kellough, p. 22) and have a propensity for improper nutrition. They are often physically vulnerable due to poor physical fitness, poor health habits, (Scales, 2003) and high-risk behaviors including the use of alcohol or illicit drugs (National Institute on Drug Abuse, 2005) and experimentation with sexual activity.



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Puberty, a phase of physiological changes includes the development of sexual reproductive systems, begins in early adolescence (Manning & Bucher, 2005). Triggered by the release of hormones, the onset of puberty is an intense developmental period. A cascade of hormones signals the development of primary sex characteristics (genitalia) and secondary sex characteristics (e.g., breast development in girls; facial hair in boys) during this period. Girls tend to mature one to two years earlier than boys do (Caissy, 1994). Increased production of adrenal hormones affects skeletal growth, hair production, and skin changes (Dahl, 2004). These highly visible changes and disparate rates of maturity cause many young adolescents to feel uncomfortable about differences in physical development (Simmons & Blyth, 1987).

The brain also undergoes remarkable development during young adolescence. Though brain size remains relatively unchanged, researchers (e.g., Blakemore & Choudhury, 2006; Casey, Giedd, & Thomas, 2000; Dahl, 2004) report significant changes within the brain. The advent of neuroimaging technology allows researchers to examine the structures and functions of the young adolescent brain without invasive procedures. For example, researchers observe that the prefrontal cortex, the area of the brain that handles executive functions including planning, reasoning, anticipating consequences, sustaining attention, and making decisions, is not fully developed in young adolescents. They also note gender-specific differences in young adolescent brains. (See Caskey & Ruben, 2007, for a synthesis of recent neuroscience research specific to the brain development of young adolescents.)

Implications for Practice

Practitioners and parents need to recognize that physical developmental characteristics may affect young adolescents' emotional/psychological and social development. Teachers and guidance counselors can mitigate young adolescents' concerns about physical development by explaining that these changes are natural and common (Van Hoose, Strahan, & L'Esperance, 2001; Wiles & Bondi, 2001; Wiles, Bondi, & Wiles, 2006). They can present accurate information, respond to questions, and encourage young adolescents to consult credible resources (Scales, 2003). Schools should provide health and science curricula that explicate physical changes (Kellough & Kellough, 2008) and other educational programs that encourage sound nutrition, sufficient exercise, and healthy lifestyles.

Correspondingly, schools need to ensure that young adolescents have access to plenty of water and nutritious food during the school day. Appropriate instruction concerning the risks of alcohol and drug use, teenage pregnancy, and sexually transmitted diseases needs to be made available. Due to fluctuations in basal metabolism, young adolescents will also

need opportunities for physical movement as well as periods of rest (George & Alexander, 1993). Teachers need to recall that preoccupation with body image and self-consciousness may lead some young adolescents to avoid physical activity (Milgram, 1992). When planning activities that require physical movement, teachers need to minimize situations that promote competition and possible comparisons between early- and late-maturing youth. In addition, teachers need to arrange young adolescents' participation in an array of hands-on learning experiences (Kellough & Kellough, 2003) including simulations and service learning.

Intellectual Developmental Characteristics

Intellectual development refers to the increased ability of people to understand and reason. In young adolescents, intellectual development is not as visible as physical development, but it is just as intense (Stevenson, 2002; Van Hoose, Strahan, & L'Esperance, 2001). During early adolescence, youth exhibit a wide range of individual intellectual development (California State Department of Education, 1987; Kellough & Kellough, 2008; Manning, 2002; Scales, 2003), metacognition (the ability to think about one's own thinking), and independent thought (Kellough & Kellough). They tend to be highly curious and display a broad array of interests—though few are sustained (Kellough & Kellough; Scales). Typically, young adolescents are eager to learn about topics they find interesting and useful, favor active over passive learning experiences, and prefer interactions with peers during educational activities (Kellough & Kellough).

Young adolescents develop the capacity for abstract thought processes (Elkind, 1974; Flavell, 1963; Piaget, 1952, 1960); however, this transition to higher levels of cognitive function varies significantly across individuals as well as across and within content areas. During early adolescence, youth typically progress from concrete logical operations and problem solving to acquiring the ability to develop and test hypotheses, analyze and synthesize data, grapple with complex concepts, and think reflectively (Manning, 2002). As they mature, young adolescents start to understand the nuances of metaphors, derive meaning from traditional wisdom, and experience metacognition (Kellough & Kellough, 2008). Similarly, they are increasingly able to consider ideological topics, argue a position, question adult authority, and appreciate sophisticated levels of humor (Stevenson).

Young adolescents, as learners, build upon their individual experiences and prior knowledge to make sense of the world around them (Piaget, 1960). Experience plays a central role in developing the brain and induces learners to construct meaning based on what they already believe and understand (Bransford, Brown, & Cocking, 1999). During early adolescence, youth are most interested in real-life experiences and authentic learning opportunities; they are often less interested



in conventional academic subjects (Kellough & Kellough, 2008). Young adolescents tend to be inquisitive about adults and are often keen observers of adult behavior (Scales, 2003). They also develop an improved ability to think about the future, anticipate needs, and develop personal goals (Kellough & Kellough).

Implications for Practice

Teachers need to consider the varying intellectual developmental differences of young adolescents when planning learning experiences. To address this diversity, teachers need to provide a wide variety of educational approaches and materials that are appropriate for their students' varied cognitive abilities. While concrete thinkers require more structured learning experiences, abstract thinkers need more challenging activities (Manning & Butcher, 2005). Young adolescents need teachers who understand and know how they think (Stevenson, 2002). Teachers need to plan curricula around real-world concepts (Kellough & Kellough, 2008) and supply authentic educational activities (e.g., experimentation, analysis and synthesis of data) that are meaningful for young adolescents (Scales, 2003). To foster intellectual development, these youth need to interact directly with their world—through discourse with peers and adults and hands-on experience (Stevenson). Further, schools need to recognize young adolescents' changing interests and ensure that they have opportunities for exploration throughout their educational program (Manning & Butcher). Teachers can also provide forums for this age group to explore the reasons for school, home, and societal rules. Serving as adult role models, teachers help young adolescents to connect intellectual and moral reasoning by teaching through example.

Moral/Ethical Developmental Characteristics

Moral/ethical development is associated with a person's growing ability to make principled choices. Young adolescents tend to be idealistic and possess a strong sense of fairness in human relations (Kellough & Kellough, 2008; Scales, 2003). Their increased capacity for analytical thought, reflection, and introspection exemplifies the connection between young adolescents' moral and intellectual development. Young adolescents begin to reconcile their understanding of people who care about them with their own egocentricity (Roney, 2005), as they progress into the interpersonal conformity stage of moral development (Kohlberg, 1983). They transition from a self-centered perspective to having consideration for the rights and feelings of others (Scales). Young adolescents are often keenly aware of flaws in others, but are reticent to acknowledge their own (Scales). They pose broad, unanswerable questions about life and refuse to accept trivial responses from adults (Kellough & Kellough). During early adolescence, youth move

from blanket acceptance of adult moral judgment to the development of their own personal values; however, they usually embrace the values of their parents or key adults (Scales). Young adolescents start to view moral issues in shades of grey rather than strictly in black and white. They start to consider complex moral and ethical questions, yet are unprepared to cope with them. Consequently, young adolescents are at risk when it comes to making sound moral and ethical choices (Kellough & Kellough).

Implications for Practice

Teachers need to recognize and capitalize on the relationship between young adolescents' intellectual development and their moral reasoning (Scales, 2003). They need to plan instructional experiences that foster higher order thinking skills and higher levels of moral reasoning. For example, teachers can include assignments that guide students to articulate their thoughts and feelings in writing (Scales). Young adolescents need opportunities to examine options of behavior as well as the consequences of these options (Kellough & Kellough, 2008). In the same vein, teachers need to plan experiences for this age group to contemplate moral/ethical dilemmas (Scales) and consider possible responses. This can help students to develop values, resolve problems, and set their own standards of behavior (Kellough & Kellough). Teachers can also incorporate scenarios that prompt young adolescents to explore concepts of fairness, justice, and equity (Scales). Additionally, schools need to include programs and curricula that address societal issues such as racism, sexism, and discrimination (Scales).

Emotional/Psychological Developmental Characteristics

During early adolescence, emotional and psychological development is characterized by the quest for independence and identity formation. It is a time when young adolescents seek their own sense of individuality and uniqueness (Knowles & Brown, 2000). They are searching for an adult identity as well as adult acceptance, while striving to maintain peer approval (Kellough & Kellough, 2008). As young adolescents' affiliation base expands to include family and peers, feelings of conflict arise because of competing allegiances (Wiles, Bondi, & Wiles, 2006). Their search for identity and self-discovery may exacerbate feelings of vulnerability as they become increasingly attuned to the differences between self and others (Scales, 2003). Typically, the period of early adolescence is intense and unpredictable (Scales). Young adolescents have a tendency to be moody, restless, and may exhibit erratic and inconsistent behavior including anxiety, bravado, and fluctuations between superiority and inferiority (Kellough & Kellough; Scales; Wiles, Bondi, & Wiles). They are also often self-conscious, prone to lack self-esteem, and are highly sensitive to criticism of their perceived personal shortcomings (Scales). Emotionally-charged situations may trigger



young adolescents to resort to childish behavior patterns, exaggeration of simple occurrences, and vocalization of naive opinions or one-sided arguments. Their emotional variability also puts young adolescents at risk for making decisions with negative consequences (Milgram, 1992). Furthermore, young adolescents are apt to believe that their experiences, feelings, and problems are unique (Scales).

Implications for Practice

Schools and teachers need to support young adolescents' quest for identity formation through curricular experiences, organization structures, instructional approaches, and opportunities for exploration. Advisory programs, in particular, can ensure that every young adolescent is known well by at least one adult and foster positive relationships among peers. Young adolescents need opportunities to form relationships with adults who understand them and who are willing to support their development. Educational as well as advisory programs and practices can promote an atmosphere of friendliness, concern, and group cohesiveness (Kellough & Kellough, 2008). Moreover, teachers can acknowledge the importance of friendships and help students to understand that shifting allegiances are normal (Scales, 2003). Teachers can explain to young adolescents how self-esteem affects nearly all aspects of their development and provide experiences that build students' self-esteem. Young adolescents need environments that are free from harsh criticism, humiliation, and sarcasm. With regard to emotional development, young adolescents need opportunities that allow them to play out their emotions as well as promote self-assessment. Teachers can provide educational experiences such as role-playing, drama, and reading that permit young adolescents to understand that their problems are not unique (Kellough & Kellough).

Social Developmental Characteristics

Social development refers to a person's capacity for more mature interactions with individuals and groups. Young adolescents have a strong need to belong to a group—with peer approval becoming more important as adult approval decreases in importance (Scales, 2003). This need often results in fierce loyalty to peer groups (Kellough & Kellough, 2008). "Friendships, positive peer relationships, and social interactions can boost young adolescents' self-esteem." (Manning, 2002, p. 32). As young adolescents mature socially, they often experience opposing loyalties to peer group and family (Wiles, Bondi, & Wiles, 2006). As they search for a social position within their peer group, young adolescents may experiment with slang and alternative behaviors. Young adolescents tend to emulate esteemed peers or non-parent adults and prefer to make their own choices, yet the family remains a critical factor in final decision-making (Kellough & Kellough). Though young adolescents may be rebellious to parents and adults, they still depend on them (Scales). Young adolescents also tend to test the limits of acceptable behavior and often challenge adult

authority (Scales). Feelings of adult rejection can drive young adolescents into the somewhat secure social environment of their peer group (Kellough & Kellough). Social maturity often lags behind physical and intellectual development. Consequently, young adolescents may overreact to social situations, ridicule others, and feel embarrassment (Scales). Young adolescents are also socially vulnerable due to influences of media and negative interactions with adults (Kellough & Kellough; Scales).

Implications for Practice

Because of young adolescents' strong need for affiliation, they need opportunities to form positive and healthy relationships with peers. Teachers must recognize the importance of friendship and peer relationships (Scales, 2003) and provide opportunities for peer interactions (Kellough & Kellough, 2008). In addition, teachers need to be aware that adults compete for young adolescents' attention, so their interactions with these youth need to be positive and constructive (Scales). Schools need to provide young adolescents with experiences that promote freedom and independence within a safe space. Student government, service clubs, and other leadership groups allow young adolescents to develop their own guidelines for behavior or their own projects (Kellough & Kellough). Teachers can plan activities that engage students in argumentation or debate in academic settings as well as those that simulate social situations through role-plays or simulations (Kellough & Kellough). Teachers also need to develop cooperative learning activities and collaborative experiences in which young adolescents can interact productively with peers (Scales).

Conclusion

Young adolescents deserve educational experiences and schools that are organized to address their unique physical, intellectual, emotional/psychological, moral/ethical, and social developmental characteristics and needs. Practitioners, parents, and others who work with young adolescents need to be aware of any changes—subtle or obvious—in developmental characteristics. Such changes may give adults insights into the challenges facing young adolescents and elucidate possible reasons for shifts in young adolescents' ability and behavior.

Educators who were influential in the development of the middle school (e.g., John Lounsbury, Donald Eichhorn, William Alexander, and Gordon Vars) were insistent that the developmental needs of young adolescents influence the educational environment and organizational structure of the middle school. This desire to be "developmentally appropriate" was what set the middle school apart from its predecessor, the junior high. While educators and policymakers have attempted to implement restructuring and reform initiatives to provide young adolescents with more developmentally appropriate learning experiences and environments, much work remains.



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Everything educators of young adolescents need to know is here—covered thoroughly and presented clearly in a manner that emphasizes the practical as well as the theoretical. Kellough and Kellough encourage educators to actively engage their students in learning and afford each student an equal chance to participate, learn, grow, and succeed. A wealth of examples and exercises are provided for each of the book's chapters. Coverage includes the characteristics of young adolescents and planning, implementing, and assessing learning based on these developmental qualities. This book is intended for teacher preparation students, but seasoned teachers and administrators will find this book very useful as they continue to develop their skills in working with young adolescents.

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- Manning, M. L. (2002). *Developmentally appropriate middle level schools* (2nd ed.). Olney, MD: Association for Childhood Education International.

In *Developmentally Appropriate Middle Level Schools*, Manning examines early adolescence as a developmental period and explains the physical, psychosocial, and cognitive characteristics of 10- to 15-year-olds. In addition, it provides recommendations for how middle grades schools can provide developmentally appropriate educational experiences. Chapter four provides resources for middle grades educators, including a list of professional associations, Internet sites, and resource centers. Appendix A contains a checklist that will allow middle grades schools to measure their responsiveness to young adolescents' developmental characteristics.



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Stevenson, C. (2002). *Teaching ten to fourteen year olds* (3rd ed.). Boston: Allyn & Bacon.

Stevenson, in *Teaching Ten to Fourteen Year Olds*, offers readers an excellent overview of the social, physical, and emotional development of the young adolescent. In addition to its usefulness to educators, parents of young adolescents will find this book helpful in understanding the development of their child. In Part One, Stevenson (a) describes the underpinnings of middle grades education and establishes the context for the reader's personal and professional development as a teacher of young adolescents; (b) guides the reader in using shadowing and inquiry techniques as methods for observing and learning from and about young adolescents; and (c) presents the domains of development (i.e., social, physical, and emotional), which are characterized as "interactive." Part Two focuses on conceptualizing, organizing, presenting, and assessing the effectiveness of schooling that will complement the developmental characteristics of young adolescents. Part Three examines the teacher's personal context—the selected roles and functions of middle grades teachers that distinguish this work from teaching other levels of schooling.

Wiles, J., & Bondi, J. (2001). *The new American middle school: Educating preadolescents in an era of change* (3rd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Wiles and Bondi address the wide array of middle school issues from an informed vantage point in the classroom. They project a new era in middle grades education—where the power of new technologies makes it possible to truly individualize student learning. A wealth of practical suggestions and ideas for teachers are offered throughout the book. The range of topics includes the characteristics of young adolescent learners and their relationship to curriculum, instruction, school organization and structure, and assessment. The book has a strong emphasis on the role of technology and standards in teaching and learning.

RECOMMENDED RESOURCES

Adolescence Directory On-Line (ADOL)—an electronic guide to information on adolescent issues. Center for Adolescent Studies at Indiana University. Retrieved June 3, 2006, from <http://education.indiana.edu/cas/adol/adol.html>

Anfara, V. A., Jr., Andrews, G., & Mertens, S. B. (Eds.). (2005). *The encyclopedia of middle grades education*. Greenwich, CT: Information Age Publishing and National Middle School Association.

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