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ABSTRACT

This monograph examines early adolescence as a developmental period and explains the physical, psychosocial, and cognitive characteristics of 10- to 14-year-olds. The monograph also discusses how middle schools can provide developmentally appropriate educational experiences. Chapter 1 of the monograph explores early adolescence as a developmental period, and provides examples of efforts to promote adolescent development. In chapter 2, research on physical, psychosocial, and cognitive development is examined, and a developmental portrait of young adolescent learners is provided. Chapter 3 shows how young adolescents' physical, psychosocial, and cognitive development can form the basis for developmentally appropriate curricular and instructional decisions in middle schools. Finally, chapter 4 provides resources for middle school educators, including an annotated bibliography. An appendix provides a checklist to determine middle schools' response to young adolescents' developmental characteristics. Contains over 180 references. (MM)

Developmentally Appropriate Middle Level Schools

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Preface

Researchers and writers have suggested that learners' developmental levels should provide the basis for school curricular and instructional practices, as well as the overall teaching-learning environment. While developmental psychologists have offered insightful theories about physical, psychosocial and cognitive development, the process of translating them into practice has been somewhat slow, especially beyond the elementary school years.

Recognition of early adolescence as a legitimate developmental period is a hopeful sign. The 1990s have ushered in a new emphasis on improving schools for young adolescents. The growing middle level school movement represents a commitment to base school practices on 10- to 14-year-olds' developmental characteristics.

For decades, the role of schools for 10- to 14-year-olds remained unclear. The problem may have resulted from the mindset that the elementary school should address the education needs of the childhood years and the secondary school should focus upon the adolescent years. Except for serving as a transition between the two, the middle level school lacked a clear rationale.

Several factors have contributed to the increased emphasis on developmentally responsive middle level schools. First, early adolescence has now been accepted as a legitimate developmental period. Second, the middle level school has progressed beyond its infancy and developed to a stage where genuine improvements are possible. Third, the contemporary emphasis on reforming middle level schools to be more responsive to young adolescents' needs can be seen in many studies and reports. Fourth, the launching of ACEI's division newsletter *Focus on Later Childhood/ Early Adolescence* and the publication of this monograph demonstrate the organization's commitment to young adolescents and their education.

Developmentally Appropriate Middle Level Schools examines early adolescence as a developmental period and explains the physical, psychosocial and cognitive characteristics of 10- to 14-year-olds. In addition, the monograph discusses how middle level schools can provide developmentally appropriate educational experiences.

Chapter 1 explores early adolescence as a developmental period and its evolution toward acceptance. Evidence of contemporary efforts to promote the 10- to 14-year-old period is provided. Chapter 2 examines contemporary research on physical, psychosocial and cognitive development and provides a developmental portrait of young adolescent learners. Chapter 3 shows how young adolescents' physical, psychosocial and cognitive development can form the basis for developmentally appropriate curricular and instructional decisions in middle level schools. Chapter 4 provides resources for middle level school educators, including an annotated bibliography. Appendix A includes a "Checklist To Determine Middle Level Schools' Response to Young Adolescents' Developmental Characteristics."

Advocates for young adolescents readily recognize the tremendous progress made during the last decade, as well as its potential for the future. An improved understanding of 10- to 14-year-olds, a recognition of the need for developmentally appropriate educational experiences, and the reports focusing on effective middle level school practices indicate a bright and promising future for young adolescents.

—M. Lee Manning

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Introduction

Joel Milgram, a national leader in the middle level school movement, once shared the story of a noted middle level education scholar who was asked, "How would you describe the characteristics of the American young adolescent?" "How would I know?" he replied, "I only have three of them." Most parents and teachers of young adolescents can easily relate to his response. No single descriptor can describe a 12-year-old, for example. There are, however, tremendous similarities in developmental trends during the 10- to 14-year-old range.

M. Lee Manning uses these common developmental characteristics as a basis for curricular and instructional reform in middle level education. Referring to this age group, George Melton, former Associate Executive Director of the National Association of Secondary School Principals, once stated, "To stand them we must understand them." Manning has extended this logic to the premise that, to educate middle grade students effectively, we must base our curricular and instructional decisions on a sound understanding of their developmental needs.

The evidence of the early adolescence years as a formative stage of human development is compelling. Various developmental theories from Kohlberg to Erikson to Piaget focus upon these middle grade years as identity-forming years. It does not take long for educators and parents to realize the two major needs of children during this stage: a need to belong and a need to discover who they are. The early adolescence years encompass a tremendous amount of physical, social, emotional and intellectual change and growth (probably more developmental change than at any other period during the school years). The school and the family can provide the young adolescent with a sense of safety and belonging as the young adolescent searches for the illusive sense of self "identity."

While Manning thoroughly discusses the physical, psychosocial and cognitive development of young adolescents, it is important to remember that the development of these areas does not take place in isolation from the other areas. This breakdown is only for the writer's convenience in discussing the developmental characteristics of this age. These areas are very much interconnected, like an orchestra that includes many different types of instruments playing different parts that come together at the same time. When some parts are out of tune or not playing together, however, the overall performance of the orchestra is affected. Such is the young adolescent who is "learning how to be" during an awkward age.

Much is now being written about education reform for the 21st century. What kinds of skills and understandings are needed for this curriculum of the future? Changing family structures, health issues, the knowledge explosion, global interdependence, environmental issues, technology and a changing world economy seem to dominate these intellectual discussions. While these societal issues are certainly valid and important considerations when discussing curricular reform, it is ultimately the individual students who will solve tomorrow's problems and successfully adapt to a rapidly changing future. Manning contends that a developmentally sensitive school environment can help young adolescents to solve problems; learn necessary academic skills; gain an understanding of their interests, values and abilities; and work cooperatively in groups. Aren't these the education outcomes for a rapidly changing and demanding future?

Manning not only examines early adolescence as a developmental period, but also articulates the implications of these characteristics for teaching and learning in the middle grades. This book is a valuable resource for middle level school teachers and administrators, as well as a possible textbook for university preservice and inservice preparation programs. Of special note is the author's extensive analysis of resources for middle level educators.

The Association for Childhood Education International (ACEI) should be commended for supporting this significant contribution to the middle level education literature. ACEI has long been known for its leadership in promoting developmentally responsive programs and instruction for all children, infancy through early adolescence. This advocacy is much needed and timely as middle level schools throughout the United States evaluate their education programs and consider various reform and restructuring efforts.

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1: Early Adolescence as a Developmental Period

QUESTIONS TO BE EXPLORED

1. How did childhood, adolescence and early adolescence become recognized as legitimate periods of growth and development?
2. What significant historical events mark the acceptance of early adolescence as a developmental period?
3. Which early researchers and writers contributed to the recognition of the 10- to 14-year-old age period as a legitimate developmental period?
4. What age ranges do the middle level school years include and what is the preferred term for learners in this developmental period?
5. In what directions do educators in developmentally appropriate middle level schools focus their efforts?
6. What lingering obstacles continue to hinder young adolescents and their education?

OVERVIEW

The acceptance of early adolescence as a developmental period between childhood and adolescence has been a recent phenomenon. With childhood and adolescence firmly accepted as periods of development, early adolescence (ages 10 to 14) slowly gained recognition as a period of unique physical, psychosocial and cognitive development. The need to provide developmentally appropriate educational experiences for young adolescents became apparent. This chapter examines the history of early adolescence as a developmental period, its early advocates, and the implications for educators planning and implementing developmentally appropriate middle level school practices.

BRIEF HISTORICAL LOOK AT CHILDHOOD, ADOLESCENCE AND EARLY ADOLESCENCE

Chart 1-1 looks at the important milestones in the acceptance of early adolescence.

Recognition of the Childhood Years

Childhood and adolescence had to be accepted as worthy and legitimate periods of development before early adolescence could be recognized. Children once were thought to be miniature adults with cognitive and psychosocial capacities to act and think like adults. Young people who actually had access to schooling received a common set of experiences without regard for developmental needs and interests. The lack of value placed on the childhood years contributed to children being treated alike and with little respect.

John Locke and Jean Jacques Rousseau offered the first significant attempts to change attitudes toward children and the childhood years. Locke, in *Some Thoughts Concerning Education* (1693), stressed the uniqueness of the childhood years and the importance of recognizing children's development, needs and interests. Similarly, Rousseau recognized children's developmental stages and agreed with Locke that child-

Chart 1-1
Selected Milestones in the Acceptance of Early Adolescence

Date	Event	Implications
1904	G. Stanley Hall published two-volume work, *Adolescence*	First recognition of adolescence as worthy period
1944	F. Redl published "Preadolescents: What Makes Them Tick?"	Preadolescence proposed as a developmental stage
1951	A. Blair and W. Burton published *Growth and Development of the Preadolescent*	An effort to study a neglected field, the psychology of preadolescence
1966	David Eichhorn published *The Middle School*	Proposed the importance of basing instruction on development
1968	R. Havighurst studied the middle school	Proposed 10- to 14-year-olds experienced specific age-level developmental tasks
1972	J. Kagan and R. Coles published *Twelve to Sixteen Early Adolescence*	Scholarly volume with 14 readings on 10- to 14-year-olds
1974	H. Thornburg published *Preadolescent Development*	Showed increasing acceptance of a specific developmental period for 10- to 14-year-olds
1977	J. Lipsitz published *Growing Up Forgotten*	Proposed the early adolescence developmental period was forgotten and needed attention
1981	H. Thornburg founded the *Journal of Early Adolescence*	The first scholarly research focusing on 10- to 14-year-olds
1983	G. Dorman published *Middle Grades Assessment Program* and "Making Schools Work for Young Adolescents"	Proposed schools needed to become more responsive to development
1984	J. Lipsitz published *Successful Schools for Young Adolescents*	Provided detailed descriptions of good middle level schools
Late 1980s - Early 1990s	Many national, state and foundation reports appeared on reforming middle level schools; ACEI began publication of *Focus on Later Childhood/Early Adolescence*	Major attention focused on the needs of young adolescents and on effective middle level school practices

hood was a special time of life. In *Emile* (1762), Rousseau described children's growth and emphasized the necessity of learning experiences based on developmental levels.

Recognition of Adolescence

Contrary to some beliefs, the concept of adolescence is relatively new. In fact, the concept did not exist prior to the last two decades of the 19th century (Demos & Demos, 1969). Similarly, Aries (1962) suggested that even the concept of childhood was hardly acknowledged. A term that suggested a continuation of childhood beyond puberty appeared even more ludicrous.

Today's concept of adolescence may have originated with Rousseau's *Emile* (1762). In his attempt to clarify and prolong the childhood years, Rousseau characterized the period of adolescence as being a second birth, or a time beyond the earlier period of ch dhood. The term "adolescence," incorporating older attitudes and modes of thinking, became an American invention.

Bakan (1971) suggested that social changes associated with America's development in the latter half of the 19th century (e.g., compulsory education, child labor laws and juvenile delinquency) resulted in the term "adolescence." Basically, society did not consider a person an adult so long as one could not terminate schooling, work as an adult or be convicted as a criminal. In essence, America invented adolescence to provide for the time between childhood and adulthood, when a person was not a child yet did not have the authority to act or the right to be treated as an adult. The concept of adolescence also resulted from a better understanding of human development. The first dramatic recognition of adolescence as a growth stage worthy of study became evident in G. Stanley Hall's two-volume work, *Adolescence*, published in 1904.

Recognition of Early Adolescence as a Legitimate Developmental Period Between Childhood and Adolescence

The legitimacy of early adolescence, a developmental period between childhood and adolescence, has been accepted only during the past 30 or 40 years. Just as the childhood and adolescence stages received slow acceptance in some circles, the early adolescence developmental period struggled to justify its legitimacy. Havighurst (1968) gave credibility to early adolescence when he suggested developmental tasks for the age group, as did Thornburg (1983b) when he described 10- to 14-year-olds' unique physical, psychosocial and cognitive developmental characteristics.

The determination of an age range for the early adolescence developmental period can be traced back to at least 1926, when Furfey referred to 10- to 16-year-olds as gang members developing through a period called "preadolescence." Other evidence of the term can be seen in Redl (1941) and Jenkins, Schater and Bauer (1949). Blair and Burton (1951) proposed "to open up a new field which has been neglected, namely the psychology of the preadolescent period" (p. v).

As recognition of early adolescence increased, perceptive educators began calling attention to the need to base teaching-learning experiences on 10- to 14-year-olds' developmental characteristics. Eichhorn (1966) brought attention to the middle level school years and the importance of considering learners' development when planning and implementing instruction. Likewise, emphasis on the developmental period continued to increase as Havighurst (1968) suggested middle level school children experience

specific developmental tasks. Then in 1974, Thornburg published his many articles on preadolescence in the book *Preadolescent Development*. Between 1926 and 1974, less than 50 articles or books focused on the uniqueness of the age span (Thornburg, 1983b).

While the term "preadolescence" illustrated increasing recognition of a developmental stage between childhood and adolescence, "early adolescence" appeared to gain popularity, especially with publication of *Twelve to Sixteen: Early Adolescence* (Kagan & Coles, 1972). In this text of collected readings, most authors referred to the developmental period as "early adolescence" and to individuals as "young adolescents." Lipsitz (1977) in *Growing Up Forgotten* maintained that while the childhood years and the adolescence years had been examined, the period of early adolescence and the lives of young adolescents had been forgotten or neglected.

During the early 1980s, Thornburg's contributions as a researcher and leader in the movement to understand early adolescence added to the credibility of the stage. In 1981, he founded the *Journal of Early Adolescence*, designed to provide a forum for researchers and writers interested in the developmental stage. After more than a decade, the journal continues to use the term "early adolescence" and to provide empirical-based studies and theoretical articles on this developmental level. While the authors used terms interchangeably for a number of years (and in some cases still do), the major transition from "preadolescence" to "early adolescence" seemed to occur several years later. Thornburg's many other research projects and publications during the 1980s and his use of the term "early adolescence" contributed to acceptance of the developmental period.

Dorman's (1984) *Middle Grades Assessment Program* represented another milestone in the acceptance of the period and also in the realization that middle level schools needed to become more responsive to the developmental needs and interests of young adolescents. Designed to assess effective middle level school practices, Dorman's instrument illustrated the continuing and growing popularity of "early adolescence" and "young adolescents." Dorman's "Making Schools Work for Young Adolescents" (1983) also advocated improved educational experiences for young adolescents.

Educators, developmentalists and writers have generally accepted early adolescence as a legitimate developmental period. Still, several questions continue to plague its advocates. First, what ages constitute this period? Kagan and Coles (1972) viewed this period as ages 12 to 16. Other suggested age ranges include 9 to 14 and 10 to 15. Second, what term should designate these learners? They have been called "preadolescents," "emerging adolescents," "early adolescents," "in-between-agers," "transescents" and "young adolescents."

Growing Acceptance of the Early Adolescence Developmental Period, an Age Range and a Designating Term

During the early 1990s, books and other publications indicate a growing acceptance of the early adolescence developmental period, the age range 10 to 14 years and the designation "young adolescent." A parallel may be drawn with the early childhood period and the designation "young children." Also, nearly all state, corporation and foundation reports use the term "young adolescent."

For example, *Turning Points* (Carnegie Council on Adolescent Development, 1989), *Caught in the Middle* (California State Department of Education, 1987), *Making the Middle Grades Work* (Maryland State Department of Education, 1988) and recent pub-

lications of the National Middle School Association (NMSA) have adopted the term "young adolescent." Likewise, NMSA's (1992) position paper *This We Believe* refers to learners as "young adolescents." George and Alexander (1993) maintained that, regardless of the term used, "There is growing unanimity about the significance of this period of growing up" (p. 3).

To provide young adolescents developmentally appropriate educational experiences, educators need to recognize early adolescence as a legitimate developmental period between childhood and adolescence. Just as educators no longer view children as miniature adults, they cannot perceive young adolescents as functioning in a no-man's land "somewhere in-between" elementary and secondary school. Lipsitz (1984) argued for middle level schools being more than a holding ground where learners remain until secondary school. Developmentally appropriate middle level schools provide organizational and curricular responses designed to meet 10- to 14-year-olds' developmental needs while acknowledging their tremendous diversity. Opportunities for new experiences can be provided such as plays, field trips, contests and other special events. At the same time, effective middle level schools offer young adolescents the routine, structure and limits warranted by their developmental period (Lipsitz, 1984).

CONTEMPORARY DIRECTIONS FOR SCHOOLING YOUNG ADOLESCENTS

At least four indicators suggest an interest in the early adolescence developmental period and the need for effective middle level school practices: 1) the publication of the previously mentioned national and state reports; 2) the release of several middle level school textbooks—*Teaching and Learning in the Middle Level School* (Allen, Splittgerber & Manning, 1993), *The Exemplary Middle School* (George & Alexander, 1993) and *Transforming Middle Level Education* (Irwin, 1992); 3) the work of the Center for Early Adolescence and 4) ACEI's commitment to improving the lives and educational experiences of young adolescents. These efforts suggest contemporary directions, such as:

- providing a curriculum that has a middle level school identity—one that distinctly reflects 10- to 14-year-olds' developmental characteristics
- providing curricular, organizational and instructional practices that reflect young adolescents' development
- understanding the cultural, gender and socioeconomic differences among young adolescents
- taking advantage of the national emphasis (reports, documents and articles) on the early adolescence developmental period
- understanding the relationship between young adolescents and their families.

Middle level educators share a commitment to provide 10- to 14-year-olds with developmentally appropriate educational experiences. Efforts in this direction include:

- promoting the general welfare of young adolescents through personal contact with parents, parent-teacher conferences, advisory councils, school boards, social service agencies and community organizations
- learning more about the lives of young adolescents, including friendships, peer pressure and other concerns, parent and family relationships, cognitive levels and socialization opportunities; encouraging other professionals to learn more

- insisting on continued recognition and acceptance of the early adolescence developmental period and the necessity of educational experiences that reflect neither elementary nor secondary orientations
- insisting that administrators, teachers, counselors and other middle level school personnel be professionally trained to work with young adolescents.

Historical observations show a rocky road from the early perception of children as miniature adults to the present acceptance of early adolescence as 10- to 14-year-olds' unique developmental period. Advocates for improving the lives and educational experiences of young adolescents take pride in recent accomplishments. The challenges will continue into the 21st century as administrators and teachers work toward improving educational opportunities for adolescents.

Leaders in the Call To Reform Middle Level Schools

The 1980s and early 1990s have been times of increased recognition of early adolescence as a developmental period and provision of appropriate educational experiences for 10- to 14-year-olds. Likewise, recent publications (Carnegie Council on Adolescent Development, 1989; Manning, 1992b; National Middle School Association, 1992) emphasized developmentally appropriate education, while urging reform of middle level school practices.

University Resource Centers. At least three universities have taken the lead in providing resources, workshop leaders and other professional services for middle level school educators: 1) The Center for Early Adolescence at University of North Carolina-Chapel Hill serves as an advocate for 10- to 14-year-olds and as a resource center for professionals interested in early adolescence. 2) The University of South Florida's National Resource Center for Middle Grades Education serves as a repository for large volumes of middle level school materials and also as a provider of various services. 3) The Center of Education for the Young Adolescent at University of Wisconsin-Platteville offers various resources and services for middle level educators.

Professional Organizations. Several professional organizations have assumed significant leadership roles in promoting effective middle level school practices and the welfare of young adolescents. For members of its Division for Later Childhood/Early Adolescence, ACEI provides *Focus on Later Childhood/Early Adolescence*, which addresses various developmental, curricular and instructional issues. The organization has recognized the fallacy of ability grouping and the dangers of assuming too much homogeneity at the expense of individual growth and development. The National Middle School Association and various State Middle School Associations have offered significant contributions such as conventions, journals, monographs and workshops. Other organizations such as National Association of Secondary School Principals, Association for Supervision and Curriculum Development and Phi Delta Kappa have also made notable contributions.

The *Middle School Journal* features articles on effective middle level school practices and the *Journal of Early Adolescence* provides research and theoretical articles on 10- to 14-year-olds. *Childhood Education, Phi Delta Kappan, Momentum* and *NASSP Bulletin* also publish articles in this area.

Corporations, Foundations and Organizations. Other examples include efforts by the Carnegie Corporation and the Children's Defense Fund to improve middle level grades education. The Carnegie Corporation published the well-known *Turning Points*

(Carnegie Council on Adolescent Development, 1989), a plan of action for transforming middle level schools and improving the overall educational experiences of young adolescents. Stirring the consciences of many educators, the report has been the impetus for the middle level school reform movement. *Making the Middle Grades Work* (Children's Defense Fund, 1988) also looked at the plight of many young adolescents and provided a blueprint for teaching young adolescents effectively.

State Departments of Education. Several states have assumed significant leadership roles in promoting middle level grades education. Selected examples of state initiatives may be found in: *Framework for Education in the Middle School Grades in Virginia* (Virginia Department of Education, 1990), *Caught in the Middle* (California State Department of Education, 1987), *What Matters in the Middle Grades* (Maryland State Department of Education, 1989), *The Forgotten Years* (Florida State Department of Education, 1989) and *Policy Statement on Middle-Level Schools and Schools with Middle-Level Grades* (New York State Department of Education, 1989).

Chapter 4 provides addresses and telephone numbers of these resource centers, professional organizations and state departments of education, as well as examples of their materials and services.

LINGERING OBSTACLES TO YOUNG ADOLESCENTS AND THEIR EDUCATION

As the movement to reform middle level schools gains momentum, several obstacles continue to plague young adolescents:

- Young adolescents experience dramatic and rapid biological, social, emotional and cognitive changes; yet, knowledge about the early adolescence period is limited (Lipsitz, 1984).
- Instead of developmentally appropriate education, young adolescents often receive curricular and instructional experiences that are either a repeat of elementary school experiences or a "watered-down version" of secondary school experiences.
- Young adolescents continue to be viewed by some educators and lay people as developmentally "somewhere between" childhood and adolescence, "too old to be children yet too young to be adolescents." Lipsitz (1977) aptly illustrates how early adolescence has been slighted in research and writing, while emphasis has been placed on childhood and adolescence.
- Young adolescents sometimes have a reputation for being a rowdy and misbehaving group, difficult to teach and manage.
- Young adolescents often attend middle level schools that continue to operate as "transitional schools"—merely housing learners between elementary and secondary school.
- Young adolescents often attend schools staffed by teachers and administrators who have been trained and certified to work in elementary or secondary schools and who know little about young adolescents and their development.
- Young adolescents often attend middle level schools that place major emphasis (or the only emphasis) on school organization. These schools fail to develop a genuine middle level curriculum or an educational environment conducive to academic, personal and social growth.
- Young adolescents are too often considered a homogeneous group, without regard for their gender, cultural, social class and individual differences.

CONCLUDING REMARKS

During the past decade, serious efforts have been made to understand young adolescents and to implement middle level school practices that reflect their physical, psychosocial and cognitive development. Significant national and state reports and other publications have called for increased attention to 10- to 14-year-olds and for reform of middle level school practices. The momentum must not be lost. Educators have the professional responsibility to act as advocates fc young adolescents and to insist on effective middle level schools that meet the developmental needs of young adolescents.

2: Physical, Psychosocial and Cognitive Development

QUESTIONS TO BE EXPLORED

1. What changes, constants and concerns do young adolescents experience?
2. What physical, psychosocial and cognitive characteristics most effectively describe the early adolescence developmental period?
3. How does the considerable diversity in developmental rates during early adolescence affect teaching-learning experiences?
4. What are the implications of the young adolescent's physical, psychosocial and cognitive development for designing and implementing developmentally appropriate curricular and instructional practices?
5. What gender and cultural differences warrant understanding and consideration in planning developmentally appropriate middle level schools?
6. What educational practices, environmental conditions and school policies can educators assess to determine whether a middle level school provides developmentally appropriate experiences?

OVERVIEW

Dramatic physical, psychosocial and cognitive changes occur daily during early adolescence. These have significant implications both for 10- to 14-year-olds experiencing the changes and for educators planning developmentally appropriate middle level schools. Young adolescents have concerns about the normalcy of their development and, similarly, middle level school educators have the responsibility to base curricular and instructional practices on young adolescents' development. Emphasizing the need to understand their development, this chapter examines the physical, psychosocial and cognitive characteristics of 10- to 14-year-olds and suggests implications for middle level educators.

THE NEED TO UNDERSTAND AND RESPOND TO YOUNG ADOLESCENTS' DEVELOPMENT

An understanding of young adolescents reveals tremendous diversity among their development, maturity levels, behavior and sometimes rapidly fluctuating self-esteem. Such understanding provides insight into their concerns and questions about overall development, body changes and the onset of puberty.

Equally important is the educator's commitment to respond to the need for developmentally appropriate teaching and learning practices. Educational practices should demonstrate that developmentally appropriate instruction has been planned and implemented: physical development may require that young adolescents have frequent opportunities to stretch or exercise; psychosocial development may affect peer and friend relationships; cognitive development may contribute to higher levels of thinking and less egocentrism. Students require opportunities to behave responsibly and demonstrate their growing capacity for self-control and self-management; to explore aptitudes, interests and special talents; and to develop accurate and positive

self-concepts (National Association of Secondary School Principals, 1985). In essence, young adolescents benefit both as individuals and learners when educational experiences reflect developmental characteristics and changes.

Young Adolescents: Changes, Constants and Concerns

Young adolescents experience numerous changes, constants and concerns during this rapid developmental period. While many changes occur daily, constants such as the need for love continue to influence young adolescents and their behavior. Understanding these changes and constants enables educators to help with their growing independence and to answer questions about their development.

Young adolescents experience developing bodies, expanding social worlds and advancing cognitive capabilities. These changes, however, do not occur uniformly. One 12-year-old girl might be an early maturer who is preoccupied with self and friends and demonstrates higher levels of thought, while another might just be starting to grow or develop into puberty, be very dependent upon her parents and a few close friends, and think only in concrete terms.

Constants include the need for love and security, for acceptance regardless of changes and for optimistic perspectives on life. Whether experiencing physical, psychosocial or cognitive changes, young adolescents need a sense of stability and security. One 12-year-old once said, "I hope my parents and friends will like me no matter how I look when I am grown up." During this young girl's rapid development, she needed love and opportunities to feel safe and secure. Likewise, her teachers needed to provide a nonthreatening classroom environment that nurtured her delicate and changing self-esteem.

Concerns include developmental changes and individual differences in rates of change; friendships, cliques and peer pressures; and changing family relationships. Effective middle level educators play a significant role in helping learners understand developmental changes, the nature of changing friendships and peer relations, and shifting allegiance from family to peers.

These changes, constants and concerns have a profound effect on young adolescents. A young adolescent's feelings of clumsiness or awkwardness might lead to feelings of worthlessness or of not having any friends. Likewise, being unable to succeed at higher-level problem-solving activities that others can perform may lead to feelings of inferiority or lowered self-esteem. Realizing that all developmental changes can lead to behavioral changes, caring educators remember that young adolescents need security and acceptance even when behaviors and attitudes challenge their understanding and patience.

The Interconnected Nature of Young Adolescents' Development

Educators often speak of physical, psychosocial and cognitive development as if each type occurred in isolation. Developmental areas interrelate, however, with one aspect affecting another. For example, the young adolescent preoccupied with early or late physical development may delay social interaction or cognitive endeavors until reaching a satisfactory resolution concerning physical development. While all young adolescents experience notable developmental changes that deserve understanding, diversity is also a hallmark characteristic of 10- to 14-year-olds (Thornburg, 1982).

Scales (1991) described the "terrible too's" of early adolescence: "If infancy has its 'terrible two's,' then early adolescence has its 'terrible too's: too much, too little, too slow, too fast'" (p. 9). Perceptive middle level educators recognize the tremendous diversity among and within young adolescents and recognize how this diversity affects the interconnectedness of overall development.

Middle level educators need to consider overall development, individual differences and varying developmental rates when making curricular and instructional decisions. For organizational reasons and clarity, this monograph examines physical, psychosocial and cognitive areas separately. Yet, readers should remember the continuous and interconnected nature of development at all levels.

Physical Development

Physical Characteristics of Young Adolescents

Developmental research has contributed to a portrait of young adolescents and allows credible generalizations. It remains important to remember, however, that individual growth varies according to genetics, culture, gender and socioeconomic status.

Characteristic 1 Young adolescents experience a growth spurt marked by a rapid increase in body size, as well as readily apparent skeletal and structural changes.

Growth spurts and other closely related physical changes are easily recognized in both boys and girls. These marked increases in growth rate occur almost universally in both boys and girls. The growth spurt and the rate of growth reach a peak in girls around age 12 and in boys around age 14 (Craig, 1976). While diversity in development must be remembered, the growth spurt normally occurs during ages 10 and 15. Changes in body size and symmetry and in the primary and secondary sex characteristics mark this transitional time (George & Alexander, 1993).

J. M. Tanner (1962, 1968, 1971, 1973) conducted extensive studies on "growing up" and provided the basis for much of the current writings on young adolescents' physical development. He concluded that growth spurts differ for boys and girls and that, on the average, the growth spurt comes two years earlier in girls than in boys. The average boy is slightly taller than the average girl until the girl's growth spurt begins. Then, the average girl may grow taller at about the ages of 11 and 13 and may be heavier and stronger (Tanner, 1973).

Both boys and girls grow at faster rates than they have ever experienced, with the exception of the infancy years. During the approximately two years of the growth spurt, 9 to 10 inches of growth for boys and 7 inches for girls sometimes occur. For a time, girls weigh more than boys (Marshall & Tanner, 1974; Milgram, 1992).

Some body parts grow faster than others. For example, legs most often reach their growth peak first; then the trunk follows. The sequence of growth and the temporary mismatch of body parts often make 10- to 14-year-olds feel ungainly, awkward and uncoordinated (Lawrence, 1980; Milgram, 1992; Tanner, 1978). Both girls and boys develop a preoccupation with their changing bodies and constantly examine their physical development for signs of imperfections (Milgram, 1992).

Today's young adolescents are bigger than previous generations. Growth trends over the years have resulted in the average girl being 1/2 to 1 inch taller than her

mother and reaching menarche (an individual's first menstrual period) nearly a year sooner. In the late 1800s, boys did not reach their full height until at least age 23; now, most boys reach adult height by age 18 (Bullough, 1981; Milgram, 1992). This earlier maturation results from several factors, including nutrition and quality of medical care. Remembering the interconnectedness of physical and other developmental areas, these maturation trends often result in earlier sexual activity and teenage pregnancy (George & Alexander, 1993).

Although young adolescents have unique individual characteristics, several readily apparent structural and skeletal changes serve as indicators of maturing individuals. Substantial changes in limb length, hip width, and chest breadth and depth often occur rapidly. Specifically, the "baby fat" of childhood develops into a more adult look. Boys' voices deepen, their shoulders grow wider, and pubic and facial hair becomes visible. Similarly, girls' hips widen and pubic hair appears (Dorman & Lipsitz, 1984). Physical growth changes interrelate with cognitive, social and emotional development; the advent of a physically developed body does not imply maturity in other developmental areas.

Characteristic 2 Young adolescents experience the same developmental sequence, but rates and growth spurts vary among individuals.

As long as developmental issues have been studied, the sequence of developmental changes has remained constant. In general, girls develop two years ahead of boys, but considerable variability exists in the beginning of development. The ages of greatest variability in the maturation of girls are 11, 12 and 13; for boys, the greatest variations occur during ages 13 and 14. Similarly, differences in rates vary among same-sex young adolescents. One boy may have completed a growth cycle, while another boy of the same age may not have started the growth cycle. One 12-year-old girl may be developing at such a rapid pace that she resembles a 16-year-old, while another girl of the same age may not have started her growth spurt. Rates of development have the potential for weighing heavily on young adolescents and can affect other areas such as self-esteem and general psychosocial development (Lawrence, 1980).

Characteristic 3 With the onset of puberty, young adolescents experience physiological changes that include development of the reproductive system.

Closely associated with these growth spurts and changes in height and weight is the onset of puberty. Lipsitz (1979) termed this growth rate as the most intense and rapid of any stage in human development. Curtis and Bidwell (1977) reported a wide age range for pubertal changes; however, 88 percent of girls reach puberty by age 14 and 83 percent of boys attain puberty at age 14. Educators can assume that nine out of ten girls and more than four out of five boys reach puberty by the 8th grade (Forbes, 1968).

Determining the actual beginning point of puberty can be difficult due to variations in boys and girls (Tanner, 1968). Schuster and Ashburn (1986) considered puberty to be the entire transition period and offered a precise definition of puberty as the time when reproduction is first possible. Similarly, Espenschade and Eckert (1967) reported:

The onset of puberty is difficult to assess in males and is usually based on the development of secondary sex characteristics and the growth of the genitalia. In females the menarche, or first menstrual period, is usually taken as the onset of puberty . . . (p. 173)

The young adolescent's physiological changes also include development of the reproductive system. Female hormones develop between the ages of 9 and 12 and mark the beginning of a long series of psychological and physical changes that transform the girl into a woman. In the case of boys, the increase in male hormones is less accentuated and occurs over a greater period of time (Eichhorn, 1966).

For girls, the menstrual cycle and breast growth mark the development of the reproductive system. The comparable events for boys are genital growth and the first ejaculation. On the average, girls have their first menstrual period between the ages of 10 3/4 and 15 1/2. Breast development usually begins between the ages of 8 3/4 and 13 1/4 and is completed between the ages of 13 and 18. For boys, genital growth may begin between the ages of 9 1/2 and 14 and end between 12 1/2 and 17 (Dorman & Lipsitz, 1984).

Although such tremendous diversity makes age-developmental norms difficult to determine, teachers can expect young adolescents to experience significant and possibly discomforting pubertal changes and rapid growth spurts. Middle level educators often find young adolescents preoccupied with their pubertal and other physiological changes. This preoccupation can affect their attention, motivation and capacity to focus on school learning activities.

Contributors to Research on Physical Development

Tanner. Tanner offered significant contributions to the research on physical development in his *Growth at Adolescence* (1962), his writings on growing up published in *Scientific American* (1968), and his studies of development in 12- to 16-year-olds published in *Twelve to Sixteen: Early Adolescence* (Kagan & Coles, 1972). In fact, his extensive studies of "growing up" have provided a basis for much of educators' knowledge of young adolescents' development. His research focused on nearly all areas of physical development: sequence, tempo, individual variation, the beginning of puberty, the trend toward large body sizes, early and late maturers, and the relationship among emotional attitudes, mental growth and physiological development.

Boyce. The Boyce Medical Study comprehensively investigated the level of biological maturation and the health status of students in Boyce Middle School. The investigation, conducted by Dr. Allan Drash and a team of medical specialists, sought to determine the level of biological maturation for each student by medically examining nearly 500 students and assessing the implications of their data for education programs (Eichhorn, 1980). Differences of 6 to 8 inches in height and 40 to 60 pounds in weight were common. This physical variability, in conjunction with the remarkable differences in emotional maturity, attentiveness, interest and cognitive ability, demonstrates the vast developmental diversity among young adolescents (Drash, 1980).

Other Significant Contributors. In her book *Growing Up Forgotten,* Lipsitz (1977) considered the 10- to 14-year-old developmental period as basically neglected and forgotten. Her other contributions included an examination of myths of development (Lipsitz, 1979). Thornburg (1974), in his text *Preadolescent Development: Readings,* examined the overall development of 10- to 14-year-olds. Also, Thornburg (1982) contributed

to the field with his research on physical and social development and his writings on learners developing in a contemporary society. Eichhorn (1966), in his middle school textbook, also examined the physical and mental growth of this age period.

Physical Development: Implications for Middle Level School Educators

Knowledge of young adolescents' developmental characteristics contributes to understanding their behavior and planning developmentally appropriate middle level schools. The research on physical development uncovered several implications for educators working with young adolescents.

First, educators should respond appropriately to 10- to 14-year-olds' concern about developmental differences. Schools should examine practices and expectations that ignore variability in maturation, such as chronological age or ability grouping for all activities. For example, the tremendous physical differences among many 13-year-old boys can lead to significant problems for late maturers, not only in terms of physical strength and stamina but also psychosocial development. Activities that stress strength and stamina and lead to unfavorable comparisons should be de-emphasized.

In a soccer game, a nearly fully developed 13-year-old boy outplayed and outmaneuvered another boy of the same age. A perceptive teacher, understanding how the smaller boy felt, responded by talking with him and, eventually, making arrangements for two soccer teams. Thus, late developers could have better feelings about their size, stamina and strength.

Second, educators can respond appropriately to 10- to 14-year-olds' concerns about the onset of puberty and developing sexuality. Young adolescents need to understand the changes occurring in their bodies and know which changes are normal and expected (and, of course, those changes that warrant medical attention). Judy Blume's (1970) book *Are You There God? It's Me Margaret* presented a situation in which a girl wondered why her menstrual period had not yet begun. Both boys and girls need to learn that while the sequence of development remains the same, rates among boys and girls may differ significantly.

Third, curricular and instructional design should address 10- to 14-year-olds' need for movement and exercise. The awkwardness and discomfort associated with changing bodies, including lack of coordination, should be considered in planning classroom organization. Young adolescents need sufficient opportunities to stretch and walk around, desks and seating arrangements appropriate for growing bodies, and sufficient room between rows so legs and arms can be extended without disrupting other students. One middle level school provided different size desks rather than expecting all learners to fit in a desk assigned to a particular grade. Educators allowed students to walk around the room during designated times. Even during undesignated times, such as periods of direct instruction, teachers provided "stretch breaks" so young adolescents could move around the room.

Physical Development: Implications for Middle Level Schools

Curricular and organizational practices for young adolescents should:

- adapt to the constantly changing physical needs of 10- to 14-year-olds
- avoid undue physical and psychological stress on students
- emphasize self-understanding and self-acceptance about physical changes

- emphasize hands-on activities and experiences, allowing students to move around the classroom to avoid long periods of passive work
- stress physical education programs that address fundamentals of movement, physical fitness and lifetime sports
- stress physical activities designed to meet individual differences
- promote physical activities and daily exercise for all students
- emphasize intramural programs for all students and de-emphasize intense competitive interscholastic sports
- provide developmentally appropriate sex education programs for all students
- provide health programs designed to stress physical development, sound nutrition, proper exercise and personal hygiene.

Source:
DeMedio, D. L. (1991, November). *Using the unique developmental traits of middle school students to build effective curriculum.* Paper presented at the meeting of the National Middle School Association, Louisville, KY.

Gender Differences: Health Concerns and Self-Assessed Health

Alexander (1989) examined gender differences in health concerns, self-assessed health status and illness behaviors of young adolescents. Using a 28-item health concern inventory, she studied 745 8th-graders (52 percent girls and 48 percent boys; 63 percent Anglo American, 36 percent African American, and fewer than 1 percent either Asian or Hispanic American). Gender differences or similarities included:

1. Young adolescent males and females appeared to be using different "yardsticks" [p. 475] for judging health status.
2. Girls, who had undergone most of their physical changes, associated emotional and social concerns with poorer perceived health, while boys associated physical concerns with fair or poor health.
3. Emotional concerns were related to greater numbers of school days missed or attended when ill for girls, yet not for boys.

Psychosocial Development

Psychosocial Characteristics of Young Adolescents

Characteristic 1 Young adolescents make friends and interact socially, a characteristic crucial to psychosocial development.

The influence of peers and social interaction on psychosocial development has been documented (Hartup, 1983). Peers and peer approval become especially important as young adolescents adjust to pubertal changes. Likewise, the benefits of friendships have been documented: 1) relationships and conversation between friends can boost young people's self-esteem and reduce anxiety as trust and respect develop; 2) friends help young adolescents develop their sense of identity; 3) friendships contribute to the development of interpersonal skills important for future intimate relationships. Peer interaction and friendship serve especially important functions during early adolescence as boys and girls adjust to the physical and emotional changes associated with puberty (Crockett, Losoff & Peterson, 1984).

Research also supports the contention that close friendships emerge during the first stages of adolescence around the ages of 12 and beyond (Berndt, 1982). Young adolescents see friends on a daily basis and develop a system of cliques. Boys tend to congregate in groups and have a fairly extensive network of friends, while girls more likely form one or two close friendships with other girls. During these years of middle childhood and adolescence, young adolescents share inner thoughts and feelings and disclose personal information more readily with friends (Crockett, Losoff & Peterson, 1984).

Since early adolescence is a crucial period for identity formation, gender differences in friendships and peer relations should be understood and addressed. Girls during the early teen years have personal conversations with friends more often than do boys, confide in a friend more often and report more self-disclosure than boys (Crockett, Losoff & Peterson, 1984). Other gender differences include: boys have larger social networks than girls; males concern themselves with attributes construed to be important for status in the peer group, while girls demonstrate concern with attributes necessary for relationships with a few friends (Benenson, 1990). Finally, research indicates that intimate friendships during early adolescence occur primarily between same-sex friends; only toward the end of high school do cross-sex friendships equal same-sex friendships in the level of sharing (Crockett, Losoff & Peterson, 1984).

The unsocialized young adolescent often misses out on many learning and social opportunities and, in some ways, fails to achieve or satisfy crucial developmental tasks for this age. The social isolate, found in every school, may reflect family problems, lack of interpersonal skills and some emotional disorder (Milgram, 1992).

Children rejected by their peers often report feelings of loneliness and lower levels of self-esteem. Educators need to be aware of rejected and friendless students and carefully assess individual situations. Such assessment should begin by asking:

- Do children in the class avoid, ignore or reject the child?
- Does the child lack social skills necessary for successful interaction with others?
- Does the child have difficulty interpreting others' cues or requests?
- Does the child have difficulty communicating with others?
- Does the child act aggressively while interacting with others?
- Does the child disrupt others in the class? (Bullock, 1992)

Perceptive middle level educators realize the importance of friendships, recognize social isolates and make a deliberate effort to help them. Accepting such a responsibility is a major task, especially when one considers the long-term consequences of not having friends.

Teachers also notice rapidly changing friendships among young adolescents. A best friend one day might be an enemy tomorrow and vice-versa. During early February, a 13-year-old girl enthusiastically planned her mid-March birthday party. She said, "I have all my plans made except for who to invite." Her father asked why she could not make her guest list then. The young girl responded, "But, Dad, I don't know who I will be friends with at that time!"

Characteristic 2 Young adolescents shift their allegiance and affiliation from parents and teachers toward the peer group, which becomes the prime source for standards and models of behavior (Thornburg, 1983a).

Developmentally, young adolescents become socially curious and demonstrate increased social interactions and consciousness around the age of 10. They begin to reach outside their family for social experiences, companionship and approval. Contact with parents begins to decrease and the nature of social interactions gradually undergoes change. Parents and teachers during these times may feel that they have less influence (Thornburg, 1983a).

Young adolescents become increasingly aware of their own selves and relationships with peers. The peer group often serves as the primary reference source for attitudes, values and behavior and provides a mechanism for decision-making. Even without overt changes in behavior, peers' values become powerful forces in a child's actions and overall behavior. In some cases, the 10- to 14-year-old believes that maintaining allegiance to parents and teachers can result in loss of peer approval and acceptance (Davis, Weener & Shute, 1977).

Peers and peer pressure have a tremendous influence on the behavior, speech and attire of young adolescents. During these times, middle level educators should perceive peer pressure as a vital aspect of the socialization process. Trying to compete with a young adolescent's peers can be a futile process. One does not have to look far for other evidence of peer pressure influences. Incidences of young adolescents becoming involved with drugs, alcohol, tobacco and sexual activity provide evidence of a desire to conform to peer norms (Elkind, 1981; Frost, 1986; Manning, 1985; Postman, 1985).

Characteristic 3 Young adolescents' preoccupation with themselves leads to an examinination of all aspects of their development and overall "self."

A preoccupation with oneself naturally develops during this period. Young adolescents constantly examine and compare physical and social characteristics with others of similar age and levels of development. Youngsters with overt height, weight and related differences may be the only ones to notice such differences, which can play a significant role in determining their perception of themselves. This characteristic plays a significant role in young adolescents' lives because self-perceptions influence their opinion of abilities to interact socially (Manning & Allen, 1987). One author aptly summarized how parents can determine the young adolescent's preoccupation with self: "The only positive way available for determining the onset of adolescence is to note when their child discovers the bathroom mirror" (Gullota, 1983, p. 152).

Characteristic 4 Young adolescents increasingly seek freedom and independence from adult authority.

The quest for independence and autonomy plays a powerful role during early adolescence. These youngsters expend considerable energy to move toward greater control over their lives and increased freedom from authority (Thornburg, 1983a). Serious examination of long-held beliefs and allegiances begins to occur, often resulting in a move toward greater independence and freedom from authority figures (George & Alexander, 1993).

In their search for independence, young adolescents may rebuke authority, engage in vandalism or become involved with sex, alcohol or drugs. Although some may not even want to participate in such activities, being actively involved promotes a

sense of freedom from adult authority and a sense of allegiance to peers (Thornburg, 1982). New ways of thinking, feeling and acting evolve which allow reflection upon social experiences. These social changes, accompanied by physical and emotional changes associated with puberty (Crockett, Losoff & Peterson, 1984), often result in unusual, drastic, daring and sometimes aggressive behavior (Bondi & Wiles, 1981).

Characteristic 5 Young adolescents experience changing self-esteem, which is influenced by all aspects of their lives—both at home and at school.

Many young adolescents experience an adjusting self-esteem that may actually fluctuate daily or with a given situation. Being in a school where they no longer reign as the oldest and biggest, young adolescents must reassess their standing with both peers and teachers. The transition from elementary to middle level school can have a long-lasting and negative impact on young adolescents' self-esteem (Thornburg & Glider, 1984).

While Blyth and Traeger (1983) report that the self-esteem constantly changes due to situational and value influences, others (Alexander & George, 1981; Bondi & Wiles, 1981) feel that a re-evaluation of the self-esteem also constantly occurs in response to physical and psychosocial changes. Reporting that many changes occur both in and around young adolescents, Blyth and Traeger (1983) stress that learners need a certain degree of stability in their self-esteem for normal development to occur.

While observers of young adolescents have long thought that rapidly changing physical developments had corresponding effects on psychosocial development, one study documented a significant relationship among gender differences, self-esteem and body image and offered several other observations. Several generalizations concerning gender differences can also be made:

1. Males feel more satisfied with their bodies than females.
2. Males, rating some aspects of their bodies positively, were more likely to rate most aspects similarly; females, on the other hand, assigned different values to different aspects of their bodies.
3. Changes affecting the female body have the potential for making the youngster disappointed in her body, while the male may be more concerned with task mastery and effectiveness than with physical appearance (Koff, Rierdan & Stubbs, 1990).

Contributors to Research on Psychosocial Development

Erikson—Psychosocial Theories. Humans develop through eight psychosocial stages, with each having an age range and distinct characteristics. Likewise, each stage has a crisis period for social and emotional development. The resolution of each crisis depends on a person's ability to achieve a positive or negative outcome that, in turn, influences ego development. An unresolved crisis may interfere with progress during the next developmental stage (Erikson, 1963).

Erikson did not, however, designate a distinct 10 to 14 age range. Neither did he consider the influence of cultural and gender differences on psychosocial crises. Because early adolescence actually crosses two age ranges, these learners are clearly developing through two of Erikson's psychosocial stages: Industry vs. Inferiority (6 to 11 years) and Identity vs. Role Confusion (12 to 18 years) (Manning, 1988).

Erikson (1963) viewed the Industry vs. Inferiority stage (6 to 11 years) as a time when intellect and performance dominate learners' behavior. Children basically form an opinion of themselves as either "industrious" or "inferior." During this stage, learners need to accomplish specific and worthwhile tasks, complete all assignments and feel a sense of praise. Efforts should not be derided or treated as bothersome (Biehler & Snowman, 1990). Inability to complete relevant tasks successfully may lower the young adolescent's self-esteem and lessen the chances of future success. Students in this age range need opportunities to realize social, physical and academic goals (George & Alexander, 1993).

Young adolescents next pass through the Identity vs. Role Confusion stage (12 to 18 years). Learners seek an identity by striving for increased independence from adults and by concerning themselves with the kind of person they are becoming. The danger lies in role confusion where learners have doubts about their identity (Biehler & Snowman, 1990). The need for independence and peer acceptance grows during this stage as students seek a sense of self. Young adolescents look for role models and heroes and try to integrate those ideals into their own value system (George & Alexander, 1993).

Havighurst—Developmental Tasks. Havighurst (1972) proposed a social stage theory that divides a person's life into six developmental stages. In discussing developmental tasks, Havighurst explained that living is actually a "long series of tasks to learn, where learning well brings satisfaction and reward, while learning poorly brings unhappiness and social disapproval" (Havighurst, 1972, p. 2). The individual must learn these developmental tasks in order to be a reasonably happy and successful person who receives social approval. Havighurst (1972) offered this definition:

> A developmental task is a task which arises at or about a certain time in the life of an individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by the society, and difficulty with later tasks. (p. 2)

Developmental tasks, or those major common tasks that face all individuals, can be helpful when predicting physical, psychosocial and intellectual challenges facing young adolescents. They can be useful benchmarks for planning appropriate educational and socialization experiences (Schoeppe & Havighurst, 1952).

Curriculum planners need to select age-appropriate developmental tasks from the later years of the 6 to 12 period (i.e., 10 to 12) and the beginning years (or 12 to 14) of the adolescent stage. Havighurst maintained that the principal lessons to be learned for these ages will be social and emotional, where students learn to work together on common interests and place the pursuit of a common goal over one's personal interest.

Developmental tasks appropriate for young adolescents include: 1) achieving new and more mature relations with age-mates of both sexes; 2) continuing to learn an appropriate masculine or feminine role; 3) beginning to achieve emotional independence from parents and other adults; 4) working toward socially responsible behavior.

To help young adolescents meet these tasks, educators should recognize the influence of peer pressure and changing allegiances and encourage the beginning stages of achieving emotional independence. They should teach students to be responsible for their behavior at both school and home, and continue to teach social skills necessary for getting along with age-mates (Allen, Splittgerber & Manning, 1993).

Psychosocial Development: Implications for Middle Level School Educators

Changing social characteristics during early adolescence can have a profound impact on both young adolescents and their teachers. These psychosocial changes have important implications for middle level educators in terms of friendships, self-esteem, peer pressure, school climate, academic achievement, and teaching and learning practices (Manning & Allen, 1987). Still, however, several questions may be asked: Why is it important for middle level educators to understand Erikson's psychosocial theories and Havighurst's developmental theories? Why is knowing psychosocial characteristics of young adolescents important? What can actually be done with developmental research?

First, middle level educators can base developmentally appropriate curricular and instructional practices on Erikson's psychosocial theories and Havighurst's developmental tasks by providing opportunities for young adolescents to:

- win recognition for skills, abilities and accomplishments
- understand the influence of peers and the need to benefit from "positive" peer pressure
- identify positively with peers and achieve feelings of adequacy
- develop same-sex friendships and, eventually, successful cross-sex interactions
- have appropriate learning experiences that address psychosocial changes
- understand cliques as part of life
- understand how behavior affects others
- understand the significance of increased independence and responsibility
- understand the need to search for ideals yet maintain a sense of reality (Elkind, 1984; Erikson, 1963; Erikson, 1968; Maier, 1969).

Implications of Havighurst's theories include encouraging young adolescents to:

- understand the positive aspects of the developing self and identity
- learn social skills and listen to and consider differing viewpoints
- develop values and a sense of morality
- begin development of independence
- develop positive attitudes toward varying social groups and institutions of people
- recognize the influence of peer groups
- develop satisfying social contacts and understand democratic procedures
- understand and accept bodies, recognizing tremendous variability and normal changes
- be responsible for behavior in home, school and community
- understand how one's behavior affects others (Havighurst, 1953, 1972).

Second, middle level educators can provide appropriate opportunities for friendships and for social interaction. While young adolescents wanting to work alone should be given the opportunity, educators should encourage learners to interact not only in socially oriented situations, but also in cooperative work groups, mini-courses, exploratory programs and adviser-advisee groups. One middle level teacher allowed students to choose their learning groups and encouraged social interaction through breaks and participation in clubs and extracurricular activities.

Third, 10- to 14-year-olds shift allegiance from parents and teachers to peers and friends. This is a natural part of early adolescence that warrants educators' understanding and acceptance. Closely intertwined with this shifting of allegiance, peer pressure becomes a powerful and possibly underestimated source of influence in the socialization of young adolescents (Condry & Simon, 1974). One middle level teacher accepted the futility of trying to compete with learners' peers for allegiance. Rather than feeling offended, she perceived shifting allegiance as a natural aspect of early adolescence and worked within the confines of the situation.

Fourth, examining one's changing body, friendships, allegiances and loyalties is another natural activity for young adolescents. A nose that appears to be crooked, feet that are perceived as too big, a lack of coordination, feelings of anonymity and a host of other concerns can result in critical self-examination and shattered self-esteem.

One 14-year-old confided to her family that her nose was too big. After the family made a case for her nose not being too big, she left the room and returned soon only to say, "My feet are too big!" Her next concern was that she was "too tall." Her family tried, but failed, to convince the young girl that her nose, feet and height were not abnormal.

This episode shows that while self-evaluation should be expected, teachers of 10- to 14-year-olds should encourage a realistic self-appraisal. One middle level school plans appropriate experiences designed to assist with the self-evaluation process. Through adviser-advisee sessions and exploratory activities, the teacher conveys the normalcy of developmental rates and differences. She provides opportunities for students to learn about changing bodies, to know the difference between normal and abnormal development, and to avoid being too critical of self and others.

Fifth, young adolescents' quest for freedom and independence needs to be understood in its developmental context. They are too old to require constant care and yet too young to achieve the independence of adolescents. Responding to this desire for increased freedom and independence, educators can provide learners with opportunities to engage in decision-making. Possible strategies include allowing students freedom to make significant decisions about their school day or to work independently.

This quest for freedom and independence also demands a degree of responsibility. Young adolescents need opportunities to behave responsibly and to demonstrate their growing capacity for self-control and self-management in safe and psychologically secure settings. Developmentally appropriate activities enable students to explore their aptitudes, interests and special talents while developing an accurate and positive self-esteem (National Association of Secondary School Principals, 1985).

Sixth, and critical to all aspects of young adolescents' development, middle level educators need to respond appropriately to youngsters' changing self-esteems. Self-esteems may vary due to skin problems, lack of coordination or feelings of anonymity in a large middle level school. Also, a teacher's comment one day may have no visible impact, while the next day the same comment may reduce the person to tears.

After about six weeks into the school year, one girl tearfully confided to a teacher that her changing body and her loss of status in the new school setting overwhelmed her. Fortunately, she had a caring teacher who understood such problems encountered by young adolescents (Manning & Allen, 1987).

Psychosocial Development: Implications for Middle Level Schools

Curricular and organizational practices for young adolescents should:

- adapt to the constantly changing social needs of 10- to 14-year-olds
- promote social interactions among students of different sexes, cultural and socioeconomic backgrounds
- enable students to interact with their peers in formal and informal situations
- provide opportunities for students to be autonomous and accepting of responsibility
- provide a language arts curriculum that emphasizes social as well as individual aspects of language and usage
- provide a social studies curriculum that emphasizes social customs and traditions of va us cultures
- provide an art, music, home arts and industrial technology curriculum that emphasizes the social aspects of contemporary 10- to 14-year-olds
- provide a physical education curriculum that emphasizes both group and individual sports activities on a noncompetitive basis
- provide a health curriculum that emp :sizes developmentally appropriate materials related to dating and peer relationships
- provide a science curriculum that emphasizes the relationship of science to the social progress of human beings.

Source:
DeMedio, D. L. (1991, November). *Using the unique developmental traits of middle school students to build effective curriculum.* Paper presented at the meeting of the National Middle School Association, Louisville, KY.

Cultural Differences: Friendship Patterns in Anglo and African Americans

DuBois and Hirsch (1990) conducted research to determine friendship patterns of 292 black and white young adolescents in grades 7-9. Specifically, their investigation explored the nature of the children's friendships across school and nonschool contexts. Their research revealed that among children and adolescents: 1) own-race friendship choices are more common than other-race choices; 2) racial cleavage in friendship patterns increases between the elementary and secondary school years; 3) the increased separation of black and white peer groups and the conflicts between the groups help to make interracial friendships increasingly rare during adolescence.

These researchers concluded that there may be important differences in the peer friendship networks of blacks and whites during early adolescence:

1. More than 80 percent of both blacks and whites reported having an other-race school friend.
2. Fewer students, yet still more than half, reported having an other-race school friend with whom they were close.
3. A smaller group reported having a close other-race school friend frequently seen outside of school.
4. Blacks are almost twice as likely as whites to report having a close other-race school friend whom they saw frequently outside of school. (pp. 524-536)

In a later research study, DuBois and Hirsch (1993) suggested a relationship between school/nonschool friendships and students' self-esteem, especially in boys.

Some middle level youth fail to develop nonschool ties with friends from school because they lack sufficient confidence or mastery to tackle the steps associated with social tasks. For example, boys lacking social skills reported lower levels of activity outside of school with best school friends. These boys also demonstrated lower levels of social activity during the school day. This finding, however, did not hold true for girls.

Case Study—Developmental Portrait of a 12-Year-Old Girl

J.L.M. is a 12-year-old in the middle of the early adolescence developmental period. She is a 6th-grader in a medium size middle level school. An energetic cheerleader, she plays tennis, swims, plays the clarinet, and is an officer in the "Just Say No" club. J.L.M. thinks she is pretty, but questions the size of her nose. She enjoys attending school and likes to write; however, she is not particularly interested in the academic areas of school. In fact, her teachers and parents continually encourage her to keep up with her school work. She likes to read, but her grades do not always show her ability.

J.L.M. is growing taller and heavier, developing facial and bodily features that indicate she is approaching adolescence. Hair is appearing on her arms and legs. Although menstruation has not yet begun, both she and her parents know the time is near.

While her friendships change often, J.L.M. usually has one or two close friends at a time. Her friend during a particular period is usually one member of a clique. What her friends think and their perception of her are crucial. Her choice of a hairstyle, shoes and notebook often depends on her choice of friends. She constantly "self-examines" her appearance, clothes and mannerisms. Seeking independence from her parents and extending allegiance to her friends, she is far more concerned about her friends' perceptions than her parents'. Her self-esteem fluctuates. One day she feels good about her appearance and her ability to cope with both school and home, while another day she considers herself to be the world's doormat.

No longer confined to thinking in concrete terms, J.L.M. is developing the ability to think abstractly and critically. She thinks about thinking, analyzes and synthesizes data, poses questions to herself and others, and offers strategies and solutions to problems. Her cognitive development is satisfactory, yet she is bothered by not being able to perform all the mental operations that other students can do. She responds quickly to intellectual stimulation and is usually ready to be challenged. She also enjoys working cooperatively with her friends in intellectual pursuits.

Overall, J.L.M. is a happy young adolescent. She has friends, feels competent and enjoys the "social" aspects of school. She realizes she is developing and, while these changes often lead to questions, she feels good about herself, her life and her prospects for the future.

Cognitive Development

Cognitive Characteristics of Young Adolescents

Characteristic 1 Young adolescents' development progresses from Piaget's concrete operations stage to the formal operations stage.

During the concrete operations stage, young adolescents have the ability to think out problems. This ability includes classification, learning to organize objects into a series and reversin operations. Specifically, the young adolescent masters logical operations using material with concrete content and thinks in concrete terms about a

problem. The young adolescent understands principles of conservation, uses various approaches to solving a problem, understands the relationship of the parts to the whole and performs the operation of serializing. Language becomes primarily sociocentric while egocentric speech decreases (Ginsburg & Opper, 1988).

As development progresses and young adolescents begin functioning in the formal operations stage, several characteristics become evident: comprehension of abstract concepts (e.g., ability to form "ideas" and reason about the future), ability to handle contrary-to-fact propositions, and ability to develop and test hypotheses. In the early stages, the learner may make correct discoveries and handle certain formal operations, yet is unable to provide systematic and rigorous proof. Later, the learner formulates more sophisticated generalizations, reasoning and proofs (Ginsburg & Opper, 1988).

Considerable research evidence contradicts the belief that the formal operations stage of thinking begins around age 11 or 12. Also, there appears to be little or no relationship between intelligence and the attainment of formal thinking, or between social class and learners reaching the formal operations stage (Milgram, 1992). As emphasized in Chapter 3, one simply cannot assume all young adolescents have developed into Piaget's formal operations stage. Some young adolescents continue to function in the concrete operations stage. Rather than basing education decisions on erroneous assumptions, educators must assess young adolescents individually to determine whether they have progressed to the formal operations stage or continue to function in the concrete operations stage.

Characteristic 2 Young adolescents experience gradual changes in thinking that result in considerable diversity in their development.

Gradual changes in thinking result in thinking abstractly and reflectively in one area and in concrete terms in another area. For example, young adolescents may be deeply concerned about social justice and re-evaluating a childhood code of right and wrong, but at the same time may be unable to master abstract mathematics and science concepts (Dorman & Lipsitz, 1984). Diversity is a hallmark characteristic of early adolescence (Thornburg, 1982). While physical and psychosocial diversity can be readily detected, the more abstract nature of thinking and thought often leads educators to assume all learners are functioning on a similar cognitive level. Another serious error occurs when teachers assume that a learner functioning on a high or low level in one cognitive area also functions at a similar level in another area.

Gender differences, either biologically or socially based (or perhaps both), appear in intellectual abilities during early adolescence. Prior to puberty, both boys and girls show little or no difference in measures of verbal and spatial abilities. After puberty, however, girls score higher on verbal measures and boys score higher on spatial ability measures. Middle level educators should avoid contributing to these differences by advising both boys and girls to pursue similar areas (Milgram, 1992).

Characteristic 3 Young adolescents begin to think hypothetically, abstractly, reflectively and critically.

Young adolescents experience a rapid unfolding of cognitive capacities. They begin to think reflectively and to think about thinking. This newfound ability opens the door to more complex and abstract thought processes. This period of cognitive

development also provides opportunities for higher levels of intellectual thought and effective communication. During this period, young adolescents develop the ability to analyze and synthesize data, pose questions, explore, experiment and reason, and apply different strategies and solutions to problems (California State Department of Education, 1987).

Questioning of rules, thinking about the future, commitment to abstract ideals, excitement about learning new concepts, and diminution of egocentrism indicate development of advanced thinking abilities. Due to variations, however, young adolescents need opportunities for concrete thinking and experiences, as well as opportunities to experiment with their new abstract reasoning skills (Dorman & Lipsitz, 1984).

Characteristic 4 Young adolescents begin to develop the ability to make reasoned moral and ethical choices.

Piaget (1948) believed that intellectual and moral growth correspond and proposed that children between the ages of 9 and 11 develop the ability to internalize the rightness and wrongness of situations. Developing from the concrete operations to the formal operations stage, young adolescents can reason about the morality of a situation. Likewise, they are more inquisitive, more assertive and, through a sense of personal curiosity, are able to test and determine the moral and ethical validity of ideas (Thornburg, 1982).

Young adolescents' ability to think hypothetically, abstractly and reflectively and to make reasoned or ethical choices depends upon their level of cognitive development. All learners do not develop at the same rate. Learners continuing to function in the concrete operations stage may be unable to participate in activities with learners functioning in Piaget's formal operations stage.

The early adolescence years are crucial times for forming lifelong self-esteems and identities (Davis, 1993). While middle level educators must use caution in teaching values, Davis suggested four general goals of values training and moral development. Students need to: 1) be consciously aware of constructive values and behaviors, 2) think logically about the consequences of bad attitudes and bad behavior, 3) empathize with victims of negative behavior and 4) make personal commitments to constructive values and behavior.

To address these four general goals, Davis (1993) suggested several exercises for young adolescents. First, asking such questions as "Why is it important to be honest?" (p. 32) helps young adolescents to understand a value and its related behavior. Second, analogical thinking such as "How is a good person like a good pizza?" (p. 33) makes students think and formulate plausible explanations. Third, the empathy approach involves students by asking how a young girl might feel when her birthday gift is stolen the day after she receives it. Fourth, questioning and discussion approaches elicit awareness and commitment; i.e., asking students whether a good person considers others' feelings.

Contributors to Research on Cognitive Development

Piaget—Developmental Stages. Piaget theorized that maturing children pass through four developmental stages: sensory-motor (birth to 2), preoperational (2 to 7), concrete operational (7 to 12) and formal operational (12 and beyond). Although

variability exists in the beginning and duration of developmental stages, he maintained that the stages occur for all children in a constant, invariant sequence, with each stage having educational significance. Developmental stages having the most relevance for middle level educators are the concrete operations stage (7 to 12) and the formal operations stage (12 and beyond).

The concrete operations stage exemplifies the child's ability to see relationships, move from deductive to inductive thinking and initiate logical thinking processes. In this stage, however, the child demonstrates an inability to deal consistently and effectively with abstractions or generalizations. The concrete operations stage corresponds closely to the late elementary and beginning middle level school years and has significant implications for curriculum and instruction. Learners functioning in the transition from the late concrete operations stage to the formal operations stage develop the ability to develop and test hypotheses (Ginsburg & Opper, 1988).

The formal operations stage exemplifies the child's capacity to conceptualize abstract relationships, employ inductive thinking and expand logical thinking processes. During this stage, middle level learners consider all aspects of a problem and experiment, hypothesize and analyze to arrive at conclusions. Effective educational experiences during the formal stage require active learning experiences in logical thinking. The newly acquired capacity to construct ideal and contrary-to-fact situations allows learners to think about future possibilities differently, sometimes creating conflict in young adolescents as they compare "what is" and "what could be." This newfound capacity also has the potential for leaving the young adolescent disillusioned by family, church and other social institutions (Pikulski, 1991).

Most young adolescents function in a transitory stage between Piaget's concrete operational and formal operational stages. The learner's cognitive development includes the ability to organize information around categories or concepts, which allows for generalizations and contributes to increasingly higher levels of cognitive functioning. Likewise, some learners demonstrate early formal operations characteristics such as comprehension of concepts, reasoning about the future, ability to handle contrary-to-fact propositions and ability to test hypotheses (Ginsburg & Opper, 1988).

While they are expected to function at the formal operations stage, most young adolescents have difficulty with abstract tasks and, therefore, still function as concrete thinkers. The fact that many young adolescents function at the concrete operations level has implications for all aspects of curriculum design.

Toepfer/Epstein and Critics—Brain Growth Periodization. Epstein and Toepfer's (1978) research on the brain concluded that the brain experiences growth spurts, like any other organ, at specific age intervals: 3 to 10 months, 2 to 4 years, 6 to 8 years, 10 to 12 years and 14 to 16 years. During these growth periods, children develop higher level cognitive skills. As the brain grows, it experiences growth plateaus at ceratin periods: ages 4 to 6, 8 to 10 and 12 to 14.

Epstein and Toepfer (1978) recommended that educators plan activities for the brain growth plateaus that review and reinforce previously learned facts and information, allowing students to consolidate capacities acquired during earlier periods of brain growth. Also, the general tendency in the middle years to offer increasingly complex cognitive processes warrants consideration in light of the brain growth periodization data (Hester & Hester, 1983).

The controversy surrounding the brain growth issue deserves careful consideration. Although Epstein and Toepfer (1978) "strongly urge a searching reappraisal of

the traditional approaches to cognitive learning in the middle school years" (p. 656), other writers urged educators to move cautiously toward implementing a middle level school program based on brain growth periodization. For example, *Educational Leadership* (February 1984, p. 66) warned that "the implication that children cannot learn at certain ages is dangerous." McQueen (1984) suggested that Epstein's data support the theory of brain growth periodization "less than might be expected" (p. 68) and continued, "Teachers should not begin thinking that some of their students may be unable to learn because they are in brain growth plateaus" (p. 71). Also, *Turning Points* (Carnegie Council on Adolescent Development, 1989) warned:

> Contrary to much conventional belief, cognitive development during early adolescence is not on hold. Belief in such claims has had substantial and damaging effects on middle grade education, by limiting innovation in curriculum development that might require new and more advanced ways of thinking. (p. 42)

Middle level educators should heed this caution in trying to understand the brain growth periodization data and its possible implications. They should always consider learners as individuals capable of achieving and then challenge them to achieve at their maximum potential.

Sperry—Right Brain/Left Brain. Sperry (1974) explained that the left and right hemispheres of the brain process information differently. Examples of left-brain processes include convergent thinking, verbal learning and abstract thinking. In contrast, examples of right-brain processes include divergent thinking, nonverbal learning and concrete thinking (Quina, 1989; Springer & Deutsch, 1985). According to Sperry (1974) and Quina (1989), each hemisphere has its own private sensations, perceptions, thoughts and ideas that separate them from the corresponding experience in the opposite hemisphere.

Ornstein (1978) argued that American education focuses too much attention on left-brain processes. Learners have been taught to look at unconnected fragments of information rather than entire solutions. For example, a preoccupation with isolated facts has eliminated the possibility of learners grasping the relationships of parts to wholes. All knowledge cannot be expressed in words, yet American education focuses almost exclusively on written and spoken forms. Such approaches neglect the artist and the dancer who have learned to develop nonverbal forms of intelligence (Ornstein, 1978; Quina, 1989).

Educators can use the left- and right-brain theory as a model for implementing learning strategies. Lesson plans, units and other educational experiences should activate both hemispheres by incorporating left- and right-brain processes (Quina, 1989). Teaching-learning experiences and assessment procedures should address left- and right-brain processes; i.e., requiring both convergent and divergent thinking or providing learners with opportunities for both cognitive and intuitive thinking. Essentially, educators are challenged to understand the brain hemispheres and to avoid teaching-learning activities that address only left-brain functioning (i.e., quantitative and verbal knowledge) at the expense of the arts (Quina, 1989).

Gardner—Multiple Intelligences. Understanding the theory of multiple intelligences requires a brief review of traditional perspectives on intelligence. Intelligence has been defined operationally as the ability to answer items on tests of intelligence. Test scores compare responses of subjects at different ages. The apparent correlation

of these test scores across different tests suggests the notion that one's general intelligence does not change significantly with age or with training and experience. In essence, intelligence has been considered an inborn attribute of the individual (Walters & Gardner, 1985).

The theory of multiple intelligences (Blythe & Gardner, 1990; Gardner, 1987a; Hatch & Gardner, 1988; Walters & Gardner, 1985) questions the traditional understanding of intelligence. Specifically, the theory challenges the prevailing concept of intelligence as a single general capacity that provides the individual with an ability to deal more or less effectively with any situation. Multiple intelligences theory presents a broader perspective that proposes a number of different intelligences rather than one overall intelligence. Specifically, the theory "defines an intelligence as the capacity to solve problems or fashion products which are valued in one or more cultural settings" (Blythe & Gardner, 1990, p. 33).

Several studies (Gardner, 1987a; Hatch & Gardner, 1988; Walters & Gardner, 1985) that explored Gardner's theory of intelligence reached a consensus that the brain supports at least seven different abilities and intelligences. Chart 2-1 lists Gardner's seven intelligences and examples of each.

Dunn, Dunn, Keefe and Others—Learning Styles. A steadily increasing body of research suggests that equating learning styles and teaching-learning activities contributes to meeting individuals' unique needs (Cornett, 1983; Dunn & Dunn, 1979; Keefe, 1987, 1990; National Association of Secondary School Principals, 1979; Stewart, 1990). Learning styles have been defined in several ways.

Cornett (1983) considered learning styles to be consistent patterns of behavior defined in terms of cognitive, affective and physiological dimensions. To some degree, learning styles indicate how individuals process information and respond to affective, sensory and environmental dimensions of the instruction process. The National Association of Secondary School Principals (1979) defined learning styles as characteristic cognitive, affective and physiological behaviors that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment.

The implications of learning styles, however, extend beyond mere definitions. Style characteristics derive from genetic coding, personality, development, motivation, and cultural and environmental influences that represent relatively persistent qualities in the behavior of individual learners (Keefe, 1990).

One study that focused on *adolescent* learning styles provided several conclusions: 1) females were more concretely oriented than males; 2) females were more homogeneous as a group in their learning styles; 3) slow-track students were more reflective, more active and less abstract than fast-track students (Titus, Bergandi & Shryock, 1990).

Cognitive Development: Implications for Middle Level School Educators

Young adolescents' cognitive abilities can provide a basis for planning middle level teaching and learning experiences. Even though considerable controversy surrounds the quality of cognitive abilities during early adolescence (Lipsitz, 1984) and the research on brain functioning does not focus directly on 10- to 14-year-olds, implications for middle level school educators may be offered.

First, Piaget's ideas on cognitive development can be a valuable resource. Rather than assuming young adolescents function in the concrete operations stage or the formal operations stage, teachers need to assess children's levels of thought prior to

Chart 2-1
Gardner's Seven Intelligences

Intelligence	Ability	Example
Linguistic	Ability to use language to excite, please, convince, stimulate, or convey information	poet, novelist, editor
Musical	Ability to enjoy, perform, or compose a musical piece	musical performer, composer
Logical-mathematical	Ability to explore patterns, categories, and relationships by manipulating objects or symbols, and to experiment in a controlled, orderly way	mathematician, scientist
Spatial	Ability to perceive and mentally manipulate a form or object, to perceive and create tension, balance, and composition in a visual or spatial display	artist, engineer, surgeon
Bodily-kinesthetic	Ability to use fine and gross motor skills in sports, the performing arts, or arts and crafts production	dancer, actor, athlete
Interpersonal	Ability to understand and get along with others	teacher, salesperson, clinician
Intra-personal	Ability to gain access to and understand one's inner feelings, dreams, and ideas	introspective novelist, lyric poet, Buddhist monk

reaching curricular and instructional decisions, thus ensuring developmental appropriateness. Learning requires that children be given the opportunity to manipulate and think about objects and to develop process skills. Also, young adolescents who are preoccupied with nonschool matters need sufficient motivation to hold their attention.

Recent authorities (George & Alexander, 1993) suggested that great numbers of students remain in the concrete operations stage throughout the middle school years. Learners in the concrete operations stage may be unable to generalize broad contexts; i.e., to hypothesize from existing facts. These learners may have difficulty dealing effectively with the past in a realistically chronological manner. They may be unable to reverse mental operations or consider situations that appear contrary to personal observations. Teaching a class with students operating at the concrete level can be difficult, since most middle level school curricula have been designed to include hypothesizing, conceptualizing and symbolizing. Providing diverse learning experiences with varied instructional strategies helps to communicate subject matter to students in either developmental stage (George & Alexander, 1993).

What specific experiences can educators provide young adolescents?

- Young adolescents in transition to the formal operations stage need opportunities to reason logically about verbal statements in the absence of particular objects. Activities during the formal operations stage include experiences with mathematical concepts such as permutations, combinations, probabilities and correlations. Linguistic discourse, used as a medium for expanding thinking, can join reading and thinking together in propositional thinking (Van Hoose & Strahan, 1988).
- Developmentally appropriate instruction addresses young adolescents' increasing ability to think abstractly, hypothetically, reflectively and critically. Middle level educators need to provide educational experiences that allow learners to engage in higher levels of cognitive thought and activity.

  Because of the tremendous diversity among young adolescents, educators need to consider individual differences and varying levels of thinking ability, thus avoiding frustration among learners. One middle level teacher dealt with diversity in two ways. First, she provided instruction on different levels. While some students worked with concrete objects, others engaged in work requiring abstract thought. For example, some students worked on mathematics requiring several relatively clear steps and others worked on equations and probabilities. Second, she allowed students of varying abilities to work cooperatively toward a group goal. Students capable of higher-level thinking assisted those who had not yet acquired higher-level thinking skills, subsequently explaining the rationale behind the thought process.
- Educators in developmentally appropriate middle level schools recognize young adolescents' tremendous differences. Rather than assuming that all young adolescents learn alike, they plan and implement instruction based on consideration of both left- and right-brain learners, the learning styles of individual learners and the theory of multiple intelligences. Lesson plans and teaching units reflect consideration of left- and right-brain functioning, students' individual learning styles and varying intelligences. While Susan has tremendous mathematics ability and should be encouraged to pursue her interest and expertise, Bill should be allowed to pursue music. One cannot assume that a learner with low intelligence in one area is not able to excel in another.

- Young adolescents benefit from opportunities designed to develop moral and ethical reasoning. The mission of developmentally appropriate middle level schools includes teaching young adolescents to think ethically; to recognize good and bad; and to embrace virtues such as courage, responsibility, honesty, integrity, tolerance, appreciation of individual differences and caring about others (Carnegie Council on Adolescent Development, 1989). Other goals to work toward include hard work, cooperation, self-discipline, freedom and the importance of education itself (California State Department of Education, 1987).

Cognitive Development: Implications for Middle Level Schools

Curricular and organizational practices for young adolescents should:

- adapt to the wide range of cognitive capabilities of students
- provide a wide variety of cognitive learning experiences, both concrete and abstract
- adapt to the constantly changing interests and limited attention spans of students
- stress individualized, cognitively appropriate materials and activities
- emphasize the development of problem-solving skills and reflective thinking processes
- enable students to explore their interests and talents and to learn how to study
- provide language arts experiences that emphasize communication skills (listening, speaking, reading and writing) and de-emphasize grammar study
- provide social studies experiences that emphasize logic, reasoning and cause-and-effect relationships and de-emphasize mastery of isolated facts and events in chronological order
- provide reading experiences that adapt to a number of reading levels and stress holistic rather than skills approaches
- provide mathematics and science experiences that emphasize understanding of major concepts and mastery of essential processes and that de-emphasize information acquisition
- provide art, music, home arts and industrial technology experiences that emphasize exploratory, hands-on experiences designed to foster creativity and stimulate interest.

Source:
DeMedio, D. L. (1991, November). *Using the unique developmental traits of middle school students to build effective curriculum.* Paper presented at the meeting of the National Middle School Association, Louisville, KY.

Gender Differences, Achievement and Self-Image

Developmental theory and research have suggested that the relationship between school achievement and psychological adjustment differs for boys and girls during early adolescence. Roberts, Sarigiani, Petersen and Newman (1990) explained gender differences in the development of the relationship between school achievement and self-image. Their study showed that the link between achievement and self-image is more positive for boys than girls and that the correlation between achievement and self-image decreases for girls and increases for boys during the transition into adolescence.

Specifically, other gender differences included: 1) The relationship between achievement and self-image for boys in 6th grade increased as they moved into the 7th grade and remained stable as they moved into the 8th grade; 2) the relationship was more positive for boys than for girls in 6th grade and especially in 7th grade; 3) the relationship between achievement and self-image decreased for girls and increased for boys during the move from 6th to 7th grades; 4) boys showed an overall increase in the relationship between achievement and self-image from 6th to 8th grade.

Case Study—Developmental Portrait of a 14-Year-Old Boy

M.P.M., a 13-year-old 7th-grader, attends a suburban middle level school that houses grades 6 to 8. He basically feels good about himself and his developing body, but he has questions about the changes that occur almost daily. M.P.M. is a good student. He does his homework and school work, his teachers praise his behavior and grades, he participates in clubs and intramural soccer, and he serves as vice-president of the 7th-grade class. Basically, he has a good relationship with both his parents and teachers, yet increasingly he values the opinions of his friends.

Physically, M.P.M. is growing larger and heavier. His arms, legs, shoulders and thighs are showing signs of development. He can run faster and longer and can feel his overall strength increasing. He examines himself nearly every day and often compares his development to that of his friends, some of whom are larger and some smaller. He wants to grow and develop and improve his coordination, yet he wonders what he will look like when he grows up.

Psychosocially, M.P.M. has a small group of friends (mostly of the same sex), interacts socially and sees his friends daily. While M.P.M. abides by parental and teacher expectations, he is shifting allegiance from the significant adults in his life to his friends. He increasingly wants independence and freedom. His self-concept fluctuates. Usually he feels worthwhile, yet at times he questions his worth, his changing body and what his future might bring.

Intellectually, M.P.M. is demonstrating an increasing ability to think reflectively and abstractly. His problem-solving ability is increasing and he successfully participates in problem-solving situations. He is developing a sense of morality and values and realizes that issues cannot always be decided in black-and-white terms. Intellectual abilities indicate that M.P.M. is developing toward the formal operations stage: he can form "ideas" and reason about the future, handle contrary-to-fact propositions, and develop and test hypotheses.

M.P.M. basically feels good about himself, his increasing abilities, his school success and his future. While he sometimes questions his lack of coordination and why some boys are larger and more coordinated, he feels pretty good about his development even though he sometimes goes to his social studies teacher for reassurance.

CONCLUDING REMARKS

Once considered only from a child or adolescent developmental perspective, young adolescents have their own unique developmental period that is receiving wide recognition. Knowledge of young adolescents' developmental characteristics contributes to understanding their behavior and provides a basis for curricular and instructional decisions. Rather than adopting elementary or secondary perspectives, developmentally appropriate middle level schools first look to young adolescents' development when making education decisions. They focus attention on planning and implementing a curriculum and a school climate that reflect young adolescents' development.

3: Developmentally Appropriate Middle Level Schools

QUESTIONS TO BE EXPLORED

1. What middle level school curricular and instructional goals reflect young adolescents' physical, psychosocial and cognitive development?
2. What specific practices can middle level educators implement which reflect research on the physical, psychosocial and cognitive development of young adolescents?
3. How can middle level schools assist young adolescents in dealing with the contemporary issues related to their development?
4. How can middle level educators re-engage parents in the education of young adolescents?
5. How can middle level educators respond to the recommendations in *This We Believe* (National Middle School Association, 1992) and *Turning Points* (Carnegie Council on Adolescent Development, 1989), and the seven needs in the *Middle Grades Assessment Program* (Dorman, 1984)?

OVERVIEW

Except for being a "link between the elementary and the secondary school," the middle level school functioned for too long without a clear rationale. In fact, the middle level school has been criticized as having a curriculum with an "identity crisis" (Swaim, 1981, p. 139). Now, with growing recognition of early adolescence as a legitimate developmental period, middle level schools have an opportunity to develop their own unique identity.

Middle level educators have the twofold responsibility of understanding the early adolescence developmental period and providing 10- to 14-year-olds with developmentally appropriate educational experiences in a positive and caring school environment. Traditionally considered a transition from the elementary school to the secondary school, the middle level school is becoming recognized as a school with a more defined and specific purpose. The middle level school should serve the unique physical, psychosocial and cognitive needs of young adolescents by providing developmentally appropriate curricular, instructional and environmental experiences.

Effective middle level schools provide young adolescents with opportunities to try out their new physical, social and cognitive abilities and to discover what they can do well (Dorman, 1983). Reflecting increased recognition and knowledge of young adolescent development and behavior, such middle level school experiences demonstrate that 10- to 14-year-old learners deserve schools designed for their unique developmental period.

DEVELOPMENT: MEETING YOUNG ADOLESCENTS' NEEDS

Development during the 10 to 14 age span is characterized by rapid, dramatic and often disturbing changes. Physical changes can be seen almost daily. Psychosocial changes result in increased social contact and a quest for independence and freedom, and cognitive changes allow higher levels of abstract thinking (Manning & Allen, 1987). While these changes are easily recognized, other more subtle changes occur.

Young adolescents experience increased peer pressure to experiment with tobacco, sex, alcohol and other drugs. Effective middle level educators address problems resulting from peer pressure and value the student as a person. They provide developmentally appropriate curricula that reflect a careful balance between academic goals and human development needs. This balance of academic and human needs makes the middle level school curriculum distinctly different from either elementary or secondary programs (National Middle School Association, 1992).

In planning learning experiences for students, middle level educators must consider their unique developmental needs. Young adolescents should be provided:

- opportunities to work cooperatively in groups (social needs)
- vehicles for connecting new information to what is already known, thus helping them feel more confident about their learning ability and about their own experiences (intellectual and emotional needs)
- experiences in abstract thinking that help them move gradually and successfully from concrete to abstract levels of reasoning (intellectual needs)
- opportunities to move and change activities (physical needs)
- experiences designed to help them feel better about themselves as learners (socioemotional needs)
- motivation to learn through use of strategies that heighten their curiosity about learning (intellectual needs) (Irwin, 1992).

Impact of Early Adolescence

Peer pressure, questions about development and quests for increased freedom have a significant impact on young adolescents, sometimes resulting in greater problems as their development continues. Problems may include experimentation with sexual activity, often leading to sexually transmitted diseases and early pregnancy; use of cigarettes, marijuana and other illicit drugs; lower school grades and dropping out; and delinquency and criminal offenses. The early adolescence years may be the best time to provide intervention strategies that help youngsters avoid academic failure and behavior problems (Children's Defense Fund, 1988).

Basis for Curricular, Instructional, Organizational and Environmental Decisions

Developmentally appropriate middle level school curricula focus on skills and attitudes such as communicating, computing and researching; reflective thinking; identifying and judging the morality of problem situations; problem-solving; valuing; forming self-concept and self-esteem; developing social action skills (e.g., acting upon a problem situation both individually and collectively); and searching for completeness and meaning (Beane, 1990).

Students acquire skills needed for continued learning (reading, listening, research); organizing for action (planning, group process, leadership); understanding the universality of the human condition (personal fulfillment in various times, places and conditions); understanding cultures and differences among peoples; artistic expression (art, music, dance); systematic study of change and its effect on society; and productive thinking, systematic reasoning and evaluation of information. The curriculum challenges learn-

ers at their respective ability levels, providing a clear articulation between elementary and secondary levels, and responds to the immediate concerns of the young adolescent learner (National Association of Secondary School Principals, 1985).

MODELS FOR PLANNING AND IMPLEMENTING DEVELOPMENTALLY APPROPRIATE MIDDLE LEVEL SCHOOLS

Lipsitz (1984) found that the most striking feature of successful schools was their willingness and ability to adapt all school practices to students' individual differences in cognitive, biological and social maturation. The schools began:

> . . . from the beginning to be positive environments for early adolescent personal and social development, not only because such environments contribute to academic development, but because they are intrinsically valued, stemming from a belief in positive school climate as a goal, not a process toward a goal. (p. 168)

Using the developmental characteristics outlined in Chapter 2 and the following resources as a basis, middle level school educators can initiate the steps necessary to make developmentally appropriate middle level schools become a reality.

- *This We Believe* (National Middle School Association, 1992), a consensus statement on middle level school education, defines the middle level school as "an educational response to the needs and characteristics of youngsters during transescence and, as such, deals with the full range of intellectual and developmental needs" (p. 9). A true middle level school has 10 essential elements: educators knowledgeable about 10- to 14-year-olds, a balanced curriculum based on developmental needs, a range of organizational strategies, varied instructional strategies, an exploratory program, comprehensive advisory and counseling programs, continuous progress, appropriate evaluation procedures, cooperative planning and a positive school climate.
- *Turning Points* (Carnegie Council on Adolescent Development, 1989), contains recommendations for improving the educational experiences of all middle level students, including those at risk of being left behind (see Chart 3-1).
- *Middle Grades Assessment Program* (Dorman, 1984) suggests that young adolescents have seven basic needs. The developmentally appropriate middle level school provides curricular and instructional experiences designed to address these seven needs (see Chart 3-2).

DEVELOPMENTALLY APPROPRIATE MIDDLE LEVEL SCHOOLS

Prior to implementing developmentally appropriate school practices, schools should adopt clear core values that provide a blueprint for their practices. Core values should be limited in number and clearly articulated by all educators working in the school.

Although each school has a responsibility to develop its own core values, examples may include addressing personal responsibility, emphasizing learning and cognitive activity and respecting diversity of all types. School leaders should articulate the core values to all school personnel and disseminate them to the community (National Association of Secondary School Principals, 1985). Upon reaching consensus on core values, educators then need to plan curricular content, organizational practices, instructional strategies and a school environment that reflect a commitment to the stated core values and to developmentally appropriate practices.

Chart 3-1
Turning Point's Recommendations and Appropriate Practices

Recommendation	Appropriate Practices
1. Create small communities for learning	Opportunities for intellectual and personal growth where stable, close and mutually respectful relationships exist: schools-within-schools, teams and small group advisories
2. Teach an academic core	Opportunities to develop literacy, develop thinking skills, lead a healthy life, behave ethically and assume responsibility in a pluralistic society
3. Ensure success for all students	Opportunities for all students to experience success—elimination of tracking by achievement level, promotion of cooperative learning, flexibility in instructional time and adequate resources
4. Empower teachers and administrators to make decisions regarding educational experiences	Opportunities for students to have teachers with greater control over decisions affecting the education process
5. Staff middle schools with teachers who are expert at teaching 10- to 14-year-olds	Opportunities for students to have teachers who are properly prepared and assigned
6. Improve academic performance through fostering health and fitness	Opportunities for students to have access to health coordinators and to health care and counseling services, and a health-promoting school environment
7. Re-engage families in the education of learners	Opportunities for parents to act in meaningful roles in school governance, opportunities to support the learning process at both home and school
8. Connect schools with communities	Opportunities for student participation in the community through service and partnerships

Adapted with permission from *Turning Points: Preparing American Youth for the 21st Century.* (1989). Washington, DC: Carnegie Council on Adolescent Development. This report was prepared by the Carnegie Council on Adolescent Development's Task Force on Education of Young Adolescents. The Carnegie Council is a program of Carnegie Corporation of New York.

Chart 3-2
Dorman's Seven Needs of Young Adolescents

Need	Appropriate Practices
1. The need for diversity	Different opportunities for learning and different relationships with a variety of people, different opportunities to refine thinking skills
2. The need for self-exploration and self-definition	Opportunities to establish positive self-concept and a sense of identity
3. The need for meaningful participation in school and community	Opportunities to become independent and to have a role in making the rules affecting them
4. The need for positive social interaction with both peers and adults	Opportunities for association, companionship, and criticism regarding new social roles
5. The need for physical activity	Opportunities for physical exercise and proper rest to avoid high energy levels and fatigue
6. The need for competence and achievement	Opportunities to try out new physical, psychosocial and cognitive abilities
7. The need for structure and clear limits	Opportunities for increased independence and self-direction yet with clear limits

From *Middle Grades Assessment Program*, by Gayle Dorman (1984). Center for Early Adolescence, University of North Carolina at Chapel Hill, D-2 Carr Mill Town Center, Carrboro, NC 27510, 919/966-1148. Reprinted with permission.

Once educators decide on core values, reform requires adherence to genuine middle level education philosophical beliefs and reflection on young adolescents' developmental characteristics and needs. Concerted effort should be directed toward the various curricular, organizational, instructional and environmental aspects, rather than focusing on one entity and retaining traditional elementary or secondary perspectives for others.

Major goals of middle level schools include not only provision of developmentally appropriate curricular and instructional practices, but also attention to contemporary issues related to young adolescents' physical, psychosocial and cognitive development. The remainder of this chapter looks at how middle level schools can provide developmentally appropriate educational experiences.

Physical Development

Broad curricular and instructional goals related to the young adolescent's physical development include:

- development of the physical skills necessary to master bodies
- adjustment to the hormonal changes that lead to the onset of puberty and development of secondary sex characteristics
- development of positive attitudes toward nutrition, health and fitness
- development of positive attitudes toward tobacco, alcohol and other drugs.

Learners must be healthy in order to learn. The school's responsibilities include providing educational experiences that assure young adolescents are physically and mentally fit, have a self-image of competence and strength, and understand oneself (Carnegie Council on Adolescent Development, 1989). Likewise, the school can work toward ensuring student access to health services and establishing the school as a health-promoting environment.

Appropriate Middle Level School Practices That Reflect Research on Physical Development

Seeking a place among their peers, young adolescents realize that their physical abilities have a dramatic influence on their social acceptance as well as their self-perceptions. Middle level schools can provide opportunities for team play and the practice of physical skills so that everyone will have a chance for participation and recognition. Avoiding competition during these physical activities especially helps late-developing young adolescents.

Experiences need to focus on activities such as the 600 yard walk/run; 50 yard dash; skills basic to softball, basketball, volleyball and soccer; various bowling skills; high and broad jumps; gymnastic stunts (hand stand, hand spring, dive and forward roll, walk on hands, 3-man ride roll) and various types of exercises.

Physical activities should reflect the developmental needs of middle level students, rather than being elementary- or secondary-oriented.

- The tremendous physical diversity among young adolescents warrants de-emphasizing activities that stress size, strength and stamina; recognizing young adolescents' need for physical exercise and inability to sit for long periods of

time; and providing school policies and behavior expectations that reflect a need for physical activity. One 8th-grade boy, obviously smaller and less mature than the other boys, questioned his development and eventually his self-worth when he could not hit a softball as well as other boys. A few kind words from his physical education teacher had a significant impact during difficult times. The teacher realized that the problem resulted from grouping early- and late-developing students together and forcing them to compete.

- With their growing muscles and bones and often disproportionate bodies, boys and girls become uncomfortable when sitting in desks for long periods of time. One 6th-grade boy who made frequent trips to the pencil sharpener and trash can admitted that he had difficulty sitting comfortably for long periods of time. Perceptive middle level educators provide breaks and exercise periods, as well as learning activities that do not require students to sit (e.g., building projects).

Multiage Grouping

Recognizing the physical diversity among middle level learners, multiage grouping allows students to be placed in a learning milieu with others whose ages vary over a two- to three-year range (George & Alexander, 1993). For example, a class of 24 middle-schoolers might include any combination of 10-, 11-, 12-, 13- and 14-year-olds. While the ages differ, there might be more homogeneity among developmental and coordination levels. Rather than grouping by ability, which should be avoided at all costs, students of various ages can be grouped according to size, stamina and overall physical development. Multiage grouping should include a balance among age, race and sex to reinforce the concept of equal access to all middle level programs.

Three Guidelines for Planning Appropriate Physical Experiences

Integral to the education program, physical education emphasizes motor skills and movement, along with an opportunity to facilitate development in these areas. A developmentally based physical education program can enhance physical fitness, promote a healthy lifestyle and a positive self-image, and help learners achieve satisfaction as contributing members of society (Weiller & Richardson, 1993).

Several guidelines can assist educators as they plan teaching-learning experiences that reflect 10- to 14-year-olds' physical development. These guidelines hold true whether planning classroom instruction and specific physical education activities or just trying to implement a middle level school program.

- *First, consider the wide range of developmental diversity among young adolescents when planning programs.* Tremendous differences in height, weight and overall maturity might exist in two boys or girls of the same chronological age. Saying "She's an 11-year-old" offers little in terms of a physical description.
- *Second, recognize the realities of physical development and their effect on developing self-esteems and identities.* Being too short, too tall, overweight or unduly awkward can have a devastating effect on one's self-perception. One extremely thin 7th-grader suffered almost unbearably. When warm weather came, he continued to wear long-sleeve shirts to prevent others from laughing at his arms. Being the smallest and skinniest in the class affected his self-esteem. Even with sports that did not require inordinate physical strength, he did not participate for risk of failure.

- *Third, understand the dangers of competition, recognizing the possible adverse effects when developmentally different learners compete with one another.* In terms of strength, size and speed, the early maturer has a definite advantage over the late-maturing youngster. Avoiding competition does not mean that boys and girls cannot be encouraged to participate with learners of different development. In fact, all young adolescents need active engagement in some type of physical activity. They benefit, however, when educators do not expect them to meet prescribed standards for a particular age. Warning of the dangers associated with an overemphasis on winning, Weiss (1989) reported that children and adults do not necessarily define winning and losing in the same manner. For example, children do not always equate winning with success, or losing with failure. Embarrassment and disappointment should not follow losing or lead to fear of failure and participation in youth sports.

Instructional objectives for programs should include: a) teaching fundamental skills; b) developing positive personality traits such as self-esteem, confidence, punctuality and loyalty; c) teaching organizational skills; d) improving the physical condition of students. In programs that provide positive experiences for 10- to 14-year-olds, educators:

- encourage and accept youngsters' skills
- encourage participation in a number of sports
- acknowledge sportsmanship and team-oriented play
- talk to students about sports they enjoy
- reassure students that mistakes occur when learning a skill
- remember that children are not miniature adults (Weiss, 1989).

Extracurricular and Intramural Sports Programs

California's reform program for young adolescents (California State Department of Education, 1987) recommended access to extracurricular and intramural sports programs that promote participation, interaction and service. Open to all middle level grade students, these activities can include classroom guidance programs, cheerleading teams, pep squads, and physical activities emphasizing health and physical fitness.

Like all middle level school programs, extracurricular and intramural sports programs should include young adolescents of all maturity levels. Encouraging all students to participate and to feel comfortable exhibiting varying degrees of competence provides for improved physical skills and enhanced self-perceptions. Continual professional supervision ensures all students learn correct skills and also prevents students from being forced to compete physically in uncomfortable situations.

Several basic essentials undergird all developmentally appropriate programs: an equal right to participate; policies consistent with middle level school concepts, which assume that young adolescents' needs differ from those of elementary or secondary students; emphasis on physical exercise, teamwork and respect; and emphasis on participation rather than winning (Gentry & Hayes, 1991).

Students are not excluded from interscholastic sports or any intramural team. Rather than denying interested students access, schools can add additional teams. One principal explained how her middle level school planned for four volleyball teams, yet student participation resulted in ten teams. According to one excited girl who had visited the school, "They have intramural cheerleading teams—no one has

to try out—everyone gets to be on a team." Her excitement demonstrated the importance of avoiding competitive and exclusionary policies.

DeLand Middle School (DeLand, Florida) moved successfully from interscholastic sports to intramural programs. DeLand's faculty and administration based the school's intramural program on the philosophy that all students should be provided successful sports experiences, rather than a selected few. DeLand Middle School promised its students and their parents a program designed to promote sportsmanship, improve physical skills, enhance school spirit and provide competitive fun (Dexter & Gartside, 1992).

Dexter and Gartside, a teacher and a counselor at DeLand Middle School, offered several suggestions:

1. A director, convinced of the importance of intramural programs, must be appointed for each grade level.
2. Classroom teachers must be involved and play firsthand roles in the program, such as officiating.
3. Students must be informed of the program's purposes, how the program operates and the importance of participation.
4. Support staff such as administrators, guidance counselors and secretaries should be involved in their areas of expertise and interest.
5. Civic-minded parents and other adults must be involved so the community can learn the benefits of intramural programs (Dexter & Gartside, 1992).

Another successful intramural program may be found at Challenger Middle School (Colorado Springs, Colorado). The core of Challenger's program includes providing young adolescents with an opportunity to learn and develop skills. The 6th-grade program is conducted two days a week during the first period. The 7th- and 8th-grade program meets after school. Both programs operate on a player/coach ratio of at least 25 to 1 in all sports. Two unique concepts, cluster coaching and scramble, contribute to the program's effectiveness.

Cluster coaching involves dividing students into two groups or clusters. A cluster is then divided into five balanced teams and either cluster coach can direct the team on a given day. Advantages include: coaches know the caliber of each individual player on the floor at any time; coaches work with 50 or 60 participants, rather than the usual 10 to 14; students benefit from the expertise of two coaches; coaches experience collegial support; and schedules allow ample evaluation, practice and competition.

The number of participants in the school's volleyball program grew tremendously; however, nearly half the players failed to complete the season. An informal survey revealed students felt frustrated with the expertise of some coaches. The same teams always won while the others lost. Players felt that the coaches' level of knowledge and expertise was a factor.

While all the coaches were deeply devoted to helping young adolescents, some had valuable strengths in other areas that the school did not want to lose. Therefore, Challenger began to scramble coaches. The first part of each session focuses on teaching and practicing a specific skill. The coach skilled in the specific area conducts this session. When the coach completes the lesson, coaches "scramble" to one of the four volleyball nets. Then, the players scramble to one of the eight playing courts. Rather than playing on assigned teams, players are scrambled as long as each

team has an equal number. All coaches demonstrate techniques, reinforce efforts and encourage players (Cicatelli & Gaddie, 1992).

Addressing Young Adolescents' Concerns and Questions About Physical Development

Middle level schools have a responsibility to teach young adolescents about themselves: developmental changes, growing arms and legs, increased hair, deepening voices and an abundance of other physical changes. Perceptive educators can focus their attention in several directions. First, they can emphasize the normalcy of diversity in developmental and growth rates. Second, they can provide factual explanations to young adolescents who question their pubertal changes. Questioning peers about developmental changes might lead to even greater problems and insecurities. Young adolescents benefit when educators answer questions with accurate and positive perceptions that clarify myths and other false beliefs. Educators' approaches may include explanations, factual and age-appropriate publications, adviser-advisee sessions, mini-courses, exploratory offerings, and referrals to the school nurse or guidance counselor.

Addressing Contemporary Issues: Health-related Concerns and Health Care Services

Closely related to physical development, health-related issues increasingly pose a concern for 10- to 14-year-olds. Consider that:

> In the 1990s, the state of adolescent health in America reached crisis proportions: large numbers of ten- to fifteen-year-olds suffer from depression that may lead to suicide; they jeopardize their future by abusing illegal drugs and alcohol, and by smoking; they engage in premature, unprotected sexual activity; they are victims or perpetrators of violence; they lack proper nutrition and exercise. Their glaring need for health services is largely ignored. (Hechinger, 1992, p. 21)

Specific conditions include:

- pregnancy in teenagers under age 15, who are 15 times more likely to give birth than their peers in other Western nations (Buie, 1987)
- children under age 13 infected with the AIDS virus (Wishon, Swaim & Huang, 1989)
- other health-related issues such as venereal diseases, obesity, bulimia and anorexia nervosa (Papalia & Olds, 1989)
- signs of depression or suicidal tendencies related to pregnancy, rejection by a friend, fear of being caught in a delinquent act and serious illness (Johnston, Markle & Coey, 1987)
- loneliness, shyness, withdrawal, tenseness, extreme perfectionism, impulsivity, hyperactivity and restlessness (Seibel & Murray, 1988).

One of the most serious health problems facing young adolescents in the 1990s is the AIDS epidemic. In 1992 in the United States, 3,692 children under the age of 13 had AIDS. This number does not include children who are only HIV-positive. For the 13- to 19-year-old group, the incidence of AIDS was related to their own sexual behaviors and drug use, as well as blood disorders. Middle level school and health

and guidance programs are challenged to provide young adolescents with valid information about the circumstances and consequences of the AIDS virus (Allen, Splittgerber & Manning, 1993).

Indicators suggest that both the health concerns and the nature of health risks differ for young adolescent boys and girls. Young adolescents who view their health as fair or poor reported physical conditions (e.g., headaches and feeling tired); females reported emotional or social concerns (e.g., friendships). When asked, young people identified alcohol and drug abuse, followed by peer pressure, as the biggest problems facing youth today (Scales, 1991).

Successful health programs in the middle level school include well-planned lessons in life sciences and human biology. Such programs have been sufficiently tested to be introduced in all schools. Far from being watered-down science, these programs may boost interest in the sciences, as they use science to create an understanding of human health and health-promoting behaviors. They also educate young adolescents about a variety of risks to be avoided and opportunities to be seized, from the benefits of healthful nutrition and exercise to the dangers of drugs and promiscuous and unprotected sexual activity (Hechinger, 1992b).

Comprehensive school health programs foster healthful lifestyles, coordinate efforts of all school personnel and provide health-promoting environments. Deliberate responses include: individual and group guidance sessions, peer advising and counseling programs. Students can be trained to counsel peers, or the counseling team can be called upon for individual or group sessions. Sessions might focus on sex education, developing positive same-sex/other-sex friendships and understanding self and others. A survey of student concerns might be the most logical place to begin.

The school can set an example by providing a health-promoting environment. For lunch, one middle level school provided students with a choice of a healthful, well-balanced meal or a number of fruits and salads. Believing that it should practice what it teaches about nutrition and healthful choices, the school offered only healthful foods.

In schools providing developmentally appropriate experiences, school health coordinators or nurses work closely with middle level school administrators, faculty and support staff. They coordinate interaction with community health and social service organizations and also design and promote health-related school policies. The classroom teacher, perhaps the first to recognize potential problems related to physical development, works cooperatively with administrators, guidance counselors, the school health coordinator and other support staff provided by the school or district.

Assessing Middle Level Schools' Response to Young Adolescents' Physical Development

As with all school efforts, educators have a responsibility to assess periodically their progress toward meeting young adolescents' physical needs. Each school needs to develop a suggested checklist to meet its students' individual needs. The appendix (p. 87) provides a suggested checklist for determining the extent to which a school provides developmentally appropriate experiences.

Psychosocial Development

Broad curricular and instructional goals related to the young adolescent's psychosocial development include development of:

- competence in personal growth (self-esteem and self-knowledge)
- positive relationships with peers and adults
- positive attitudes toward culturally diverse individuals
- positive citizenship skills to function in a democratic society
- self-discipline, self-exploration, self-direction and self-responsibility
- abilities for successful social interaction and friendships
- skills to become cooperating and contributing members of society.

Appropriate Middle Level School Practices That Reflect Research on Psychosocial Development

To be effective, middle level educators need to understand young adolescents' psychosocial development. Many changes occur in early adolescence: 1) a quest for independence at a time when youngsters continue to be dependent; 2) a strong desire for peer approval; 3) unusual and drastic behavior; 4) changes in friendships from same-sex to opposite-sex; 5) a preoccupation with one's appearance and mannerisms; 6) a self-esteem that may fluctuate daily (Manning & Allen, 1987).

Some educators feel responsible only for cognitive development and academic achievement. They need to recognize, however, their role in assisting young adolescents with their social growth. This role includes not only understanding their psychosocial development, but also providing them opportunities for positive social interaction.

Learners need age- and developmentally appropriate parties and other social get-togethers, rather than "watered-down" versions of secondary dances or activities. One's physical appearance and ability to purchase expensive clothes should not become significant issues. Young adolescents need opportunities to develop their social skills, rather than additional times to question their self-worth, developmental levels, economic status or ability to compete socially.

Socialization opportunities can be developed within the classroom. One middle level school enables interaction through cooperative learning activities (students working in groups of three or four or in pairs), role-playing, writing and putting on plays or skits, allowing friends to work together, teaching social skills and encouraging membership in clubs.

Developmentally Appropriate Programs: Considerations

Responsive middle level educators base education decisions on characteristics unique to the early adolescence developmental period: the need for social interactions and friendships; shifting allegiance and affiliation; peers becoming sources of standards and models of behavior; feelings of anonymity; the need for autonomy and social competence; developing sex role and special socialization needs (Manning & Allen, 1987). Other special needs include handicapping conditions, mobility and homelessness (Eddowes & Hranitz, 1989), and feelings of friendlessness and rejection.

Curricular, Instructional and Organizational Strategies

Responsive middle level schools promote social development by helping young adolescents feel less anonymous. They help them develop or enhance friendships and contribute to their feelings of social competence. Likewise, they assume social development to include a number of characteristics: self-discipline, industriousness, respect for authority, perseverance, patience, honesty, ability to work toward goals, respect for self and others, assertiveness, enthusiasm and interest in learning, confi-

dence, ability to function in a peer group, empathy, trust, communication skills and awareness of social issues (Lipsitz, 1984).

Perceptive educators consider the effects of organizational strategies on young adolescents' social development. A fully departmentalized, ability-grouped seven-day period is incompatible with young adolescents' developmental needs. More appropriate organizational strategies include block-scheduling, multiage grouping, developmental age grouping and alternate scheduling (National Middle School Association, 1992). Some students may prefer working alone and others, working in groups. Some students may prefer working with a friend to complete a library project; another student may appreciate more teacher supervision. In addition to organizational patterns, consideration should be directed toward 10- to 14-year-olds' physical, psychosocial and cognitive developmental characteristics.

Ability Grouping: Its Effects on Psychosocial Development and Some Alternatives. Grouping students by ability often results in a form of segregation that can have detrimental effects on self-esteem, socialization, multicultural interaction and developing identity (Manning & Lucking, 1991).

Research suggests that low-ability children's attitudes and self-esteem may be seriously impaired by ability grouping. The Carnegie Council on Adolescent Development (1989) contended, "Time and time again, young people are placed in lower academic tracks or classes, often during the middle level grades, are locked into dull, repetitive instructional programs leading at best to minimum competencies" (pp. 50-51). Although it may enhance the self-esteem of the brighter youngster, ability grouping may adversely affect the attitudes, achievement and opportunities of students in lower-ability groups (Riccio, 1985). Assigning students to classes on the basis of ability may have a stigmatizing effect, evoking low self-expectations for both achievement and behavior (Slavin, 1988).

The possibility that ability grouping may result in segregation of students also warrants educators' attention and concern. Lower socioeconomic status and culturally diverse learners often find themselves placed in lower-ability groups. Such practices may be discriminatory since students are segregated along ethnic and social class lines (Dawson, 1987). Culturally diverse students and learners from lower socioeconomic groups often place in lower-ability groups, while students from higher socioeconomic strata often place in higher-ability groups. These patterns of grouping appear to be related to ethnicity and socioeconomic standing rather than academic ability and achievement levels (Riccio, 1985).

While such findings should alarm all educators, they may be even more serious for young adolescents as they move from childhood into adolescence. These youngsters, who judge themselves constantly for a sense of self-worth and identity, can develop distorted views of themselves in lower-ability groups segregated by racial or ethnic lines.

Ability grouping appears to be related to self-esteem. Students tracked in higher-ability groups have considerably higher educational aspirations and more positive academic and personal self-esteem. Students in lower-ability classes do not blame the school so much as their own abilities. Academic self-esteem tends to peak during the early elementary years and decline in the middle level years. For students in lower-ability groups, self-esteem becomes increasingly negative as each year passes (George, 1993).

The principal and faculty at McCulloch Middle School (Dallas, Texas) realized the inequities of ability grouping. Ostracized for their ability, some upper-track learners deliberately did poorly on tests to move out of the upper groups. McCulloch began a

process of educating parents and community members about the plan to move away from ability grouping. Committees met with similar size schools for advice, and block-grant monies provided an extensive staff development program. The change resulted in an improved school atmosphere. Faculty members felt a sense of renewal, and students had more opportunities (Hereford, 1993).

Educators concerned about the negative effects of ability grouping can turn to several alternatives: hetereogeneous grouping (Riccio, 1985), multiage grouping (George & Alexander, 1993), individualized instruction (Dawson, 1987), regrouping by subject area (Slavin, 1987a), mastery learning (Slavin, 1987a) and cooperative learning (Manning & Lucking, 1991). In these heterogeneous arrangements, learners interact with students of other ability levels and ethnic backgrounds. The most effective strategies avoid group labels, equalize preparation time and instructional quality, frequently reassess students and group assignments, and counterbalance ability groups with social or academic activities that encourage interaction among peers of different abilities and backgrounds (Grant & Rotenberg, 1986).

School-Within-A-School (SWS). Even when educators carefully project future school growth and population changes, schools often grow so large that students experience feelings of anonymity. To avoid such feelings among young adolescents, middle level schools should include:

- small, secure and comfortable organizational sections in which learners feel known by other students and by at least one adult
- physical separation by grade level within the building
- a focus on belonging and identity for both young adolescents and teachers
- a structure that allows teachers and students to plan and work collaboratively in learning situations (Virginia Department of Education, 1990).

The School-Within-A-School (SWS), one means of achieving such an organizational approach, organizes students into separate "schools," using chronological age-grade grouping that represents the overall demographics of the larger school. The Carnegie Council on Adolescent Development (1989) suggested the SWS approach as a solution to large schools. A "house" may contain 200 to 300 students but no more than 500.

> Students in the house would constitute a microcosm of the school population in ethnic and socioeconomic backgrounds and in physical, emotional, and cognitive maturity, allowing students to learn from each other about human diversity. Students should remain in the same house as long as they were enrolled in the school, and view themselves as graduates of the house as well as of the school. (p. 38)

Teachers become familiar with their colleagues and may confer with others frequently about the progress of students. The SWS retains all the advantages of grade level grouping while providing significant learning and socialization opportunities (George & Alexander, 1993; National Association of Secondary School Principals, 1985).

One middle level school with an enrollment of 1,000 students elected to divide into two separate campuses of approximately 500 students, each with its own administrative body. Then, four units of approximately 125 students each provided an additional sense of familiarity. The two schools continued to exist in one building. Students from one school, however, did not interact with students from the other

during any time of the day. Students felt better about their school and teachers and had more opportunities for socialization.

Another "School-Within-A-School" at Irmo Middle School (Columbia, South Carolina) encouraged young adolescents to feel a sense of belonging and commitment to the school. "Spirit Week" featured developmentally appropriate activities designed to make students more aware of other young adolescents as well as the insititution itself. Wearing school colors, students participated in contests (winning did not depend on their developmental levels!) and group performances. Parents and families were invited to the school on Friday night to enjoy the feelings of school spirit and learn more about the school's efforts. Throughout the week, efforts focused on making students feel a significant part of the school.

Classroom Environment. The classroom environment plays a major role in the success of teaching-learning efforts. Classroom management techniques reflecting knowledge of 10- to 14-year-olds and a climate free of negative statements, sarcasm and fear tactics contribute to young adolescents' positive social development. Opportunities for student expression are essential.

According to the California State Department of Education (1987), "every middle grade student should experience a positive school culture which reflects a strong student-centered educational philosophy" (p. 80). The teacher plays a major role in determining the extent to which this climate is achieved; in fact, the National Middle School Association (1992) maintained that "the overall climate is itself a 'teacher'" (p. 15). Essential aspects of middle level schools include warmth, caring and respect. Students' personalities and abilities unfold under the care of individuals who have the highest levels of caring and sensitivity (California State Department of Education, 1987).

Young adolescents need to see themselves as valued members of a group that offers supportive and trusting relationships. They need to feel successful and to be praised and rewarded for that success. They need to become socially competent individuals who have the skills necessary to cope with everyday life. They need to believe they have a promising future and have the competence and motivation to take advantage of the opportunities society has to offer (Carnegie Council on Adolescent Development, 1989).

A positive verbal environment enhances learners' self-esteem and also the quality of the overall school experience. Unlike negative environments that cause children to feel unworthy, incompetent or insignificant, positive verbal environments satisfy children's psychological needs and make them feel valued. In speaking with children, perceptive educators focus not only on content, but also on the affective impact of their words (Kostelnik, Stein & Whiren, 1988). In positive verbal environments, educators:

- use words to show affection for and sincere interest in children
- send congruent verbal and nonverbal messages
- extend invitations to children to interact with them
- listen attentively to what children have to say
- speak courteously to children
- use children's interests as a basis for conversation
- take advantage of spontaneous opportunities to talk with each child informally
- avoid judgmental comments about children, either to them or within their hearing
- refrain from speaking when talk would destroy the mood of the interaction
- focus attention on children when they professionally engage with them (Kostelnik, Stein & Whiren, 1988).

In summary, each young adolescent deserves to be a successful learner and to receive recognition and respect. Positive classroom environments provide opportunities for achievement and success. Student achievement is encouraged and recognized, and cooperation is expected from both students and teachers (Virginia Department of Education, 1990).

Cooperative Learning. Students who work in teams learn to interact successfully with others. Research suggests that social skills improve when learners work cooperatively toward a particular goal and that some learners may need direct instruction in social skills to participate effectively in cooperative situations (Manning & Lucking, 1991).

Students express greater liking for their classmates as a result of cooperative learning. Relationships improve as students engage in positive interdependence, face-to-face interaction, individual accountability and social skills (Slavin, 1987b). For cooperative learning to be effective, students must get to know one another, communicate accurately and unambiguously, accept and support one another and resolve conflicts constructively (Johnson & Johnson, 1989, 1990).

Crosscultural Grouping. When allowed to choose group members, students usually select same-sex members of similar cultural or socioeconomic background. In crosscultural grouping, teachers organize students in groups that are diverse in gender, culture, ethnicity and social class. The research on cooperative learning indicates that students who work and study together form more positive feelings about one another (Manning & Lucking, 1991).

Teacher-Student Teams. Some teacher-student teams remain together for students' entire middle level school experience. Teaming provides opportunities for groups to work together toward academic and personal goals and to solve problems before they reach a crisis stage. This community of learners nurtures bonds between teachers and students and serves as building blocks for young adolescents' education. Teaming also provides an environment conducive to learning by reducing feelings of anonymity and isolation. Schools with successful teams have sufficient staff to make teams as small as possible, so teams know each other well (Carnegie Council on Adolescent Development, 1989).

Adviser-Advisee Program. Two significant works, *This We Believe* (National Middle School Association, 1992) and *Turning Points* (Carnegie Council on Adolescent Development, 1989), documented the need for middle level school educators to address affective as well as cognitive concerns. Young adolescents need guidance and support as they struggle to cope with the changing world and their changing selves (Gill & Read, 1990). *This We Believe* called for middle level schools to provide a caring adult to give young adolescents the individual attention they deserve. Similarly, *Turning Points* suggested that every middle level school student be well-known by at least one adult. The adviser-advisee program serves this function.

Sometimes referred to as teacher-based guidance, the adviser-advisee program ensures that all students have at least one adult who knows them well and also that all students belong to a small interactive group. Advisory groups seek to promote students' social, emotional and moral growth while providing personal and academic guidance. To reduce the student-teacher ratio, all faculty serve as advisers (including exploratory teachers, librarians and resource teachers). The most successful sessions occur daily at the beginning of the day, lasting at least 25 minutes (Arnold, 1991).

At Shoreham-Wading River Middle School (Long Island, New York), advisers meet daily with eight to ten students. Other counseling professionals reinforce the

adviser-advisee program: a psychologist, a guidance counselor and a social worker. These professionals not only work with the students, but also provide inservice activities for the advisory staff (Maeroff, 1990).

Advisers serve advisees as friend, advocate, guide, group leader, community builder, liaison with parents and evaluation coordinator. They also: provide a warm, caring environment; plan and implement advisory programs; assist advisees in monitoring academic progress; provide times for students to share concerns; refer advisees to appropriate resources; communicate with parents and families; maintain appropriate records; and encourage advisees' cognitive and psychosocial growth (James, 1986). The adviser-advisee program also provides an excellent opportunity to discuss the many questions and concerns young adolescents have about their development.

Activities during adviser-advisee sessions include meeting with individual students about problems; giving career information and guidance; discussing academic, personal and family problems; addressing moral or ethical issues; discussing multicultural and intergroup relations; and helping students develop self-confidence and leadership skills (Epstein & MacIver, 1990). Teachers working in advisory roles should: know each child as an individual; develop a secure and comfortable classroom atmosphere; try self-disclosure to show that teachers have problems, satisfactions and challenges; show concern for a student's problem or concern; organize units of learning with students and try "What's Bugging Me" sessions (Brough, 1985).

Ramirez (1992), a language arts teacher at Robert T. Hill Middle School (Dallas, Texas), feels one of the biggest challenges is to define the purpose of advisories for both students and teachers. So the advisory program will not become a supervised study hall, objectives need to be written and advisory-related problems and issues discussed in faculty meetings. Also, effective advisories require clearly established ground rules, such as: comments offered during advisories are confidential; differences are respected; problems at home or with other teachers can be shared (the teacher's name cannot be mentioned); and problems involving abuse, crime and drugs should not be discussed except individually with the teacher.

Wantagh Middle School (Wantagh, New York) started an advisory program with volunteers who believed that young adolescents need individual adult attention. The program includes almost every member of the staff: teachers, administrators, librarians and guidance counselors. Wantagh seeks to provide an adult advocate for each young adolescent. This adult sees the advisee in the morning, monitors student progress, and serves as the first line of communication between home and school. Now in its fifth year, the program has an advisory handbook and extended advisories that are held twice monthly. Some advisory sessions have a set purpose while others are left to adviser discretion. Benefits include the opportunity to know students in a nonacademic setting and to work with all ability groups. Also, staff and special area teachers become a part of the total school program (Andrews & Stern, 1992).

Peer Advising. Young adolescents can play significant advisory roles as they help peers through their psychosocial changes. Educators working with young adolescents can attest to the tremendous influence of peer pressure. While peer pressure often has a negative connotation, perceptive educators take advantage of peer pressure when they channel positive suggestions and constructive advice to students. Young adolescents may feel more comfortable talking with peers rather than confiding in the teacher, guidance counselor or other adult. To become a reality, peer advising needs only minimal training. Peer advisers refer pupils to the counselor, if needed.

Improving Self-Esteem. More than two decades ago, Purkey (1970) clearly showed the correlation between self-esteem and school achievement. Educators have long recognized how a sense of self-worth affects one's social development. Responsive middle level educators provide learning and social experiences with which young adolescents can identify.

To improve young adolescents' self-esteem, educators need to direct their attention toward three areas: 1) the school and its policies; 2) their own beliefs, perceptions and teaching behaviors; 3) organizational and institutional features (physical appearance of building, school or district curriculum guides, administrative procedures and expectations, school's statement of philosophy and objectives and student handbook) (Beane & Lipka, 1987).

Teachers, administrators and other professionals need to:

- know young adolescents, their developmental needs and thinking abilities
- greet each other by name in classrooms and halls
- work cooperatively and have discussions with students
- allow small groups of students to work together on productive activities
- expect some degree of noise when students actively solve problems and puzzles; dramatize events; make, build and create projects
- have persistent day-to-day contact with young adolescents
- believe in students' ability to learn and succeed
- recognize developmental needs and characteristics of young adolescents
- offer learning experiences that address social-personal issues of young adolescents
- develop variability in materials and activities to support diversity of learner characteristics
- involve learners in planning and evaluating learning experiences (Beane & Lipka, 1987).

Several research studies concluded that cooperative learning contributes to students' self-esteem—to their feeling liked by peers and to their feeling a sense of academic accomplishment. Cooperative learning addresses both these components (Slavin, 1983, 1987b, 1989/1990). Aronson et al. (1978) reported more significant increases in self-esteem in cooperative learning situations than in competitive classrooms. In competitive classrooms, students become either winners or losers, with the latter acquiring negative attitudes toward self and the school environment. In cooperative learning situations, students see each other as academically and socially competent partners rather than competitors. Such improved recognition of peers promotes better interpersonal relationships, thus leading to increased self-esteem (Towson, 1985).

Opportunities To Participate in Developmentally Appropriate Social Functions. Students need developmentally appropriate opportunities to mingle socially and to improve social skills, not "watered-down" versions of secondary experiences. Activities should not focus primarily on boy-girl pairing. During early adolescence, same-sex friendships take precedence; then, as development continues, cross-sex friendships begin to develop.

At one 6th-grade social function, the boys stood on one side of the room and threw popcorn at the girls. The girls stood on the other side and mostly giggled. A degree of social interaction occurred: the boys acknowledged the girls by throwing popcorn and the girls acknowledged their actions by giggling. While some adults might perceive this situation as "silly" or a "waste of time," this social interaction repre-

sented a beginning. Later that evening, some of the girls and boys talked to each other. During social occasions later in the semester, more cross-over occurred among the groups. The teachers understood the nature of young adolescent friendships and did not try to force cross-over among the groups. At no time did they force social interaction or chastise the boys and girls for their behavior.

One middle level school principal tried to meet young adolescents' needs for social interaction by keeping friends together throughout the school day. School schedules encouraged social interaction by placing students with friends in the cafeteria, in their units and classes, and during break periods (Lipsitz, 1984).

Other socialization opportunities include academic honors clubs, special interest clubs, debate teams, committees and other groups working together for a purpose. Socialization can also occur in learning groups.

Addressing Young Adolescents' Concerns and Questions About Psychosocial Development

Young adolescents who understand their psychosocial-emotional development become less preoccupied with personal matters and thus better prepared to cope with a rapidly changing society. Helping young adolescents better understand themselves can take several directions:

- First, middle level educators can help learners understand their shifting emphasis from a parent-centered world to a peer-centered world. Rather than feeling guilty or disobedient, the learner understands that such behavior is normal.
- Second, young adolescents need to be aware that friendships and cliques change. A student shunned by a clique one day might be readily accepted later in the week. Educators can also help young adolescents understand the changing nature of friendships; e.g., changing friends frequently and changing from same-sex to cross-sex friendships.
- Third, although caring middle level educators strive to make all students feel accepted by the school and the various peer groups, some young adolescents still feel a sense of anonymity. The move from elementary school to middle level school and the transitory nature of friendships and cliques can result in students feeling "lost."
- Fourth, young adolescents need to realize that, while failing to succumb to peer pressure can damage friendships, adhering to one's personal beliefs is more important.

Even in the midst of an already overcrowded day, middle level schools can provide sessions that help young adolescents understand themselves. Approaches may include opportunities for social interaction, appropriate large or small group classroom activities, adviser-advisee sessions, mini-courses, guidance counselors, community speakers and parent participators.

Addressing Contemporary Issues

As with physical development, contemporary issues confront young adolescents during their psychosocial development. Several problems surface as being particularly stressful: 1) being pushed to grow up too fast academically or socially; 2) peer pressure to engage in sex, alcohol and drugs; 3) concerns about AIDS and other health-related matters.

Postman (1983, 1985) and Elkind (1981) contend that parents and teachers hurry children to grow up too fast. Society's apparent urge to rush children through the childhood years takes a significant toll as evidenced in the high incidences of teenage pregnancy, alcohol and drug abuse, sexually transmitted diseases and stress-related ailments.

Such issues have special significance for middle level educators who all too often see young adolescents being hurried into adolescence and on into adulthood. Young adolescents sometimes adopt adult behaviors, yet their psychosocial development has not sufficiently matured to deal with substance use, academic pressure, peer-group situations and relationships with the opposite sex.

How can middle level schools help young adolescents deal with these issues?

- First, early adolescence should be viewed as an important developmental period with its own unique characteristics. Educators responding to the needs of young adolescents recognize the importance of contributing not only to learners' academic growth, but also their self-esteem and social and emotional development.
- Second, educators can provide age-appropriate activities (e.g., intramural athletics) that de-emphasize competition. Schools can also provide social activities involving all students, rather than only boy-girl activities.
- Third, many contemporary issues such as peer pressure and growing up too fast can be treated in adviser-advisee groups, guidance programs and special curricular areas.

Assessing Middle Level Schools' Response to Psychosocial Development

The "Psychosocial Development" section of the checklist in the appendix (pp. 88-89) assesses a school's efforts. This checklist serves as a beginning point for a more comprehensive assessment designed especially for one's individual school.

Cognitive Development

Broad curricular and instructional goals related to the young adolescent's cognitive development include:

- application of basic skills mastered in the elementary grades
- understanding of the interrelatedness of subject areas
- development of higher-order thinking skills
- development of cognitive skills necessary for lifelong learning
- exploratory opportunities to provide broad exposure to cognitive activities, in addition to a continuing emphasis on academic subject areas.

Appropriate Middle Level School Practices That Reflect Research on Cognitive Development

What developmentally appropriate practices address the above goals and also reflect contemporary research on cognitive development?

- First, with the onset of formal operations, some young adolescents see, for the first time, connections between present achievements and future roles (Dorman, 1983). It is important to emphasize, however, that some middle level school learners continue to function at the concrete operations stage. Their maturity

does not allow them to work effectively with highly conceptual content or with abstract thought processes such as analogy, hypothesis and deduction. Instruction for these students should be rich in experience, demonstration, practice, personal relevance and reality. Planning instruction at higher cognitive levels requires evaluating students to ensure instruction will be appropriate (Virginia Department of Education, 1990).

- Second, young adolescents' increasing ability to think calls for critical thinking and problem-solving activities.
- Third, young adolescents' increasing ability to see relationships and to synthesize information suggests the need for interdisciplinary units of study that cross subject area lines.
- Fourth, educators need to provide an intellectually stimulating environment with opportunities to work collaboratively and to engage in exploratory activities.

Three essentials undergird developmentally appropriate curricula:

- First, the curriculum challenges, yet does not overchallenge, students. Otherwise, learners run the risk of continued failure and lowered self-esteem.
- Second, a carefully articulated curriculum minimizes gaps as students move from unit to unit or grade to grade. Such a curriculum provides a clear articulation between elementary and secondary curricula.
- Third, middle level learning activities reflect student variance in levels of reading, thinking, attention span and concentration, and interest. Educators recognize and plan for differences in students' ability to generalize and to understand abstract concepts, as well as differences in interests and goals, cognitive responsiveness and personal adjustment (National Association of Secondary School Principals, 1989).

Grouping Students for Learning

Research indicates that grouping hetereogeneously for most or all of the day contributes to students' overall development. Special attention should be given to assigning students to classes reflecting diversity in gender, ethnicity, social class and developmental maturity.

A Carnegie Foundation report, *An Imperiled Generation*, summarized the harmful effects of ability grouping. The report concluded that such grouping has a devastating impact on how teachers think about students and how students think about themselves (Carnegie Foundation for the Advancement of Teaching, 1988).

Overwhelming research evidence indicates that ability grouping does not enhance student achievement (Dawson, 1987; Gamoran, 1986; Slavin, 1987a; Slavin, 1987b). Slavin (1988) concluded that "overall, the effects of ability grouping cluster closely around zero for students of all achievement levels" (p. 69). Some evidence suggests high-ability learners may gain from ability grouping at the expense of low achievers, but most studies do not find any achievement gain (Slavin, 1988). In fact, evidence suggests that ability grouping may actually reduce achievement levels among average- and low-ability learners (Dawson, 1987).

Moreover, ability grouping gives the "good" students one curriculum and the "poor" students a watered-down version. Teachers sort out students at an early age and relegate them to separate tracks for fast, medium and slow learners. Once a student is assigned to a track, there is no escape. Students tend to remain in a given track throughout high school (Murphy, 1993).

Research indicates that teachers interact differently with students in the various ability groups (Harp, 1989; Hiebert, 1983). Students in higher groups may be "chartered" (p. 185) to learn more, regardless of material taught (Gamoran, 1986). Hiebert (1983) studied teacher behavior in homogeneously grouped reading classes and concluded that lower-ability students spent more time on decoding tasks while higher-ability students worked on word meaning. Similarly, lower-ability students participated in oral reading activities while higher-ability groups read silently (Harp, 1989). In one study, teachers provided higher-ability students with lengthier, more positive evaluative comments over the school year. In contrast, teachers progressively described lower-ability students in briefer, more pejorative terms (Berliner, 1986).

Evidence also suggests that homogeneous grouping may seriously impair the self-esteem of lower-ability learners and artificially inflate that of higher-ability students (Wilson & Schmits, 1978). Although ability grouping may enhance the self-esteem of brighter youngsters, it may adversely affect the attitudes, achievement and opportunities of lower-ability students (Riccio, 1985).

In addition, ability grouping patterns often parallel students' nonacademic characteristics such as race or ethnicity, socioeconomic status and personal appearance. Lower socioeconomic status and culturally diverse learners often are placed in lower-ability groups, a practice that may be discriminatory since they are segregated along ethnic and social class lines (Dawson, 1987).

Alternatives to Ability Grouping. The National Middle School Association (1992) took the position that a fully departmentalized, ability grouped seven-day period was incompatible with the research on young adolescents and their cognitive characteristics. Likewise, all national reports and state studies on middle level school education recommended the elimination of tracking students by academic ability. How, then, can middle level educators avoid the hazards of homogeneous ability grouping? Chart 3-3 looks at several alternatives to this type of grouping.

Many middle level educators group students heterogeneously and then regroup them within the large group. This organizational approach can occur within and across student teams, allowing flexibility in arranging instructional times, resources, space, equipment and teachers.

Wheelock (1993) suggested that several components contribute to successful untracking efforts:

- School missions should emphasize high expectations for all and equal access to knowledge.
- Leadership at the school level should seek support from both teachers and parents.
- Plans for change should be based on sound research.
- Time should be allocated for staff development.
- Changes in school organization and climate should promote equal learning for all students.

Developmentally Appropriate Programs: Considerations

Cognitive Readiness Levels. The emerging cognitive capabilities of young adolescents require more sophisticated learning strategies and study skills (California State Department of Education, 1987). Curriculum and instruction should also reflect an understanding of young adolescents' vast diversity in cognitive development.

Chart 3-3
Alternatives to Homogeneous Ability Grouping

Grouping Method	A Brief Description	For Additional Information
Heterogeneous	Students grouped without regard to ability or academic achievement	Manning & Lucking, 1990
Developmental-age	Students grouped according to development or maturity levels	National Middle School Association, 1992
Multiage	Students grouped across age levels and according to individual needs and interests	Alexander & George, 1981
Cooperative Learning	Students grouped in pairs or small groups, working together toward group goals	Manning & Lucking, 1991
Regrouping	Students "regrouped" within the heterogeneous group	Slavin, 1988
Cross-age tutoring	Students grouped whereby older students tutor younger learners, assisting both in learning and achievement	Carnegie Council on Adolescent Development, 1989 Gilstrap, Bierman & McKnight, 1992

Cognitive developmental characteristics include increasing ability to:

- master concrete operations, begin formal operations and deal with the properties of the present world
- use cognitive skills to solve real-life problems
- deal with hypotheses involving two or more variables
- deal with abstract concepts
- deal with difficult academic concepts
- think critically and reflectively
- argue to convince others and clarify own thinking
- make generalizations
- use hypothetical reasoning
- consider ideas contrary to fact
- make judgments regarding behavior
- develop a sense of morality and ethical behavior
- take another's point of view
- develop personal attitudes and perspectives
- develop self-discipline
- develop independence and a concern for interdependence
- develop increasing recognition of cultural diversity.

Irwin (1992) pointed out that most middle level students continue to function primarily at the concrete level of thinking. When provided with adequate time and prompting, however, many of them can perform such operations as problem-solving, synthesis, analysis and evaluation. Teachers can encourage yet not require higher levels of thinking, since young adolescents tend to think concretely, even literally, most of the time.

Learning Styles. Young adolescents' rapid developmental changes give educators reason to believe that learning styles sometimes change. Previously successful teaching strategies may no longer be effective. When teaching adapts to their preferred learning styles, students demonstrate higher levels of achievement, show more interest in subject matter, approve of instructional methods and want other subjects to be taught similarly (Bell, 1986).

Suggestions for matching teaching strategies with learning styles include: 1) using all types of questions (i.e., those requesting factual information and those wanting value judgments); 2) using advance organizers in an attempt to relate past and present learning experiences; 3) setting clear purposes for learning experiences; 4) using multisensory experiences (i.e., listening as well as reading); 5) using a variety of review and reflection strategies (Cornett, 1983).

Middle level schools also need to assess an individual student's learning style. Several assessment instruments provide a means of determining specific styles, while still other instruments assess overall styles. The literature on learning styles continues to expand, yet most studies use broad-based approaches and do not deal specifically with the early adolescence developmental period. Readers wanting additional information are referred to studies by Dunn & Dunn (1979), Keefe (1987, 1990), National Association of Secondary School Principals (1979) and Stewart (1990).

Right Brain/Left Brain. When designing learning experiences and teaching strategies, educators need to consider whether a student has a left- or right-brain orientation. Lesson plans, learning modules and other educational experiences that address

both left- and right-brain hemispheres and processes (Quina, 1989) accommodate as many students' orientations as possible.

Springer and Deutsch (1985) maintained that left- and right-brain functions process information differently. Examples of differences in processing include (Quina, 1989; Springer & Deutsch, 1985): *left hemisphere*—convergent, cognitive, deductive, historical, analytical, objective, holistic, verbal and abstract; *right hemisphere*—divergent, intuitive, imaginative, timeless, subjective, nonverbal and concrete.

Right-brain students need opportunities to think divergently, take advantage of nonverbal material and experience concrete learning. Learning experiences and assessment procedures that address both left- and right-brain processes are essential. Teaching strategies include providing holistic experiences (art, music, dance and field trips), using the inquiry method, using different forms of listening (differentiation, imaginative and critical), and encouraging hypothesizing ("What would happen if . . . ") (Hester & Hester, 1983).

Learning How To Learn. Teaching students to "learn how to learn" is a critical goal as we approach the 21st century. Rapidly increasing knowledge, ever-advancing technological breakthroughs and students' growing empowerment in the learning process all indicate that learning will increasingly be considered a lifelong process. Young adolescents have developed to a point where they play a greater role in their own learning. Their social development allows cooperative efforts, their cognitive development allows higher levels of thought, and their overall maturity provides a sense of responsibility as they progress toward the goal of independent learning.

Perceptive educators emphasize student responsibility for learning by encouraging students to be active, rather than passive, learners and to be problem-solvers, inquirers and seekers of information. To reach these goals, they encourage students to:

- state what they expect to achieve by using a specific skill
- describe the procedures and rules they plan to use as they employ the skill
- predict the results of their use of the skill
- check the procedure they use as they employ the skill
- evaluate the outcome of using the skill and the way they employed it (California State Department of Education, 1987).

Students can be guided to:

- look for new information in readings, presentations and discussions
- look for clues that help to explain the relevance of what is already understood
- experiment with known information, search for connections and relate previously unrelated information by asking questions, defining issues, describing problems, formulating and testing hypotheses and presenting findings and conclusions
- recognize or create patterns and relationships that identify ways of breaking down complex ideas and concepts into manageable components
- develop models and use other strategies to represent patterns and relationships among parts and wholes, thus bridging the gap between existing and new information. For example, students can prepare: diagrams and charts; lists of comparisons and contrasts; descriptions of sequences, processes, causes; outlines; imaginative stories, scenarios, theories, arguments; items that incorporate several ideas or concepts; experiments and lab reports (California State Department of Education, 1987).

Active Learning. Young adolescents' level of cognitive development allows increased capacities to think and to accept responsibility for learning. Likewise, their steadily developing psychosocial abilities allow increased cooperation and ability to work with others toward common learning goals. Developmentally appropriate teaching and learning experiences take advantage of these increased abilities by providing opportunities for active participation in the learning process.

Active learning techniques encourage students to ask questions and to challenge accepted beliefs. Group activities may include opportunities to: reason with others; apply and integrate skills and knowledge; experience the joy and rewards of academic commitment and achievement; use supplemental materials such as software, video cassettes, laboratory equipment, studio supplies and community resources (Children's Defense Fund, 1988).

At Shoreham-Wading River Middle School (Long Island, New York), students rotate through a sequence of daily classes in physical education, art, music, industrial arts and home economics. They make jewelry and ceramics, paint pictures, produce videos, compose music on computers, participate in dramatic readings, build scale-model houses, cook food and sew clothing. Volunteers may participate in a chorus, band, orchestra and ensemble. The school also offers individual lessons in instrumental music and singing as a part of regular daily activities (Maeroff, 1990).

Equal Access to All School Experiences and Programs. All students should have equal opportunity to participate in educational experiences. Instructional practices that hinder students from reaching the most advanced curricular levels and prevent them from achieving at the highest levels mock the concept of equal access. One can find numerous violations of the equal access concept in middle level schools today. For example:

- An 8th-grade girl tried out for cheerleading with over 100 other girls, even though only 14 would be selected. While she memorized the cheers, learned the jumps and gave four days to the pursuit, the girl failed to "make the team." The school failed to provide equal access to over 86 girls, including the girl who practiced diligently to become a member of the team.
- A 7th-grade girl tried out for the school play. She remained after school and faithfully participated in the tryouts. Nearly 100 students tried out for the available parts. This time, however, even worse odds faced female would-be participants: of the 11 parts, the teachers needed only four girls! Not only did the school violate the concept of equal access, but the girls faced even more difficult obstacles.
- Another middle level school required 7th-grade students to choose among art, music and band. A young learner, showing talent and interest in both art and music, faced a difficult decision because the school schedule did not allow participation in all three areas or even two areas.

Educators can provide students equal access to all programs and activities. For example:

- One middle school principal assured parents that all students would have an opportunity to participate on cheerleading teams. "We have ten cheerleading teams. If more girls want to join a team, then we will begin additional teams." The school offered similar commitments to volleyball, soccer and other sports.

- Another time, teachers announced the opportunity to participate in a play. All students participated: some had speaking roles, others sang as a group. Everyone had the opportunity to be "on-stage." Other possibilities included having more than one play, or perhaps having a series of one-act plays scheduled over a weekend or even several weekends (Manning, 1993).

Appropriate Curricular, Instructional and Organizational Strategies That Enhance Cognitive Development

Success in addressing young adolescents' cognitive needs is more likely when instructional programs also accommodate learners' affective outcomes (Beane, 1990). While this section focuses on cognitive development, educators need to plan instruction that considers the relationship between affective and cognitive learning.

Core Academic Programs. Middle level core academic programs provide learners with specific subject areas as well as broader learnings (Carnegie Council on Adolescent Development, 1989). Subject matter and instructional methods need to satisfy cognitive, affective and psychomotor development in a full and balanced program. Such a curriculum consists of language arts, reading and literature, mathematics, science, social studies, physical education, health, music, art, foreign language, computer education, and appropriate vocational and career education skills (Virginia Department of Education, 1990). Broader learnings include thinking critically, solving problems, developing healthful lifestyles and being active citizens.

Core academic programs can integrate subject matter across disciplines and teach students to learn as well as to test successfully (Jackson, 1991). Middle level schools can provide this core of common knowledge, attitudes and skills through exploratory programs and interdisciplinary studies.

Integrating Subject Matter Across Disciplines. Curricular integration helps young adolescents to "learn how to learn" and to become independent, confident students who develop lifelong learning skills. Their successful transition to the secondary school depends on the extent to which learning activities are integrated with appropriate skill development (National Association of Secondary School Principals, 1993). Young adolescents' cognitive development permits an understanding of relationships and principles that cross curricular lines. In curricular areas such as social studies, their psychosocial development allows an understanding of people and the ability to perceive situations from others' perspective.

To acquire and use knowledge productively, middle level students need to understand that knowledge and skills cross subject areas (Virginia Department of Education, 1990). Yet, school curricula have traditionally been organized as territorial spaces carved out by academic scholars for their own purposes. Such organization limits access to broader meanings by not allowing learners to cross subject area boundaries for answers to questions. For curricular integration to become a reality, two crucial aspects warrant recognition. First, integration implies wholeness and unity rather than separation and fragmentation. Second, genuine curricular integration occurs when young people confront personally meaningful questions and engage in related experiences they can integrate into their own system of meanings (Beane, 1991).

Educators can help learners recognize the interdisciplinary nature of a topic. When encouraged to approach a topic from more than one angle, students are more likely to find some aspect to which they can make an intellectual commitment. Also,

integrated opportunities provide learners with sources of guidance and support that increase the likelihood of successful learning experiences (George, Stevenson, Thomason & Beane, 1992).

The insistence on a core academic program sometimes leads educators to believe that subjects should be taught separately. The core curriculum, however, can be organized around integrated themes that young adolescents find relevant to their own lives. For example, English, arts, history and social studies courses may be grouped into humanities and then organized around thematic units such as "Immigration." Likewise, mathematics and science may be grouped in themes such as "Mapping the Environment" (Carnegie Council on Adolescent Development, 1989).

Students need to understand relationships and patterns within the curriculum in order to synthesize information, solve problems and apply concepts in multiple subject areas. Organizing topics might include contemporary concerns such as homelessness, hunger, drug abuse and pollution (McEwin & Thomason, 1991). Other interdisciplinary or thematic units include "Developing Through Early Adolescence," "Making Wise Decisions," "Young Adolescents Around the World," "Technology and People," "Cultural Diversity," "Weather" and "Time."

Classifying courses as "academic" and "nonacademic" (National Association of Secondary School Principals, 1989, p. 34) can be counterproductive, with some courses viewed as frills. All curricular areas deserve equal respect. For example, a student might acquire basic facts in a science or mathematics class, yet develop a fuller understanding in later courses. Likewise, experiences in art, music, health and physical education can be powerful sources of cognitive growth. Young adolescents' cognitive development reaches a new height through the interrelationship of all curricular areas (NASSP, 1989).

At Marquette Middle School (Madison, Wisconsin), teachers conducted a thematic unit that exemplifies the integrated curriculum. The unit began with students listing questions about themselves and their world and then identifying a number of themes based on their questions. Then the students selected one theme, "Living in the Future," and listed possible ways to find answers to the questions. Their planning included naming the knowledge skills needed to answer the questions (Beane, 1991).

Several key factors contribute to the effectiveness of integrated units: relevant topics, clear goals and expectations, flexible activities and grouping strategies, student choice and input, adequate time, field trips, group cooperation, sharing opportunities and community involvement (Strubbe, 1990).

Interdisciplinary Team Organization. The National Middle School Association has taken a firm position on interdisciplinary team organization, suggesting that it is central to the middle level school concept (Vars, 1987). The most common of all middle level school organizations, interdisciplinary teams consist of a group of teachers, usually two to five, who represent different disciplines but share a common group of students, a common schedule and planning time, and an adjacent space whenever possible.

Characteristics of successful teams include: heterogeneous grouping of students; balance in terms of teachers' expertise, age, sex and race; formal team leaders with specific responsibilities; team organization for effective decision-making (e.g., goals, grouping, scheduling, homework and discipline); team sessions for systematic assessment of student strengths and weaknesses; development of team identity (Arnold, 1991).

Interdisciplinary teams offer unique opportunities for collaborative curricular de-

velopment and instruction. Teachers can correlate skills and concepts across disciplines, develop contracts and follow-up activities for at-risk students, design special projects, implement integrated teaching units, and change teacher and group size roles (Arnold, 1991). Research suggests that middle level schools with a high commitment to interdisciplinary teaming have significantly stronger programs (Epstein & MacIver, 1990).

Young adolescents benefit as a result. Teachers who understand individual learners' needs can convey useful information to team members, perhaps suggesting developmentally appropriate experiences that consider their cognitive and psychosocial characteristics. Teams also facilitate integration of curricular units. Team members can complement each other's efforts and "cover all bases" in addressing students' developmental characteristics.

How do young adolescents perceive interdisciplinary teams? Powell (1993) worked with 120 students and 4 teachers at Burkholder Junior High School (Henderson, Nevada) to learn how 7th-grade students actually perceived the team. Students' responses indicated they:

- viewed their team as an intra-group support network both in and out of school
- felt a part of the team, hence less isolated within the larger school context
- shared a commitment to learn
- had decreased levels of anxiety about learning and coming to school
- felt cared for by their teachers
- appreciated teachers knowing their learning styles
- felt more positive about the teaching-learning process.

Communities of Learning. Young adolescents often feel anonymous after their transition from a smaller elementary school to a larger middle level school. The advantages of "communities of learning" extend to both cognitive and social development:

- Learners working in small teams get to know one another sufficiently well to create a climate for cognitive development.
- Teachers reach more consensus on expectations and practices.
- Subject matter is more integrated.
- Instability of peer groups is lessened.
- Every young adolescent has at least one thoughtful adult who has the time and initiative to talk about personal and academic problems, the importance of performing well in school, and the importance of harboring positive feelings about oneself and one's school (Carnegie Council on Adolescent Development, 1989).

Flexible Scheduling. Rigid scheduling that resembles the secondary school is to be avoided. For example, the teaching of reading and language arts may require more time than most other subjects. Instructional time should be allocated according to the needs of the students and the nature of the content, rather than a fixed and unvarying schedule (Virginia Department of Education, 1990). Flexible schedules reflect a sound middle level school philosophy and ensure a greater degree of equal access to all instructional programs and student support services (California State Department of Education, 1987).

For example, the schedule of one middle level school allowed a number of "either-

or" situations. A 12-year-old girl with strengths in both art and band faced an either-or situation when informed that schedules did not allow her to participate in both areas. Such a policy violated her equal access right, forcing her to choose one strength over another.

Another school believed that students need a flexible schedule. The school developed a master schedule that provided flexible blocks of instructional time for each team of teachers and students. Its schedule fosters interdisciplinary team teaching by accommodating activities needing varying lengths of time and minimizing the disruption of "pull-out" programs. The schedule also contributes to in-depth studies by providing exploratory programs.

The schedule should provide for diversity of students' cognitive and affective abilities, as well as their need for exercise and rest. Such a schedule includes exploratory programs, adviser-advisee programs, extended blocks of uninterrupted time, teacher planning time, integration of subjects, varied lengths of instructional time, and innovation and experimentation with varied time schedules (Arnold, 1991).

Academic Counseling. Effective academic counseling provides young adolescents with timely access to critical information about the school curriculum and its personal implications for career choices. Teachers and counselors confer regularly about individual students' needs. Students need to acquire a clear concept of their cognitive ability in a way that does not damage their self-esteem and developing identity. During early adolescence, they develop lifelong values and attitudes about the significance of education and their chances of succeeding in upwardly mobile academic and career choices. A strong academic counseling program also includes direct, substantive parental involvement, enabling parents to offer input and also become aware of academic options and career choices (California State Department of Education, 1987).

One fairly large middle level school in an upper-middle class neighborhood provides small and large group academic counseling sessions. Counselors advise students in selecting courses (for middle and secondary school) and in considering college and career options. Parents play a major role in the program. The program has dual benefits: parents and counselors benefit from each other's knowledge of the learner, and learners see firsthand that their parents and the counselor work together as a team.

Cooperative Learning: Cognitive Aspects. Cooperative learning calls upon young adolescents' developing abilities to think and to work socially toward group goals. Rather than competing with one another, students work together in small groups of four or five. Considerable evidence (Manning & Lucking, 1991) indicates that cooperative learning contributes to academic achievement while simultaneously requiring individual accountability.

Most research studies showed that high, average and low achievers gain equally from cooperative learning experiences. Some studies, however, showed greater gains for low achievers, while others showed greater gains for high achievers (Slavin, 1985). Studies on cooperative learning and academic achievement reached agreement on two aspects: 1) cooperative learning methods usually have positive effects on academic achievement and 2) achievement effects do not result from all forms of cooperative learning (Slavin, 1988, 1989/1990).

Evidence indicates that cooperative learning methods that produce positive academic achievement share two common features. First, as they work toward group goals, team members function interdependently to earn teacher recognition or other

forms of success. Second, individual accountability is required as group success depends on individual contributions and learning of all members (Manning & Lucking, 1991).

Middle level educators sometimes have to defend their use of cooperative learning. Parents often feel that learners benefit more from working alone and that competition serves as a motivating force. Misunderstandings can be lessened when teachers inform parents that cooperative learning is only one form of small group instruction and that it includes individual accountability.

Peer-based Learning. Because peer influence during early adolescence is significant, students can benefit from peer-based learning activities. Cross-age tutoring programs and peer-based study groups can increase achievement in important ways. More time becomes available for active participation in the learning process, feedback increases and positive attitudes toward learning develop (California State Department of Education, 1987).

Cross-age tutoring satisfies young adolescents' developmental need for feelings of competence and achievement, for socialization, and for both cooperation and responsibility. Consider this cross-age tutoring situation. A group of 8th-graders confers in pairs as they prepare to tutor 6th-graders. The teacher has already met with the 6th-graders to determine their strengths and weaknesses and with the 8th-graders to discuss teaching methods—how to establish rapport, how to ask questions and how to motivate their charges. Working in pairs, the 8th-graders help the 6th-graders. The 8th-graders then meet as a group to discuss what methods worked and did not work. Finally, the teacher meets with the 8th-grade group to discuss possible changes in the next cross-age tutoring session (Gilstrap, Bierman & McKnight, 1992).

Exploratory Programs. The middle level curriculum should reflect young adolescents' need to explore areas of personal concern and interest. An exploratory focus enables students to better understand their developing capacities and interests during this time of change (National Association of Secondary School Principals, 1993).

Children's rapid development during early adolescence suggests the need for interest-based activities. Recognizing the vast number of topics that interest young adolescents, educators need to pr vide adequate exploratory programs that introduce them to a variety of topics, skills and content fields without requiring mastery. Such programs can be accomplished through a series of short courses or elective units that give students some sense of control over the kind of learning undertaken (NASSP, 1985).

The exploratory program should accommodate the physical, psychosocial and cognitive dimensions of some of the most traumatic changes young adolescents experience. Young adolescents require opportunities to explore their interests, talents and skills within personal and educational constructs. They need to identify who and what they are and consider who and what they want to be and can become. To accomplish these goals, exploratory programs must:

- help young adolescents define and pursue their current living and learning needs
- consider how students' developing interests and capacities can influence future school and life decisions (NASSP, 1993).

Short attention spans and the restlessness of changing bodies call for exploratory modules that relate to changing interests and meet for considerably less than an hour

and less than a semester. Exploratory courses, service clubs, special interest activities and independent study projects provide for developmentally appropriate activities (National Middle School Association, 1992).

Exploratory opportunities designed to develop this sense of connectedness may include:

- drama, home and industrial arts
- developmental and health concerns
- foreign languages
- study skills
- extensions of specific academic areas
- arts and crafts
- theatrical performance experiences
- games and physical activities
- conversation
- sustained silent reading
- independent study opportunities
- personal improvement programs
- clubs and student organizations
- historical, cultural and studio art
- dance, music and aesthetic assessment
- various elements of visual art, drawing, handbuilt pottery
- history of technology, communications, transportation, manufacturing
- computer keyboarding and word processing skills, graphics and telecommunications
- home economics studies: self-awareness, developing confidence, personal grooming and consumer education (Steffans, 1991).

With the exception of foreign languages, most schools do not schedule exploratory courses on a year-long basis. Nine- and 12-week "rotations" are especially common. For example, in grade 6, students explore art, music, drama and dance for nine weeks each. In grades 7 and 8, they choose an area for a semester's study. Students may take exploratory courses on a free elective basis one or two quarters per year. Some meet on a daily basis; others meet one to three times weekly (Arnold, 1991).

A survey of principals revealed that some exploratory programs (actually abbreviated versions of full-year or one-semester activities) included courses on computers, foreign languages, family life and study skills. But many other exploratory experiences included in-depth examinations of special topics such as cartooning, the stock market, calligraphy, culturally diverse groups, consumerism, outdoor education and robotics. The programs a school offers its students depend partly on the skills and talents of the teaching staff (Becker, 1990).

One middle level school offered a 7th-grade home arts exploratory experience. The nine-week course, designed for both boys and girls, helped students understand themselves, their families, their environment and other people. The teacher encouraged students to have a better understanding of their physical, social, emotional and cognitive development. The course emphasized development of lifelong skills: weeks 1-4 focused on nutrition, week 5 on home and greenhouse care, and weeks 6-9 on clothing. Students met in large groups for general instruction and in small groups for special projects.

Integrated Foreign Language Exploratory (I-FLEX), an exploratory program, considers the need to reconceptualize middle level curricula to emphasize cultural diversity, social problems and political processes. I-FLEX uses the following curricular components: general language, specific language, multicultural, career awareness and study skills. Various aspects of middle level philosophy are combined, such as exploration, hands-on learning, interdisciplinary teaching, individual and group projects, and cooperative learning. Depending on staffing and scheduling flexibility, the program can be offered for one quarter, 12 weeks, one semester or one year. I-FLEX can engage students in history, culture, fine arts, career exploration and study skills (Olmedo, 1993).

Regardless of the content, direction and design of the exploratory experience, several concerns warrant consideration:

- identifying methods especially appropriate for providing intellectual explorations
- identifying opportunities for intellectual exploration in each academic subject area
- developing middle level teaching strategies particularly suited to intellectual exploration in academic courses
- identifying whether certain nonacademic courses and experiences in the program are particularly suited to intellectual exploration
- identifying how extra-class activities can provide intellectual exploration (National Association of Secondary School Principals, 1989).

Independent Study. Independent study allows a student to pursue a topic in depth over an extended period of time. The teacher meets with the student to plan for independent study and to make decisions about goals, materials, methods, evaluation and deadlines. The teacher helps the student to develop a plan for conducting the study and, most important, to structure his/her time. After the teacher and the student decide on a topic, they confer regularly according to a set schedule to check progress and discuss concerns as needed. As the project nears completion, the teacher schedules a final conference to review the study and to set a time for sharing the project with the class.

The young adolescent's developmental need to explore personal interests makes independent study an excellent instructional method. Some learners, however, need considerable guidance and encouragement for projects to be successful (Gilstrap, Bierman & McKnight, 1992).

Independent study also provides a means of balancing academic and student needs. For example, students may want to work individually or in small groups to pursue orbital studies or other common interests. Such studies exemplify variety and choice, allowing young adolescents to experience meaningful academic learning at a critical time of their development. In providing opportunities for independent study, the teacher's role changes from dispenser of information to facilitator and collaborator in learning. Independent study actually helps teachers and students work together more closely to explore new interests and integrate subject matter (George, Stevenson, Thomason & Beane, 1992).

Homework. Schools can help students maintain and extend learning and study skills through careful design and evaluation of regular homework assignments. Evidence indicates that students who do homework achieve better in school and behave better than those who do not. In meeting these worthwhile goals, teachers plan

useful, responsive, engaging, varied and challenging homework that benefits student learning, attitudes and development (Maryland State Department of Education, 1989).

Homework in the middle level grades:

- provides young adolescents with opportunities for exploration
- encourages them to invest their time in worthwhile educational activities
- helps them practice skills taught in class
- prepares them for their next lessons
- helps them explore and extend many new skills and talents
- contributes to collaboration and creative work
- encourages their communication with parents, peers and others in the community by requiring them to conduct interviews and surveys and perform service activities
- contributes to their learning, social and personal growth.

Homework patterns across the middle level grades can prepare students for the transition to secondary school homework requirements. Practices may include more homework with each grade, moving toward one to two hours per night; more independent work; and more long-term projects based on student choice and interest (Maryland State Department of Education, 1989).

Homework should be provided frequently and carefully evaluated by the teacher. To be most effective, homework should be coordinated among teachers and related to class goals and a current study topic. Unlike drill work, homework should require careful thought, cognitive effort and use of learned skills, as well as lead to acquisition of new knowledge (National Association of Secondary School Principals, 1985).

Some homework assignments can encourage students and their families to discuss school work at home. Teachers need to provide parents with information on homework policies and assignments, and suggest how they can help to monitor, assist and discuss work in all subjects.

Character Development. Every young adolescent needs opportunities to personalize ideals and develop the ability to make reasoned moral and ethical choices (California State Department of Education, 1987). A major goal of the middle level school includes development of character and a sense of values and morals. In fact, a direct, positive correlation exists between the ideals for which students strive and the academic success they experience in school. Young adolescents can be helped to value hard work, personal responsibility, honesty, cooperation, self-discipline, freedom, human diversity, goodness, beauty, reality and education.

The diversity of the public schools and the rights of parents to influence values education make the school's role increasingly difficult. Middle level schools, however, can still provide developmentally appropriate experiences that help young adolescents develop their own sense of right and wrong. For example:

- Curriculum guides and instructional materials can focus on the significance of reasoned and ethical choices.
- Assignments can encourage thinking about moral and ethical struggles of literary and historical personalities.
- Inservice training for teachers, counselors and administrators can address ways of dealing with moral and ethical struggles (California State Department of Education, 1987).

In lieu of a separate program for character development, educators can incorporate commonly accepted ideals and beliefs in adviser-advisee programs, exploratory programs, interdisciplinary units and counseling sessions.

Computers and Technological Literacy. Computers have become a permanent part of schools and society. Basic keyboarding and word processing (the electronic equivalent of penmanship), along with other computer applications like databases and spreadsheets, deserve to be taught prior to the 9th grade. All young adolescents need to acquire these skills to achieve success in school and society (Maryland State Department of Education, 1989).

Young adolescents have developed sufficient independence and cognitive abilities to work with computers and other equipment. In some schools, however, gifted and talented students as well as slow learners often have priority access for enrichment and remedial purposes. Students in the middle, usually the majority, do not always have access to computers. Middle level schools subscribing to the equal access philosophy have a responsibility to make computers equally accessible to all students.

Addressing Young Adolescents' Concerns About Cognitive Development

As with other forms of development, young adolescents need to understand that considerable diversity characterizes cognitive development. Academic instruction should provide them with opportunities to function at different levels of thought. Just as educators do not expect all 12-year-olds to kick a soccer ball with the same skill and ease, learning experiences should not be geared toward one level of thought or perception.

Addressing Contemporary Issues

Multiple Intelligences. The theory of multiple intelligences (Blythe & Gardner, 1990; Gardner, 1987a; Hatch & Gardner, 1988; Walters & Gardner, 1985) discussed in Chapter 2 deserves consideration when planning and implementing educational experiences and when assessing students' potential. Multiple intelligences can provide alternatives to current education practice in several areas:

- Educators can address human abilities and talents other than the commonly considered linguistic and logical-mathematical intelligences (Gardner, 1987a).
- Shifts in instructional emphases may be necessary. For example, in typical classrooms relying heavily on linguistic and logical-mathematical symbol systems, learners have little opportunity to develop musical intelligence.
- Multiple intelligences theory challenges the viability of standardized, machine-scored, multiple-choice assessments that do not allow each intelligence to be measured (Blythe & Gardner, 1990).

In light of his theory of multiple intelligences, Gardner (1987a) suggested a new set of roles for educators:

- First, educators might become "assessment specialists" (Gardner, 1987a, p. 191) who would try to understand as sensitively as possible the abilities and interests of students. These specialists could use "intelligence-fair" (p. 191) tests to look specifically at spatial and other individual abilities rather than measuring only traditional forms of intelligence.

- Second, Gardner recommended the teaching of arts and humanities in a manner that reveals and builds upon students' latent abilities in these areas.
- Third, the teacher's role can include matching students' profiles, goals and interests to particular curricula and styles of learning.
- Fourth, Gardner suggested educators (or perhaps one designated educator) assume responsibility for matching students to learning opportunities in the wider community. As apprentices or interns in organizations, students gain a feeling for the different roles of society (Gardner, 1987b).

The teacher's role takes on new meaning when educational experiences reflect the research on multiple intelligences. The teacher learns to observe learners from seven different perspectives and to provide resources to facilitate center- and project-based learning. The teacher works with students rather than for them, exploring what they explore, discovering what they discover and often learning what they learn. Satisfaction comes from student enthusiasm for learning and independence, rather than test scores and ability to sit quietly. Also, planning for learning requires providing for diverse modes of learning in which teachers become more creative and multimodal in their own thinking and learning (Campbell, 1992).

Putting Assessment in Its Proper Perspective. In the 1970s, American educators faced numerous legislative requirements for testing that reflected the concerns of the accountability movement. Believing schooling to be ineffective, legislators mandated establishment of obligatory tests to show whether students could display at least minimal competence in the three Rs (Popham, 1993).

Gardner (1987a) summarized his feelings toward testing:

> I am not worried about those youngsters who are good at everything. They're going to do just fine. I'm concerned about those who don't shine on the standardized tests, and who, therefore, tend to be written off as not having gifts of any kind (p. 192).

While Gardner's statement has direct relevance to all learners, young adolescents function in a particularly vulnerable position. These learners have just left the supposedly safe confines of the elementary school and are experiencing rapid physical, psychosocial and cognitive growth. At the same time, they are bombarded with an overemphasis on testing.

The Association for Childhood Education International has taken a strong position against standardized testing in preschool and K-2. Further, ACEI "question[s] seriously the need for testing every child in the remainder of the elementary years" (ACEI/Perrone, 1991, p. 137). Stressing the inappropriateness of standardized testing, ACEI:

> oppose[s] . . . using test results to make any important judgment about a child. . . . [Testing]: results in increased pressure on children, setting too many of them up for devastating failure and, consequently, lowered self-esteem; does not provide useful information about individual children, yet often becomes the basis for decisions about . . . promotion and retention in the grades, and placement in special classes. (ACEI/Perrone, 1991, p. 141)

Educators who recognize the need to place assessment in its proper perspective do not allow standardized testing to restrict or limit a school's possibilities. In Lipsitz's (1984) study of successful middle level schools, she found that successful schools accentuated the positives of standardized testing: tests documented weaknesses and

pinpointed the need for time and staff; tests showed schools' effective areas; and tests served as useful diagnostic tools for individual and group remediation.

Middle level educators need to look seriously at testing, determine its effects on cognitive and psychosocial development, and seek authentic assessment alternatives to traditional testing practices. Lee (1992) suggests nonstructured assessments such as writing samples, checklists, projects and teacher-developed tests. These assessments can be placed in a portfolio so teachers can evaluate students' work over time in order to chart growth and performance.

Wolf, LeMahieu and Eresh (1992) also recommend a portfolio approach. In all classes, students compile a portfolio that contains class work, journals and projects. After each nine-week period, teachers meet with individual students to select their representative work in particular curricular areas or in an interdisciplinary project. The initial portfolio replaces the quarterly final or unit test and also allows students to reflect upon their work and their performance. On the basis of the portfolios, teachers assign grades or narrative reports. The reports go home with a sample of the student's typical and best work from each curricular area. Parents can include comments directly in the student's portfolio.

Motivation. Motivation during the early adolescence period closely relates to social development and, in many cases, directly influences perceptions of social events. The emergence of new cognitive abilities and the expanded competence in social situations deserve consideration as teachers plan motivational strategies. With growing independence and ability to think critically, young adolescents increasingly tend to use peers as sources of wisdom and authority (Potter, 1984). Motivational techniques that work well with young children may be ignored by 10- to 14-year-olds.

Learning depends on students' excitement about learning. Learners often get their values and perceptions of what is important from their parents and the community. The beliefs, principles and values of a community set the tone for much of what occurs in school. A community that holds scholastic achievement in high regard encourages students to excel in learning despite the many competing pressures such as television, clothes, cars and sports that can detract them from the goals of education (Murphy, 1993).

Expectations of success and failure also affect learners' motivation and ability to learn. Judgments about one's ability and emotional reactions of pride and hopelessness all contribute to the extent one uses metacognitive strategies to learn or to improve learning. Learners who believe their lack of ability to be the cause of failure develop a sense of helplessness (Ames, 1990). This theory of the relationship between motivation and feelings of self-worth might be especially valid for middle level educators who work with learners forming perceptions of cognitive ability.

Bacon (1993), in his study of 6th- and 7th-graders' accepting responsibility for learning, made several interesting, yet disturbing, observations. For example, when compelled to engage in learning activities, students did only the minimum required to complete the assignment. If teachers provided a choice, they most often preferred talking to their friends, reading materials not required for class and drawing "doodles" (p. 203). Some students did not complete assigned work, but avoided activities that might lead to confrontation with teachers. Students seemed to tolerate and endure classes that did not seem to instill a strong desire to learn.

Thomason and Thompson (1992) recommended several practices designed to increase young adolescents' motivation:

- Preinstructional decisions: create an inviting environment, allow for a participatory democracy and implement heterogeneous grouping.
- Expect success: connect success to effort (i.e., success depends on effort rather than luck) and help students redefine success as exceeding personal goals rather than competing with other learners.
- Use extrinsic incentives appropriately: provide equal opportunities to be successful, reward efforts and clearly define the task.
- Capitalize on intrinsic rewards: maintain the correct balance for assignments, avoiding work that is too easy or too hard; use novelty (i.e., media and technological advances); enable peer interaction; provide autonomy and personal control over learning and behavior.

Critical Thinking Skills. Developmentally appropriate curricula and instructional techniques reflect an emphasis on thinking skills for all students. Upon completing the middle level school, every student needs the capacities for critical thought and effective communication. Evidence indicates that young adolescents experience a rapid unfolding of their cognitive capacities and their ability to think reflectively and to think about thinking. Such developmental changes open the door to more complex and abstract thought processes that have profound implications for the development of moral reasoning, problem-solving, critical thinking, and the ability to use scientific methods and to make aesthetic judgments (California State Department of Education, 1987).

Assessing Middle Level Schools' Response to Cognitive Development

Appendix A provides a checklist for educators to evaluate their response to young adolescents' cognitive development. As with the physical and psychosocial developmental areas, learners benefit the most when educators consider their school's goals for responding to students' cognitive development.

Community Service for All Young Adolescents

Community service is a developmentally appropriate educational experience for young adolescents. Experiencing feelings of altruism and idealism, they reach out to teachers, parents and other significant adults for meaningful community participation. A sense of belonging to a community larger than school, family and peer group emerges during this developmental stage (Allen, Splittgerber & Manning, 1993).

The best youth service programs are developed at the local school setting. Teachers and students need to have a great deal of latitude in selecting service projects. Also, service strengthens the school program when activities reflect the school curriculum. The complete range of subject areas, including the sciences, the humanities and the arts, can be designed to reflect service projects (Allen, Splittgerber & Manning, 1993).

Opportunities to contribute to society and to develop responsible citizenship contribute to young adolescents' school success and foster the spirit of volunteerism. In performing community service, young adolescents discover new skills, develop a sense of competence, try out socialization skills, take part in the adult world, test value systems and make decisions, all supported and guided by caring adults (Schine, 1987, 1989).

At Shoreham-Wooding River Middle School (Long Island, New York), almost every student performs some community service. As part of a curriculum unit, groups of students leave the building for a double period once a week for six to eight weeks

under the supervision of a teacher and four part-time aides. Groups work with special needs children in a hospital and with elderly persons in retirement homes. A representative from the hospital visited the school to talk about the capabilities of the children they would meet. Likewise, a retirement home staff member visited to explain how to engage elderly persons in activities (Macroff, 1990).

Another community service success story occurred at Whittier Middle School (Sioux Falls, South Dakota). Known for its community service and volunteerism, the school collected 14,000 pounds of food for local food pantries, raised $15,000 for charity and $25,000 for March of Dimes through Walk-America programs. The school's principal considers these conditions essential for successful community service programs:

- short-term projects with specific beginning and ending dates
- action-oriented projects reflecting the nature of middle level learners (e.g., food drives and walk-a-thons)
- participation of a large number of students
- student involvement in planning
- faculty support and guidance
- emphasis on intrinsic incentives
- communication between school and community service agencies
- opportunities to celebrate community service projects.

The principal concluded community service has a positive impact on school climate. Also, students' self-esteem improves as they develop a sense of pride, and parental support increases (Kiner, 1993).

Schools can collaborate with youth-serving organizations (e.g., Boys and Girls Clubs, 4-H, Camp Fire, Boy and Girl Scouts) to develop student service placements within the community. Social service agencies, groups serving the elderly and the handicapped, Candy Stripers, Habitat for Humanity and Special Olympics also provide opportunities for young adolescents to build meaningful and lasting relationships (Jackson, 1991).

Scales (1991) listed several community service projects that have been successful, both for the learners and the community:

- The Magic Me program (Baltimore, Maryland) pairs middle level youth for the school year with nursing home residents.
- Challenger Middle School (Colorado Springs, Colorado) created HUGSS—Help Us Grow Through Service and Smiles. Each of the school's nine academic areas is responsible for school year service projects. The school curriculum realistically reflects community service projects.
- In Washington State, students who have been through the Governor's Summer Citizenship School work with at-risk middle level students, their teachers and advisers to design and conduct community service projects.
- The Lutheran Bortherhood's social studies program, Speak for Yourself, encourages 7th- and 8th-grade students across the U.S. to reflect on current issues and to share opinions with government leaders.
- The Early Adolescent Helper Program works with schools to place 10- to 15-year-olds in community service projects such as Head Start and senior citizen centers.
- The Association of Junior Leagues' Teen Outreach Program combines curriculum-based life-skills instruction and volunteer community service.

As with all middle level school programs and services, equal access continues to be a top priority. Encouraging only selected school groups (e.g., honors clubs and science clubs) to participate in community service fails to give all students equal opportunity.

Re-engaging Parents: Essential to All Middle Level School Efforts

Effective middle level schools work closely with their communities and parents. Volunteers and guests enrich the instructional program and provide important benefits for both school and community. Also, cooperative involvement and relationships enhance the quality of instruction and learning in middle level schools (Virginia Department of Education, 1990). Such schools encourage parental support in addressing young adolescents' physical, social and cognitive development and their striving toward independence. In many communities, however, parents do not play integral roles in middle level schools. Unfortunately, high levels of parental involvement are difficult to achieve due to the structure and character of middle schools, the nature of young adolescents, and the changing academic and social demands of the school environment (Involving Families in Middle Schools, 1992).

Re-engaging Parents and Families: A Rationale

A recent survey of 8th-graders and their parents revealed:

- Two-thirds of the students never or rarely discussed classes or school programs with parents.
- One-quarter of the parents never or rarely checked homework.
- Half of the parents had attended a school meeting since the beginning of the year.
- Two-thirds of the parents had never talked to school officials about the academic program.
- Only one-third of the parents belonged to a parent-teacher organization (Parents Key to Classroom Experiences, 1991).

These findings indicate the need to re-engage parents and families in the education of their young adolescents. Partnerships between parents and school personnel enhance the education of young adolescents. They also provide parents with opportunities to play crucial roles in ensuring children's health and safety, in preparing them for school, and in creating a home environment that contributes to school achievement and overall development. When parents become knowledgeable partners with schools in their children's education, students benefit in their school work, attitudes and aspirations for continued schooling (Maryland State Department of Education, 1989).

Similarly, the National Middle School Association (1992) documents the importance of parental understanding and approval of the middle level program. NMSA suggests that educators initiate direct communication with parents through face-to-face and telephone conferences, invite parents to initiate contact, and encourage three-way conferences of student, parent and teacher.

Suggestions for Re-engaging Parents and Families

Through memos, notices, report cards and conferences, educators can share ideas for assisting young adolescents at home. They can invite parents to attend student performances and participate in classroom activities and parenting workshops. Fi-

nally, parents can be encouraged to join advisory councils and advocacy groups at school, district or state levels which monitor schools and work for school improvement (Maryland State Department of Education, 1989).

Parent-teacher organizations represent another important way in which schools can reach out to involve parents. These organizations can be particularly important in offering parents opportunities to decide what they need to know about early adolescence.

Participation on school-wide building governance committees also provides parents with meaningful opportunities to help define the school's mission and to join in decision-making on building-wide issues and problems. The parents' role must be carefully defined to complement rather than conflict with school staff's role in developing the academic program (Carnegie Council on Adolescent Development, 1989).

In the effort to re-engage parents and schools, parents can be encouraged to take several initiatives: 1) talk to children about school work and become actively involved in their school life; 2) set and enforce rules on homework and television watching; 3) see that children get to school on time. Likewise, schools and communities can provide more involvement opportunities for parents and, in some cases, create programs that help parents guide children through school. Other efforts include meeting with individual parents, sending notes home about children's performance and holding school meetings at times convenient for working parents (Parents Key to Classroom Experiences, 1991).

Schools can promote trust, collaboration and communication between parents and schools by:

- assigning each student an adviser for the entire period of enrollment who knows the student's family
- forging alliances with parents in planning a course of study during the middle grade years that will enable children to reach their full potential
- encouraging parents to participate with their child in conferences with teachers
- encouraging parents to tutor young adolescents or monitor completion of homework
- designing home-learning activities that draw on parents' strengths
- encouraging parents, grandparents and other adults to play useful roles in daily school life (Carnegie Council on Adolescent Development, 1989).

Other ways to involve parents and families include:

- Establish a clear, welcoming parental involvement policy and plan a methodical strategy to inform all parents and families of the policy.
- Organize the school so that at least one person knows each child well and serves as a point of contact.
- Ensure that the school office conveys a friendly first contact for families.
- Encourage and sponsor parent-to-parent communication and events.
- Designate a full-time parent contact person responsible for promoting school/home collaboration.
- Provide a parent room in the school building.
- Determine with parents their particular needs and concerns and provide family services where needed.
- Provide translation services and diverse methods for communicating with families with limited English proficiency or low literacy (Berla, 1992).

Schools can take a three-pronged approach to developing parent education programs. For example, educators can help parents understand young adolescents' developmental characteristics and, thus, respond appropriately to their changing behavior. Parents need to understand the vital concepts that distinguish the middle level school from elementary and secondary schools.

Programs designed to achieve these ends can be purchased or developed by educators. Packaged programs require less preparatory time and usually minor revision. They may be specific, however, only to the community for which they were developed. (An example of a packaged program is *Living with 10- to 15-Year-Olds: A Parent Education Curriculum*, Center for Early Adolescence, University of North Carolina at Chapel Hill, Carr Mill Rd., Ste. 223, Carrboro, NC 27510.) Developing a parent education program based on specific family and community needs might prove more effective, and be received more enthusiastically by parents. Regardless of the format selected, an assessment or needs inventory should first be conducted to determine preferred methods and content (Manning, 1992a).

Re-engaging parents requires involving them actively as team members in their child's educational program and with the school as a whole. This collaborative relationship between parents and schools gives young adolescents the support of a united group of advocates.

CONCLUDING REMARKS

For many years, middle level schools did not receive their fair share of attention and professional consideration. The middle level school curricula lacked a clear purpose. Moreover, prevailing views held that organization played a greater role than curriculum and that the middle level school served only as a transition between elementary and secondary school. In essence, middle level schools did not really know what constituted a curricula for young adolescents.

The recent emphasis on improving educational experiences for 10- to 14-year-olds is the result of a concerted effort. Professional organizations, foundations, corporations, and state and national agencies have issued calls for reform, based on developmental considerations. Knowledge of how 10- to 14-year-olds develop and of the essential elements of effective middle level schools provides a sound basis for planning and implementing educational experiences for young adolescents during the 1990s and beyond.

4: Resources for Middle Level School Educators

Responding to the need for middle level school reform, various groups and institutions have produced numerous publications, reports and studies that urge developmentally appropriate curricula and instruction. To assist readers in locating these and other resources, this chapter is divided into six major sections:

- Professional Organizations
- State Departments of Education/Government Initiatives
- Foundations/Corporations/Endowments/Programs
- National Resource Centers
- Youth Organizations
- Selected Annotated Publications

PROFESSIONAL ORGANIZATIONS

Association for Childhood Education International (ACEI), 11501 Georgia Ave., Ste. 315, Wheaton, MD 20902-1924, (301-942-2443, 800-423-3563). Publishes *Childhood Education* and *ACEI Exchange* (5 times annually), *Journal of Research in Childhood Education* (biannually), three division newsletters (quarterly), books, pamphlets and position papers. Conducts topic workshops and annual study conferences that focus on timely issues and concerns. Of particular interest to middle level educators is ACEI's division newsletter *Focus on Later Childhood/Early Adolescence*.

Association for Supervision and Curriculum Development (ASCD), 125 N. West Street, Alexandria VA 22314 (703-549-9110). Publishes *Educational Leadership* with special articles on middle level school education (8 times annually), books and booklets. Several publications deal with areas of interest to middle level educators (e.g., urban education, collaboration, empowerment of teachers, motivation and cooperative learning).

National Association of Elementary School Principals (NAESP), 1015 Duke St., Alexandria, VA 22314 (703-684-3345). Publishes *Principal* (5 times annually) and various books and handbooks. While NAESP focuses mainly on the elementary level, the middle level is also addressed. *Principal* regularly includes "Middle School Notes" and occasionally features the middle level school education theme.

National Association of Secondary School Principals (NASSP), Council on Middle Level Education, 1904 Association Dr., Reston, VA 22091 (703-860-0200). Publishes *NASSP Bulletin* (9 times annually, with special theme issues on middle level school education) and various monographs and books (e.g., *An Agenda for Excellence at the Middle Level* and *Middle Level Education's Responsibility for Intellectual Development*). NASSP also publishes *Schools in the Middle*, which focuses on current issues, trends and practices.

National Middle School Association (NMSA), 4807 Evanswood Dr., Columbus, OH 43229 (614-848-8211). Publishes *Middle School Journal* (5 times annually), newspaper *Middle Ground* (quarterly), newsletter *Target* (quarterly), occasional papers *Midpoints*, and various monographs and position papers. Monograph topics include adviser-advisee guidance, interdisciplinary teaching, self-concept, young adolescents and their teachers, classroom management and working with parents. NMSA conducts local, state and national conferences.

Specific Subject Area Organizations

National Council for the Social Studies (NCSS), 3501 Newark St., NW, Washington, DC 20016 (202-966-7840). Publishes *Social Studies* (5 times annually) and *Social Education* (7 times annually) on curricular and instructional issues of interest to middle level educators. Annual meetings and conventions focus on various areas of the social studies. A 1991 Position Statement on "Social Studies in the Middle School" recommends basing both content and instructional methods on young adolescents' development.

National Council of Teachers of English (NCTE), 1111 Kenyon Rd., Urbana, IL 61801 (217-328-9645). Publishes *Language Arts* and *English Journal*, which occasionally address topics related to middle level school learners. While NCTE does not have an official statement on middle level education, the organization provides many resources for middle level educators and their students: evaluation criteria for curriculum guides, ways to improve instruction, planning in a world of change, teaching the gifted student, and whole language.

National Council of Teachers of Mathematics (NCTM), 1906 Association Dr., Reston, VA 22091 (703-620-9840). Publishes several journals and yearbooks (e.g., *Mathematics for the Middle Grades*), *Mathematics Education Month* (April), and *IDEAS from the Arithmetic Teacher: Grades 6-8 Middle School*. NCTM also sponsors competitions for 7th- and 8th-graders (i.e., MATHCOUNTS).

National Science Teachers Association (NSTA), 1742 Connecticut Ave., NW, Washington, DC 20009-1171 (202-328-5800). Published a 1986 Position Statement on Middle School Science: "Science Education for Middle and Junior High Students," *Science and Children*, 24(3), 62-63. Other publications include *Middle School/Junior High Science* and *Physical Science Activities for Elementary and Middle School*.

STATE DEPARTMENTS OF EDUCATION / GOVERNMENT INITIATIVES

California State Department of Education, 721 Capitol Mall, P.O. Box 944272, Sacramento, CA 94244-2720 (916-445-4688). Published *Caught in the Middle* (1987), which focuses on curriculum and instruction, student potential, organization and structure, teaching and administration, and leadership and partnership.

Florida House of Representatives, The Capitol, Tallahassee, FL 32301 (904-644-6447). Published *The Forgotten Years* (1984), which examines the condition of young adolescents in Florida and reports on the impact of the PRIME legislation designed to improve middle level education.

Maryland State Department of Education, Division of Instruction, Baltimore, MD 21201 (301-333-2000). Published *What Matters in the Middle Grades* (1989), which provides recommendations in such areas as outcomes of middle level education, who needs to interact in the middle level grades, organization and delivery systems, types of assistance schools need, and how recommendations can be best implemented.

New York State Department of Education, Middle Level Education Program, Albany, NY 12234 (518-474-5844). Published *Regents' Policy Statement on Middle-Level Education and Schools with Middle-Level Grades, Comparing and Contrasting*, which examines New York's efforts, and *Resource Monograph on the Middle Grades*, which focuses on pupils, programs and processes.

Virginia Department of Education, Middle School Service, P.O. Box 6-Q, Richmond, VA 23216-2060. (804-225-2056). Published *Framework for Education in the Middle School Grades in Virginia* (1990) and *Restructuring Education in the Middle School Grades* (1991).

FOUNDATIONS / CORPORATIONS / ENDOWMENTS / PROGRAMS

Carnegie Council on Adolescent Development, 11 Dupont Circle, NW, Washington, DC 20036 (202-265-9080). Published *Turning Points* (1989), a detailed description of the schools young adolescents need. Other Carnegie reports include *AIDS in Adolescence: A Rationale for Concern* (Hein, 1988) and *Preventing Abuse of Drugs, Alcohol, and Tobacco by Adolescents* (Falco, 1988). While both reports focus on adolescents, educators can learn appropriate preventive measures during the middle level school years.

Children's Defense Fund, 25 E St., NW, Washington, DC 20001 (202-628-8787). Published *Making the Middle Grades Work* (1988), which focuses on the problems of middle level students, the need for better middle level education (e.g., subsection on "A Blueprint for Teaching Young Adolescents Effectively"), school practices and state initiatives to improve education.

Early Adolescent Helper Program, National Center for Service Learning in Early Adolescence, Center for Advanced Study in Education, Graduate School and University Center of the City University of New York, 25 W. 43rd St., Ste. 612, New York, NY 10036-8099 (212-642-2947). Administers Helper Program for young people interested in meaningful community service. Resources and materials include program guides (child care helpers, latchkey helpers, partner programs), videotapes (Helping Hands and Youth Meets Experience) and brochures describing the Helper Program. Publication *Community Roles for Youth* available on request.

Education Writers Association, 1001 Connecticut Ave., NW, Washington DC 20036 (202-429-9680). Publishes *High Strides* (5 times annually) with funding support from the Edna McConnell Clark Foundation. Focusing on urban middle level schools, recent theme issues include tracking practices, technology and teaming. EWA is a professional association of education reporters and writers.

Lilly Endowment, Inc., 2801 N. Meridan St., P.O. Box 88068, Indianapolis, IN 46208 (317-924-5471). Publishes materials and reports on youth and education. Issued calls for proposals for its Middle Grades Improvement Program. Annual Report (1990) features an elementary/secondary section on exemplary middle level schools.

NATIONAL RESOURCE CENTERS

Center for Early Adolescence, University of North Carolina at Chapel Hill, Ste. 223, Carr Mill Rd., Carrboro, NC 27510 (919-966-1148). Offers many publications and resources: Dorman's *Middle Grades Assessment Program, Living with 10- to 15-Year-Olds: A Parent Education Curriculum*, books and periodicals, researc collections, program materials, statistical information, consultant and speaker files, and video and film reviews.

Center for Research on Elementary and Middle Schools, The Johns Hopkins University, 3505 N. Charles St., Baltimore, MD 21218 (301-338-7570). Offers numerous reports on cooperative learning, as well as *Reducing Disorderly Behavior in Middle School* (Gottfredson, Karweit & Gottfredson, 1989), *Addressing the Needs of Different Groups of Early Adolescents: Effects of Varying School and Classroom Organizational Practices on Students from Different Social Backgrounds and Abilities* (Becker, 1987), and *School Organization in the Middle Grades: National Variations and Effects* (Braddock, Wu & McPartland, 1988).

Center of Education for the Young Adolescent, University of Wisconsin-Platteville, 1 University Plaza, Platteville, WI 53818-3099 (608-342-1276). Publishes *Middle Link* (quarterly). Offers videotapes, publications, summer seminars and staff development workshops for educators wanting to improve the lives of young adolescents.

National Resource Center for Middle Grades Education, University of South Florida, College of Education, 4202 Fowler Ave., Tampa, FL 33620 (813-974-2530). Provides a variety of services and products: staff development training programs, annual symposium, evaluation programs, advisory publications, classroom teaching materials, consultative services, workshop offerings, assessment programs and reproducible interdisciplinary units.

YOUTH ORGANIZATIONS

Author's note: This section on Youth Organizations was developed in part from: Hechinger, F. M. (1992). *Fateful choices: Healthy youth for the 21st century.* New York: Carnegie Council of New York.

American Camping Association, 5000 State Rd., Martinsville, IN 40151 (317-342-8456). Promotes outdoor activities, recreation and safety skills. The organization's major role is to support management of camp facilities and promote camping as a part of the total education process.

ASPIRA Association, 1112 16th St., NW, Ste. 340, Washington, DC 20036 (202-835-3600). Encourages and supports Hispanic American young people in the pursuit of education. Services include counseling, financial assistance, workshops on career choice and applications, health fairs and trips to schools.

Boy Scouts of America, 1325 Walnut Hill Ln., P.O. Box 152079, Irving, TX 75015 (214-580-2000). Stresses the development of mental and physical fitness and outdoor skills.

Boys and Girls Clubs of America: Boys Club, 771 1st Ave., New York, NY 10017 (212-351-5900); Girls Club, 30 E. 33rd St., New York, NY 10016 (212-689-3700). Offer health and physical fitness programs. National programs include *Smart Moves*, an initiative to prevent substance abuse and early sexual involvement.

Girl Scouts of America, 830 3rd Ave., New York, NY 10022 (203-940-7500). Stresses personal well-being and fitness by activities focusing on physical and mental health (health and exercise, home, work, leisure, interpersonal relationships). Topics addressed in its booklet series *Contemporary Issues* include preventing teenage pregnancy, growing up female, preventing suicide and preventing drug abuse.

National Coalition of Hispanic Health and Human Services Organizations, 1030 15th St., NW, Ste. 1053, Washington, DC 20005 (202-371-2100). Works to improve community-based health and human services for Hispanic Americans. Demonstration projects include AIDS education, alcohol and drug prevention, gang and drug abuse prevention, and inhalant abuse prevention.

National Network of Runaway and Youth Services, 1400 I St., NW, Ste. 330, Washington, DC 20005 (202-682-4114). Serves runaway, homeless and other at-risk children; provides safe shelter and counseling to young people. Two national programs include *Youth-Reaching-Youth*, a peer counseling program that discourages drug abuse, and *Safe Choices*, an AIDS prevention program.

National Urban League, 500 E. 62nd St., New York, NY 10021 (212-310-9000). Sponsors national programs that address adolescent pregnancy prevention and parenting, male responsibility, and alcohol, drug and tobacco prevention.

YMCA of the USA, Commerce Bldg., Ste. 111, 8200 Humboldt Ave., Bloomington, MN 55430 (612-885-0273). Dedicates its efforts to healthy minds, bodies and spirits. Provides a number of sports programs, but improving personal health continues to be organization's main priority.

YWCA of the USA, 726 Broadway, New York, NY 10003 (212-614-2700). Promotes health, sports and fitness for women and girls. Health care is a main priority: health instruction, teen pregnancy prevention, family life education, self-esteem enhancement, parenting and nutrition.

SELECTED ANNOTATED PUBLICATIONS

Abruscato, J. (1993). Early results and tentative implications from the Vermont portfolio project. *Phi Delta Kappan, 74*, 474-477. Author reports on portfolio effort and offers suggestions for educators seeking alternative forms of assessment.

Alexander, W., & McEwin, C. K. (1990). *Middle level programs and practices in elementary (K-8) schools: Report of a national study*. Columbus, OH: National Middle School Association. Practices in middle level schools are well known; however, less has been known about practices in K-8 schools. Authors report middle level programs and practices in K-8 schools.

Allen, H. A., Splittgerber, F. L., & Manning, M. L. (1993). *Teaching and learning in the middle level school*. Columbus, OH: Merrill. Authors examine the history of the middle level school, young adolescent development and its implications for middle level educators, and the middle level school curriculum.

Bacon, C. S. (1993). Student responsibility for learning. *Adolescence, 28*, 199-212. Bacon presents the results of a survey of 6th- and 7th-graders' responsibility for learning, concluding that all students do not perceive schools as a place to learn.

Batesky, J. (1991). Middle school physical education curriculum: Exposure or in-depth instruction? *Middle School Journal, 22*(3), 7-11. Calling for reform in the physical education curriculum, Batesky suggests a 3-year cyclical program that includes topics such as rhythms and dances, wellness, team sports, recreational activities, gymnastics and aquatics.

Beane, J. A. (1990). *A middle school curriculum: From rhetoric to reality*. Columbus, OH: National Middle School Association. Believing early adolescence developmental and organizational practices have received major attention in the past, a curriculum expert maintains that present and future study should focus on the middle level school curriculum.

Beane, J. A. (1990). Rethinking the middle school curriculum. *Middle School Journal, 21*(5), 1-5. Author presents a challenging essay on curricula for young adolescents.

Beane, J. A. (1991). The middle school: The natural home of integrated curriculum. *Educational Leadership, 49*(2), 9-13. Beane believes the fundamental question of "What should the middle level school curriculum be?" has not been answered. Explains how the middle level school curriculum can be restructured to meet the learning and developmental needs of 10- to 14-year-olds.

Beane, J. A., & Lipka, R. P. (1987). *When the kids come first: Enhancing self-esteem*. Columbus, OH: National Middle School Association. Two experts on self-concept examine the case for improving self-perceptions in young adolescents. Discuss school and institutional features and describe a middle level school "where kids come first."

Bowers, R. S. (1991). Effective models for middle school science instruction. *Middle School Journal, 22*(4), 4-9. Bowers examines science achievement among young adolescents and then explains several instructional models matched to the developmental needs of 10- to 14-year-olds.

California State Department of Education. (1987). *Caught in the middle*. Sacramento, CA: Author. This comprehensive document encourages educators to: recognize learners' development, have a middle level school philosophy that reflects learners' development, cooperate with community agencies that provide services, and provide opportunities for moral and ethical decison-making and independent learning.

Carnegie Council on Adolescent Development. (1989). *Turning points: Preparing American youth for the 21st century*. (1989). Washington, DC: Author. Maintaining that learners should be mentally and physically fit, *Turning Points* recommends a school environment that promotes knowledge and skills for preventing health-damaging behaviors.

Children's Defense Fund. (1988). *Making the middle grades work*. Washington, DC: Author. CDF maintains that learners need appropriate physical education, group opportunities to reason and question, personal counseling, health and drug education, and opportunities to learn independently and make moral decisions.

Dorman, G. (1983). Making schools work for young adolescents. *Educational Horizons, 61*(4), 175-182. An expert in the area of early adolescence explains how the MGAP, a self-assessment process, can be used to assess the effectiveness of middle level schools. She also examines why schools are difficult to improve and looks at two very different schools.

Early Adolescent Education. (April 1991). *Momentum, 22*(2), 6-51. Articles in this issue of *Momentum* discuss middle level school organization (John Arnold) and curriculum for young adolescents (Kenneth McEwin & Julia Thomason). An examination of *Turning Points* is included (Anthony Jackson).

Eichhorn, D. H. (1966, 1987). *The middle school.* Columbus, OH: National Middle School Association. Reissued by NMSA and NASSP, this 1966 classic describes a middle level school based on the development of young adolescents.

Epstein, J. L., & MacIver, D. J. (1991). *Education in the middle grades: National practices and trends.* Columbus, OH: National Middle School Association. Authors report a survey on the implementation of practices recommended for the middle level grades, including such areas as grade span, ability groups, guidance, advisory periods and teacher teams.

Epstein, J., & Salinas, K. (1991). New directions in the middle grades. *Childhood Education, 67,* 285-291. Epstein and Salinas first examine several issues such as content, prevention or treatment, and approved programs. They then focus attention on several subject areas: mathematics, reading, language arts, science, social studies and thinking skills.

Evans, C. S. (1993). When teachers look at student work. *Educational Leadership, 50*(5), 71-72. Evans tells of a portfolio project and how grades and scores were assigned to student work.

Farris, R. A. (1991). Meeting their needs: Motivating middle level learners. *Middle School Journal, 22*(2), 22-26. In her discussion of motivation of middle level learners, Farris contends that educators must meet young adolescents' needs for survival, belonging, power, freedom and fun.

Florida State Department of Education. (1984). *The forgotten years.* (1984). Tallahassee, FL: Author. The publication calls for critical thinking and exploratory opportunities related to student development. Activities that develop physical and social skills, a sense of identity, responsibility and independence are recommended.

George, P. (1991). Student development and middle level school organization: A prolegomenon. *Midpoints Occasional Papers, 1*(1), 1-12. A leading spokesperson for the middle level school movement examines the relationship between student development and school organization. He also looks at organizational patterns that resemble those of elementary and secondary schools.

George, P. (1993). Tracking and ability grouping in the middle school: Ten tentative truths. *Middle School Journal, 24*(4), 17-24. George looks at the dangers of ability grouping in considerable detail and suggests courageous practitioners across the United States are seeking alternatives to this practice.

George, P. S., & Alexander, W. M. (1993). *The exemplary middle school* (2nd ed.). New York: Harcourt Brace Jovanovich. This examination of exemplary middle schools across the U.S. describes what makes them exemplary.

George, P. S., Stevenson, C., Thomason, J., & Beane, J. (1992). *The middle school—and beyond.* Alexandria, VA: Association for Supervision and Curriculum Development. Authors examine teacher-student relationships, middle school curriculum and organization.

Gill, J., & Read, J. E. (1990). The "experts" comment on adviser-advisee programs. *Middle School Journal, 21*(5), 31-33. Reporting on a questionnaire sent to middle level school experts, Gill and Read describe an effective adviser-advisee program and how it serves the needs of young adolescents.

Gilstrap, R. L., Bierman, C., & McKnight, T. R. (1992). *Improving instruction in middle schools.* Bloomington, IN: Phi Delta Kappa. This Fastback title, one of the few publications to focus on instruction, examines what educators need to know about young adolescents and then looks at instructional strategies.

Hechinger, F. M. (1992). *Fateful choices: Healthy youth for the 21st century.* New York: Carnegie Council of New York. Hechinger comprehensively examines issues such as babies born to children; drugs, alcohol, tobacco; death and violence; and programs for young people.

Hereford, N. J. (1993, April). Saying no to drugs. *Middle Years.* 14-18. Author looks at drug education programs in specific middle schools and offers practical suggestions.

High Strides. (1993, January). *4*(6). This issue of *High Strides* focuses on art and making the arts academic.

High Strides. (1993, February). *5*(1). This issue examines values, at-risk young adolescents, reducing prejudice and eliminating ability grouping.

Hillman, S. B. (1991). What developmental psychology has to say about early adolescence. *Middle School Journal, 23*(1), 3-8. Examining the research from developmental psychology, Hillman explains young adolescent development as it relates to family-peer relationships and risk-taking behaviors.

Irvin, J. L. (1992). *Transforming middle level education: Perspectives and possibilities.* Boston: Allyn & Bacon. Prepared by experts in middle level education, this volume of readings looks at middle level schools developing a sense of identity, responsiveness and relevance, as well as support systems.

James, M. (1986). *Adviser-advisee programs: Why, what, and how.* Columbus, OH: National Middle School Association. James examines six successful adviser-advisee programs and also provides suggestions for implementing them.

Kiner, R. W. (1993). Community service: A middle school success story. *The Clearing House, 66*(3), 139-140. Kiner offers educators practical suggestions for implementing a community service program.

Leiderman, J. D., & Terzpoles, S. G. (1991). Assisting the transition to middle school. *Principal, 70*(4), 56, 58. Believing young adolescents need help in their transition to the middle level school, the authors address such areas as school organization, support services, and curriculum and instruction.

Lilly Endowment, Inc. (1990). *Middle schools: Coming into their own.* Indianapolis, IN: Author. The 1990 Annual Report of the Lilly Endowment looks at how some middle level schools are experiencing a transformation. The Middle Grades Improvement Program (MGIP), part of a Lilly Endowment initiative, has resulted in changes and innovations in areas such as multiage grouping and adviser-advisee programs.

Lipsitz, J. (1984). *Successful schools for young adolescents.* New Brunswick, NJ: Transaction. Lipsitz examines middle level schools to determine the characteristics contributing to their success. A resource for professionals developing middle level school programs.

Lounsbury, J. H. (1990). Middle level education: Perspectives, problems, and prospects. *Educational Horizons, 68*(2), 63-68. A nationally recognized leader and speaker examines how middle level schools are rooted in human growth and development and also suggests problems to be overcome in serving young adolescents.

Mackey, B. J. (1990). Cross-age tutoring: Students teaching students. *Middle School Journal, 22*(1), 24-26. Mackey discusses planning, training, implementing and tutor recognition—key factors in providing cross-age tutoring for middle level school students.

Maeroff, G. I. (1990). Getting to know a good middle school: Shoreham-Wading River. *Phi Delta Kappan, 71*, 505-511. Author discusses Shoreham-Wading River Middle School's exemplary practices: relationships between young adolescents and teachers, community service, adviser-advisee groups, freedom with responsibility, experiential learning.

Maeroff, G. I. (1993). Building teams to rebuild schools. *Phi Delta Kappan, 74*, 512-519. Maeroff looks at the team process and offers suggestions to educators wanting to build effective teams.

Males, M. (1993). Schools, society and teen pregnancy. *Phi Delta Kappan, 74*, 566-568. Addressing an important topic, Males suggests adults are powerful role models for children and maintains the best prevention may be expanded educational opportunity.

Manning, M. L. (1989). Multicultural education. *Middle School Journal. 21*(1), 14-16. Manning examines multicultural education, why it is important to 10- to 14-year-olds, goals of programs, characteristics of educators and pitfalls to avoid.

Maryland State Department of Education. (1989). *What matters in the middle grades.* Baltimore, MD: Author. This detailed publication suggests that educators provide curriculum and instruction based on physical, social, emotional and cognitive development; plan for all learners; and avoid ability grouping and tracking.

Merenbloom, E. (1991). *The team process* (3rd ed.). Columbus, OH: National Middle School Association. Author includes many thorough, practiced, field-tested examples in a discussion of learning at the middle level school.

Mertes, L. M. (1991). Thinking and writing. *Middle School Journal, 22*(5), 24-25. Believing critical thinking is synonymous with the writing process, Mertes provides a sample lesson that fosters both thinking and writing.

Messick, R. G., & Reynolds, K. E. (1992). *Middle level curriculum in action.* New York: Longman. This textbook focuses directly on curriculum and curricular-related issues, such as basic subjects, the exploratory curriculum and the affective curriculum.

Middle School Journal. (1993, January). This theme issue on cooperation in the classroom examines such topics as cooperative learning, staff development, mathematics and literacy.

Muth, K. D, & Alvermann, D. E. (1992). *Teaching and learning in the middle grades.* Boston: Allyn & Bacon. Muth and Alvermann examine young adolescent development and middle grades content. Major attention is given to instruction and learning.

National Association of Secondary School Principals. (1985). *An agenda for excellence at the middle level.* Reston, VA: Author. Providing an agenda for excellence, this monograph examines core values, culture and climate, student development, curriculum, learning and instruction, and several other features unique to effective middle level schools.

National Association of Secondary School Principals. (1989). *Middle level education's responsibility for intellectual development.* Reston, VA: Author. This publication focuses on intellectual development, self-concept, middle level education functions, readiness, acceleration, cognitive levels matching and multiple intelligences.

National Association of Secondary School Principals. (1993). *Achieving excellence through the middle level curriculum.* Reston, VA: Author. An in-depth look at middle level curriculum examines such issues as ownership, student diversity, middle level curriculum identity, and designing curricula for young adolescents.

National Middle School Association. (1992). *This we believe.* Columbus, OH: Author. Originally published in 1982 as an NMSA position paper, *This We Believe* summarizes the "essential elements of a true middle school" (p. iii).

Phi Delta Kappan. (1990). *71*(6). Articles in this issue on middle level school education discuss grade spans, tracking, curriculum and issues, needs of young adolescents and staffing.

Plodzak, K. T., & George, P. (1989). Interdisciplinary team organization. *Middle School Journal, 20*(5), 15-17. Maintaining that the interdisciplinary team is not the same as team teaching, Plodzak and George report on a study of the four phases of interdisciplinary team organization and the extent of their development.

Promising practices for the middle grades. (1990, September). *High Strides 2*(4), 2. This issue summarizes promising practices for urban middle level schools: reading, mathematics, science and social studies programs; tracking; making schools safe; involving and educating parents.

Reed, D. F. (1991) Effective classroom managers in the middle school. *Middle School Journal, 23*(1), 16-21. Reed examines seven postulates about effective classroom management and provides detailed descriptions of effective classrooms.

Steffans, P. (1991). Exploration—the final frontier. *Middle School Journal, 22*(3). Author believes that exploration, a major middle level school practice, should be based on young adolescents' needs. Focus areas include computers, art, foreign language, study skills, industrial technology, living skills and music.

Strubbe, M. A. (1990). Are interdisciplinary units worthwhile? Ask students! *Middle School Journal, 21*(3), 36-38. This in-depth and practical look at interdisciplinary units provides essentials for successful units.

Van Hoose, J. (1991). *The ultimate goal: A/A across the day.* Columbus, OH: National Middle School Association. In the second of NMSA's occasional papers series, Van Hoose proposes having adviser/advisee programs throughout the school day and addresses goals, program components and scheduling considerations.

Van Hoose, J., & Straham, D. (1990). *Young adolescent development and school practices: Promoting harmony.* Columbus, OH: National Middle School Association. This examination of young adolescents' developmental characteristics discusses appropriate and inappropriate practices.

Vars, G. F. (1987). *Interdisciplinary teaching in the middle grades.* Columbus, OH: National Middle School Association. In an in-depth look at interdisciplinary teaching, Vars discusses rationales, approaches, planning, methods and skills development.

Virginia Department of Education. (1990). *Framework for education in the middle school grades in Virginia.* Richmond, VA: Author. This document examines a wide array of middle level school topics such as curriculum, instruction, special education, gifted education and staff development.

Walsh, K. J, & Shay, M. J. (1993). In support of interdisciplinary teaming: The climate factor. *Middle School Journal, 24*(4), 56-60. Authors suggest that interdisciplinary teaming improves the school climate for both young adolescents and teachers.

Weiller, K. H., & Richardson, P. A. (1993). A program for kids: Success-oriented physical education. *Childhood Education, 69,* 133-137. Weiller and Richardson offer advice on making physical education programs successful for all learners.

Williams, R., & Johnston, J. H. (1991). *Planning for success: Successful implementation of middle level reorganization.* Reston, VA: National Association of Secondary School Principals. This monograph on planning for change examines collaborative planning, community relations, coping with dissent and pitfalls to avoid.

Winn, D. D., Regan, P., & Gibson, S. (1991). Teaching the middle years learner. *The Clearing House, 64,* 265-267. Examining the characteristics of young adolescents, the authors suggest ways to enrich the middle level school curriculum.

Wishon, P. M., Swaim, J. H., & Huang, A. (1989). AIDS. *Middle School Journal, 20*(3), 3-6. Authors examine the AIDS problem and show how young adolescents are at-risk.

Yager, R. E. (1990). A new approach to science instruction. *Middle School Journal, 21*(4), 46-48. Yager recommends teaching the basic science process skills using personal and social contexts.

CHECKLIST TO DETERMINE MIDDLE LEVEL SCHOOLS' RESPONSE TO YOUNG ADOLESCENTS' DEVELOPMENTAL CHARACTERISTICS

Educators have the professional responsibility to assess whether their middle level school is basing educational experiences on young adolescents' physical, psychosocial and cognitive development. The following checklist was developed from the research on young adolescents' development and from studies and reports such as *This We Believe* (National Middle School Association, 1992), *Middle Grades Assessment Program* (Dorman, 1984), and *Turning Points* (Carnegie Council on Adolescent Development, 1989).

The Developmentally Appropriate Middle Level School Checklist

The Overall Middle Level School Program

Yes No 1. The school's written philosophy states that curricular, instructional and environmental practices are based upon young adolescents' physical, psychosocial and cognitive developmental characteristics.

Yes No 2. The school's curricular and instructional practices reflect the unique nature and needs of young adolescents, rather than perceiving 10- to 14-year-olds as children or adolescents.

Yes No 3. The school's administration, faculty and staff have received professional preparation in young adolescent development and are experts at teaching 10- to 14-year-olds.

Yes No 4. The school provides "communities for learning" where close, trusting relationships with adults and peers create a climate for personal growth and cognitive development.

Yes No 5. The school's policies and practices recognize and address young adolescents' cultural and gender differences, as well as their tremendous diversity in physical, psychosocial and cognitive development.

Yes No 6. The school ensures success for all young adolescents in at least one area.

Yes No 7. The school has functional strategies for re-engaging families in the education of learners.

Yes No 8. The school provides an organization that includes cross-age grouping, alternatives to ability grouping and tracking, school-within-a-school and other organizational strategies that address the young adolescent's physical, psychosocial and cognitive development.

Yes No 9. The school actively seeks to connect schools with communities and tries to provide young adolescents with opportunities for community service.

Yes No 10. The school empowers administrators and teachers to make decisions based on young adolescent development and effective middle level school practices.

The Middle Level School's Response to Young Adolescents' Physical Development

Yes No 11. Young adolescents are provided sufficient opportunities for physical exercise, both planned activities and opportunities to move around the classroom.

Yes No 12. Young adolescents are provided desks, chairs and tables of appropriate sizes.

Yes No 13. Young adolescents are provided opportunities for noncompetitive intramural sports activities that do not result in a comparison of early- and late-maturers.

Yes No 14. Young adolescents have opportunities to become healthy individuals through the school's efforts to provide appropriate health services and health and fitness education.

Yes No 15. Young adolescents have at least one caring adult who is willing to listen to concerns and to answer questions about the various developmental areas.

Yes No 16. Young adolescents have their gender differences understood and addressed by the administration and faculty (e.g., the implications of the growth spurt that is usually about two years later for boys than girls).

Yes No 17. Young adolescents who are early- and late-maturers are assured that variations in development are expected and normal.

Yes No 18. Young adolescents—not just the athletically inclined or the early developer—are involved in some type of developmentally appropriate physical activity based on their unique developmental needs.

The Middle Level School's Response to Young Adolescents' Psychosocial Development

Yes No 19. Young adolescents are provided opportunities to interact socially with same-sex peers and, if desired, opposite-sex peers.

Yes No 20. Young adolescents' friendships are understood as being crucial to development and are encouraged through developmentally appropriate school activities.

Yes No 21. Young adolescents' shifting allegiances and quests for freedom and independence are accepted as significant aspects of the developmental period; appropriate activities (e.g., learning cooperatively and congregating with friends) are integrated into the overall middle level school program.

Yes No 22. Developing a positive self-concept is viewed as crucial to young adolescents' overall development and deliberate efforts are directed toward improving self-concepts.

Yes No 23. Young adolescents' gender differences are recognized and appropriately addressed (e.g., boys have larger social networks than girls and girls have more personal conversations than boys).

Yes No 24. Young adolescents' peer pressure is understood and accepted as a significant aspect of the developmental period and, whenever possible, used as a means of establishing appropriate behaviors.

Yes No 25. Young adolescents are provided significant opportunities to form identities as worthwhile individuals who are developing from childhood into adolescence.

Yes No 26. Young adolescents are provided comprehensive counsel that includes adviser-advisee programs and small- and large-group guidance.

The Middle Level School's Response to Young Adolescents' Cognitive Development

Yes No 27. Young adolescents are provided cognitive activities appropriate for the late concrete and early formal operations stages, reflecting their ability to think abstractly in one area and still be restricted to concrete thought in another.

Yes No 28. Young adolescents are called upon to develop the capacities for critical thought and problem-solving skills using "real-life" situations.

Yes No 29. Young adolescents are provided opportunities to analyze problems and issues, examine the component parts, and reintegrate them into a solution or into new ways of stating the problem or issue.

Yes No 30. Young adolescents' individual differences—multiple intelligences, right brain/left brain, learning styles—are recognized and addressed through appropriate cognitive activities.

Yes No 31. Young adolescents are provided exploratory programs that provide opportunities to learn more about areas of interest or develop various types of expertise.

Yes No 32. Young adolescents have access to a core academic program that provides opportunities to develop literacy and thinking skills, lead healthy lives, behave ethically and assume responsibility.

Yes No 33. Young adolescents have opportunities to develop a repertoire of learning strategies and study skills that emphasize reflective thought and systematic progression toward independent learning.

Yes No 34. Young adolescents' gender differences are understood and addressed (e.g., the relationship between self-image and academic achievement).

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Aronson, E., Blaney, N., Stephan, C., Sikes, J., & Snapp, M. (1978). *The jigsaw classroom.* Beverly Hills, CA: Sage.

Association for Childhood Education International/Perrone, V. (1991). On standardized testing. Position paper. *Childhood Education, 67*(3), 131-142.

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Bell, L. C. (1986). Learning styles in the middle school classroom: Why and how. *Middle School Journal, 18*(1), 18-19.

Benenson, J. F. (1990). Gender differences in social networks. *Journal of Early Adolescence, 10*(4), 472-495.

Berla, N. (1992). Getting middle school parents involved. *The Education Digest, 58*(2), 18-19.

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