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Currently there is a strong movement to make schools more effective by raising the quality of instruction, program design and organizational management. This paper reviews recent research in adolescent development as a major focus for determining the success or failure of specific practices in secondary schools. Factors of school effectiveness are examined in terms of their significance for the effective schools movement and for ways in which these factors may relate to recent research on adolescents. Conclusions are drawn about how the two areas of study address common issues as well as ways in which they diverge. The first part of the paper examines current literature to build a general conception of adolescence. The second part is concerned with major issues of adolescence and their relationship to factors of school effectiveness. The third part seeks to determine the implications of these two areas for identifying desirable changes in secondary schools. Education in urban settings is also examined. A list of references is included. (JAC)

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UNDERSTANDING ADOLESCENCE: ISSUES AND IMPLICATIONS FOR EFFECTIVE SCHOOLS

by

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A COMMITMENT TO URBAN EDUCATION

Research for Better Schools, Inc. (RBS) is a regional educational laboratory that uses the results of educational research and development to assist the elementary and secondary schools in Delaware, New Jersey, and Pennsylvania. This assistance takes the form of information, staff development programs, management training and consulting, evaluating, and special research projects.

RBS' work in urban education is founded in a firm commitment to the goal of equal educational opportunity. Every child should have an opportunity to attain a high quality education. Therefore, improving the effectiveness of the public schools is the focus of the laboratory's activities in urban areas.

The Urban Development Component addresses urban educational issues by bringing together the resources of the laboratory and those of the professional associations, parent and community groups, state agencies, and urban school districts. The goal is to unite the knowledge about school effectiveness with the commitment of educational interest groups to forge a new coalition for the improvement of the public schools.

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INTRODUCTION

If schools are the major arena of public instruction, then teachers and students are the principal actors involved in the educational process. Currently, there is a strong movement afoot to make schools more effective institutions (see Harvard Graduate School of Education Bulletin, 1980). Many perspectives must be examined to determine how to accomplish such a goal, but certainly an examination of the characteristics of the student population is one important consideration. Adolescents attend middle, junior, or senior high schools; their development, the issues and problems central to this particular time in life, and the relationships between adolescent development and school achievement are important aspects of effectiveness in education. This paper seeks to examine recent research in adolescent development as a major focus for understanding the primary population in secondary schools.

The current effective schools movement also is vitally concerned with school improvement efforts. Raising the quality of instruction, program design, or organizational management are aspects of school improvement that heavily influence the experience of students in attendance at school. Examining issues of adolescent development, within the school, as well as beyond it, may shape or determine the success or failure of specific practices in secondary education aimed at making schools more effective. Of particular concern are the so-called "factors" of school effectiveness generally associated with improving schools (Brookover, 1980). In this paper, these factors are

examined both in terms of their significance to the effective schools movement and to the ways these factors may relate to recent research on adolescence. Conclusions are drawn on how the two areas of study, adolescent research and factors of effective schooling, address common issues, as well as ways in which they diverge. Finally, areas of further research are suggested.

This paper is divided into three parts. The first part examines current literature for the purpose of building a general conception of adolescence. The second part is concerned with major issues of adolescence and the relationships of these issues to factors of school effectiveness. The third part seeks to determine the implications of the relationships in these two areas in terms of identifying desirable changes in secondary schools. Education in urban settings is examined and suggestions offered for future research. A list of bibliographical references is included in the paper.

THE NATURE OF ADOLESCENCE

A single definitive description of adolescence does not really exist. Nor is there a unified theory of adolescent development. Various meanings and many assumptions are found in educational literature on the topic. However, there is some consensus about research findings on adolescence. To build a conception of adolescence requires the examination of this rather extensive, interdisciplinary research and an interpretation of its findings.

Determining a Definition of Adolescence

The dictionary definition of adolescence refers to the root linguistic meaning: adolescere, "to grow up." It characterizes the experience as "the state or process of growing up" and as "the period of life from puberty to maturity terminating legally at the age of majority." Such definitions reflect the dominant developmental and social perspectives that have shaped inquiry on adolescence in this century (Elder, 1980). These perspectives have been followed by a variety of researchers and scholars who have been involved in the study of young people.

In characterizing adolescence, biologists tend to emphasize the physical changes that occur to the soma. Psychoanalysts and psychologists reflect the trauma of the youthful psyche and the lack of clarity in their own theoretical orientations: "It is a paradox that adolescence should be the period of greatest concern to parents and youth and the era least well-comprehended by psychologists (Kagan, 1972, p. vii)."

Sociological studies dating back to Hollingshead's famous Elmtown's Youth (1949) stress the problems of social stratification and socialization. Over the years, field work in many communities has revealed problems of status, class, conflict, competition, and age segregation in a world relatively defined by a post-war perspective. Yet all these descriptions give only a fragmented depiction of the teen-age student for the educational researcher. A clear model of adolescent development has not been the obvious product of either the developmental or social views of adolescence.

There are contemporary researchers who maintain that adolescence is an invention of the industrial revolution (Hill & Monks, 1977). Starting from a Rousseauian base, Hill and Monks tie adolescence to post-industrial society in the 19th century, characterized by a new division of labor and the rise of urban manufacturing centers. Child labor, compulsory education, and juvenile justice legislation are some of the social outcomes associated with the new age group created by industrialism. These scholars see adolescence as a pivotal transition stage in the life cycle between childhood and adulthood. It is a time infused with its own opportunities and dangers. Such an historical interpretation does not deny the age-old Aristotelian view that adolescents are troublesome, idealized individuals, prone to excesses and rigid opinions:

> The young are prone to desire and ready to carry any desire they may have formed into action. Of bodily desires it is the sexual to which they are the most disposed to give way, and in regard to sexual desire they exercise no self-restraint. They are changeful too, and fickle in their desires,

> which are as transitory as they are vehement . . . . They are passionate, irascible, and apt to be carried away by their impulses . . . . They have high aspirations; for they have never yet been humiliated by the experience of life, but are unacquainted with the limiting force of circumstances . . . . Again, in their actions they prefer honor to expediency . . . . If the young commit a fault, it is always on the side of excess and exaggeration . . . . They regard themselves as ominscient and are positive in their assertions; this is, in fact, the reason of their carrying everything too far. *

But the historic perspective offers a more complex view of this period than has been suggested by developmental or social views, and the historical approach presents a dynamic interpretation of the effects of modern living on the nation's youth. Current notions of adolescence are influenced by concepts of life-span development, a greater understanding of age patterns in a longer life course, and a host of major studies of social change in the experience of youth. Elder (1980) notes that this "life course approach," developed since the 1960s, is rooted in a new view of social history which is related to the current available literature on both psychodynamics and cognition. He maintains that such a perspective must be taken into account in forming a comprehensive interpretation of adolescence. It is a useful position to examine.

In the life course approach and within the historic possibilities of one's age cohort, there are five particular tasks, according to Conger (1972), which are faced by all adolescents:

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*"Rhetoric of Aristotle," cited in Norman Kiell, The Universal Experience of Adolescence (Boston: Beacon Press, 1964), pp. 18-19.

- adjustment to physical changes of puberty and later adolescent growth;
- development of independence from parents and other caretakers;
- establishment of effective social and working relationships with peers;
- preparation for a vocation; and
- development of a system of values and a sense of personal identity.

These are the universal tasks awaiting adolescents everywhere. During the *second decade of life* in most modern, technological societies, these are the roadblocks that challenge the youngster's transition to adulthood. They are also concerns of families and schools. How the student accomplishes these tasks, what models of behavior are followed, and what degrees of freedom are avialable differ from society to society. But the tasks remain. Using developmental, social or historic underpinnings, a definition of adolescence must deal with each of these universal tasks. In completing his/her tasks, every adolescent faces both personal and societal demands.

Changing Assumptions About Adolescence

Most researchers come to the field of adolescence with various and sundry biases. Conger (1972) suggests that the difficulties faced by this developmental period appear to be increasing, partly because of current stress on the family and partly as a consequence of the accelerated

rate of change in American society. Other scholars do not necessarily agree with Conger's interpretation.

Hill (1978) identifies three assumptions about adolescence which he claims are false, but which are interesting to examine in light of current research. Reviewing major studies of American youth, Hill notes that in both Coleman's (1974) and Martin's (1974) examinations of adolescence, increasing alienation was detected among youngsters, notably in a decline in the work ethic. Hill challenges this claim. Along with Heyneman (1976), he proposes that adults working with youth have been less than candid about the unpleasant contradictions in the real workplace. What results may look like mass student alienation. Hill suggests youngsters' negativism may only be momentary disbelief or the adolescent's initial mistrust of the adult world.

Secondly, Hill suggests that some researchers, like Coleman and Martin, erroneously maintain there is increasing intragenerational hostility evidenced in the behavior of American teen-agers. Is the so-called "generation gap" getting bigger? Hill also doubts that contention. He cites the work of Kandel and Lesser (1972) to support his view, and proposes that the dissonance of generations may be an appearance created by the media. In reality, Hill maintains, the disaffection is not nearly as great as depicted. Since the late 1970s, after the cooling down of the post-Vietnam period, Hill proposes, the differences between adults and youth may actually have lessened. And in addition, according to some psychoanalytic interpretations, the

conflict that does exist is to be expected and is, in fact, quite healthy: "The formation of a conflict between generations and its subsequent resolution is the normative task of adolescence. Its importance to cultural continuity is evident. Without this conflict no adolescent psychic restructuring would occur (Blos, 1979, p. 11)."

And finally, Hill points out, researchers have raised unnecessary fears about the decreasing capacity of young people to assume adult roles. Have we, in fact, actually encouraged the development of their autonomy? Hill thinks not and suggests that such encouragement is the essence of the experience of adolescence. Bakan (1972) reflects a similar concern and refers to expectation of what the future holds as the central concern of adolescence. Such expectation is the context in which Conger's five tasks must be addressed.

What is obvious from examining these conflicting views of adolescence is the need to separate out basic characteristics of adolescence, which are largely agreed upon by researchers, from the more controversial and interpretive opinions about the developmental period. Such opinions, it would seem, may or may not have research-based support and could be influenced by the unstudied assumptions and limited perspectives of the persons who hold them. A theory of adolescent behavior, were we to seek one, would be concerned with these basic characteristics of adolescence upon which a reliable definition can be built, and would introduce the issues about which more reliable research is still needed. Once the groundwork of such an understanding about adolescence is established, then one can judge if the realization of adulthood experienced by any

individual, or group of youngsters, lives up to a particular society's blueprint for his/her existence. What then are the basic characteristics of adolescence?

The Primary Changes in Adolescence

Most researchers on adolescence agree that there are three primary changes that universally affect youngsters in the second decade of life. Roughly between 10 or 11 and 18 years of age, biological developments, changes in cognitive competence, and changes in social definition occur simultaneously and, to some extent, interactively for all adolescents. This is not to say there is not continuity with the experience of childhood for the individual (Hill & Monks, 1977), but the shift to new drives and different abilities is a dramatic benchmark in the life cycle. It also is important to note that these changes occur in different individuals at variable rates.

The development of secondary sex characteristics and physical growth are the most observable changes in the young teen-ager. Tanner (1972) points out that the tempo of growth and the developmental age of the individual, e.g., the percentage of the child's growth process which has been attained at any time, are important aspects to examine from society to society, as well as person to person. During this century, puberty and maturation have occurred earlier and earlier among youngsters around the world (Tanner, 1972). These changes appear as much as two years earlier for all social classes in western cultures.

Physiological studies of a more complex nature are in progress (Tanner & Inhelder, 1971), but there is agreement that (1) our knowledge

is far from complete, and (2) the period of adolescence, particularly for the young adolescent of 11 to 13, is one of rapid and complex physical change. These early teen years are comparable to the first two years of life, when the infant develops extensively and physically increases him/herself both in size and behavioral complexity. By the time a youngster is in secondary school, although the differences in age are not so great, physical variation can be extensive.

During adolescence, according to the research of Piaget and Inhelder (1958, 1970, 1973), the character of a youngster's thought and reasoning shifts to a new, more complex order. The *formal operations* stage is gradually acquired by the adolescent and this brings about three significant cognitive developments. First, the adolescent becomes capable of a kind of "combinatorial logic"; he/she can deal with problems in which many factors operate at the same time (Elkind, 1970). Hill and Mönks (1977) find that this increased operativity, or ability to deal rationally with multiple factors, frees the youngster from more child-like perceptions and concrete fixations:

> The adolescent can deal with situations as a whole rather than being caught up by some especially dramatic or otherwise salient feature of immediate perceptual reality. He can consider a situation from many different points of view because he can reason in terms of what might be; in that sense his thought is more flexible (p. 40).

Secondly, the adolescent, in contrast to the child, acquires the ability to use a second symbol system, to create classes or generalizations that stand for more specific objects. Such an ability to use higher

levels of abstraction makes it possible for the youngster to consider alternate reasons or explanations for the same event. This is the beginning of full operativity in Piaget's scheme. As Hill and Monks (1977) see it, the adolescent "can reason more abstractly, thinking in terms of verbal propositions about objects and events and not only the objects and events themselves. The teen-ager can, for the first time, think about his or her own thought" (p. 40). As Mosher (1979) depicts the adolescent, he/she is able to use thinking that builds on thinking.

And thirdly, the adolescent develops the capacity to construct ideals, or contrary-to-fact situations. He/she goes beyond the immediate situation of the known and extrapolates the possible (Keating, 1980). The adolescent, as inventor, tastes the reward and freedom of formal thought. Key to such cognitive development is the significance of opportunities to try, the adolescent's need for the liberty to make mistakes and to self-correct in order to regulate one's own inventing (Piaget, 1970). Although there are some researchers who might question the universality of these characteristics during adolescence (Neimark, 1975; Keating, 1980), the existence of the potentiality for and usefulness of such development is fairly accepted (Hill & Monks, 1977). The instructional program of a school is obviously a significant setting in which the teen-ager's growing cognitive ability can be mentally challenged.

The changes in social definition accompanying adolescence are not

as well described and explained by current theory as is the notion of growing cognitive competence. However, the increased social awareness and growing self-conception characteristic of the young teen-ager are aspects of social change known to psychologists, sociologists, and anthropologists alike. The characterization of the adolescent striving to become an independent person, as well as a unique member of his/her group is an emergent theme of the research literature. Lipsitz (1977) maintains:

> Not until adolescence does the individual see himself as having a past and a future that are exclusively his. Adolescence is thus a pivotal time of recapitulation and anticipation. It is a time when the individual seeks his distinctive identity, consisting of a conscious sense of personal uniqueness, an unconscious striving for continuity of experience, and a solidarity with group ideals (p. 4).

The importance of peer relationships and peer influence are related areas of adolescent research. Peer groups seem to serve the adolescent "as the principal locus for socialization in many domains, especially affiliation, aggression, sex, and moral behavior" (Hartup, 1977, p. 177). Such influences cannot be ignored in examining adolescent development and they obviously play an important role in relating the individual adolescent to the environment of the school. The school as an institution is as much the meeting place of the adolescent and his/her peers as it is the site of intelligent instruction for students and teachers.

Summary

The first section of this paper has sought to consider the basic definitions, general assumptions, and primary changes that occur in

adolescence. Various approaches to adolescent research are presented, but no single view or theory is agreed upon. Rather, a conception has been sketched from research sources which depicts a developmental period of high activity and change, great expectations and dynamic potential. Lipsitz (1977, p. 45) cites Deborah Waber's view that there is a "last chance" aspect to adolescence, that the period could have either a productive or destructive effect on the individual. Perhaps the energetic spurts of adolescence are less critical than Waber suggests. Nevertheless, adolescence is a period of rapid development based on multiple changes which create many opportunities for the teen-age student. . .

In schools, opportunities for meeting the needs of teen-agers also seem to abound. Educational programs should direct some of an adolescent's potential energy and activity in ways consistent with the natural changes of the period. But what do we know about an adolescent's development in terms of school practice? To maximize learning and growth for the high school student, it would seem prudent to examine the basic characteristics of adolescence as they influence the development of the youngster in the educational setting. In addition, it seems wise to explore that relationship in the context of effective schools. The next section of this paper is focused on this topic.

ADOLESCENCE AS A CONCERN OF EFFECTIVE SCHOOLS

To some extent, schools have actually been organized or structured in direct response to the primary changes in adolescence (Hill, 1980). In past years, junior high schools were established to serve the needs of burgeoning teen-agers. And today, a major middle school movement is predicated on changes in the emerging adolescent learner (Toepfer, 1979). But to understand basic changes in the student population does not seem sufficient. Issues of effectiveness in schooling and the impact of the school as an institution requires an examination of the meaning and significance of basic changes on student development. Factors of effectiveness might be addressed concerning adolescence when these secondary influences are better understood.

From Primary to Secondary Changes

The primary changes of adolescence have both direct and indirect effects on the psychological development of the individual (Peterson & Taylor, 1980). Direct effect studies are generally highly technical and trace factors like hormonal activity and its influence on observed behavior. The results of such studies have fairly limited utility for educational purposes. Studies of *indirect* effects, however, introduce a host of possible mediating influences on the teen-ager, such as neuroendocrine changes, morphological changes, adult reproductive capacity, and the tempo or timing of puberty itself. Studies of these related physical effects raise many issues about the outcomes of the adolescent development period. The youngster's accommodation to

biological forces influences education and other sociocultural activities in the student's life. By the same token, educational and cultural settings are influenced by the changes that confront the teen-ager. To understand the full impact of adolescence, both direct and indirect effects of primary changes must be taken into account. Some recent research on adolescence addresses problems of this sort.

Hypothetical models have been constructed by some researchers to identify the possibilities of the complex interactions between primary adolescent changes and secondary mediating influences. Peterson and Taylor (1980) show how the adolescent's responses to physiological change have an impact on both sociocultural perspectives and personal perceptions in the maturation of the teen-ager (see Figure 1). People

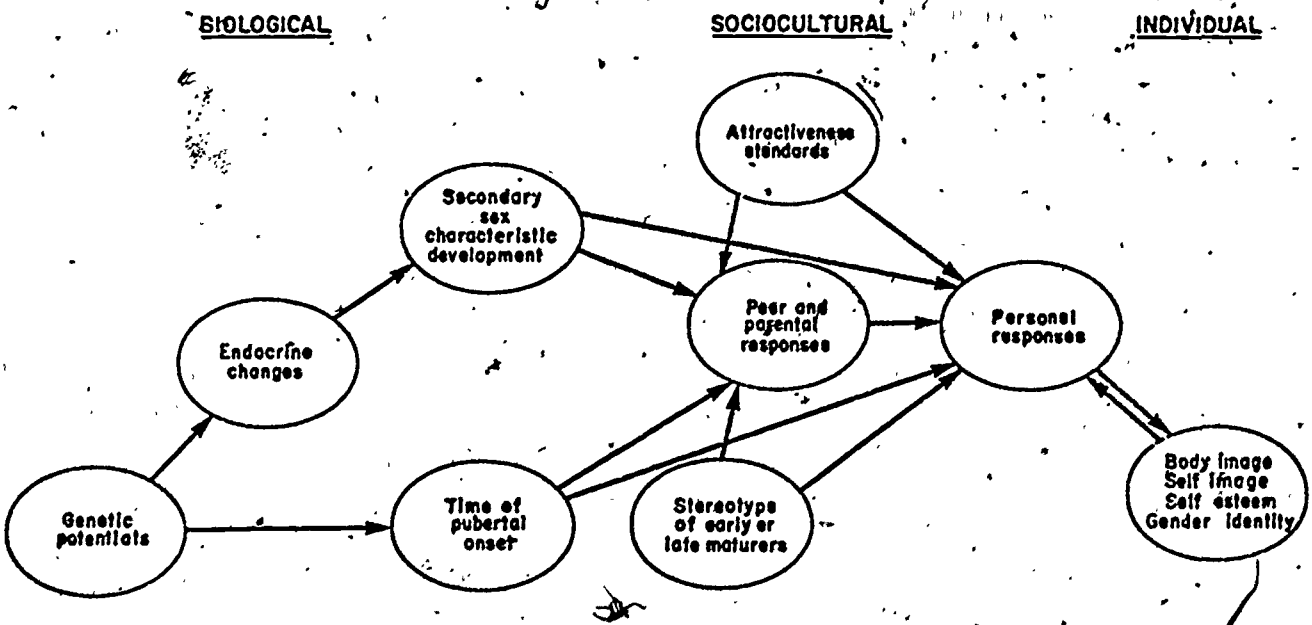

Figure 1. Hypothetically important paths between pubertal changes and psychological responses (from Peterson & Taylor, 1980, p. 147).*

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and institutions play a significant role in this interchange. The responses of parents, teachers, and peers to the adolescent's development during puberty are aspects of the image and identity each teenager creates in completing the universal tasks suggested by Conger (1972). The model presented by Peterson and Taylor serves to illustrate the complexity of these interactive relationships.

In pursuit of mediating influences, Hill (1980) developed a schematic model, a framework of causation in adolescence. He places the important influences or "settings" encountered by the adolescent (family, peer, and school) between the three basic characteristics or changes and the six secondary changes which he believes are the major mediating forces that determine what a youngster becomes and how the adolescent copes with his/her new status (see Figure 2). Hill's framework focuses on the six secondary changes: attachment, autonomy, intimacy, sexuality, achievement, and identity. In Hill's view, these are the influences that ultimately shape the adolescent's development. These mediating forces are the major psychosocial concerns of adolescence. The significant settings of a student's life -- family, peer, and school -- can be examined in terms of the youngster's participation in each of these arenas, while the secondary changes are experienced. For Hill, the school becomes one of the major environments in which secondary influences are confronted as the primary adolescent changes inevitably occur.

According to Hill's research, the influence of secondary changes on the adolescent depends upon the norms for a particular change created in the settings the youngster experiences and the relative significance

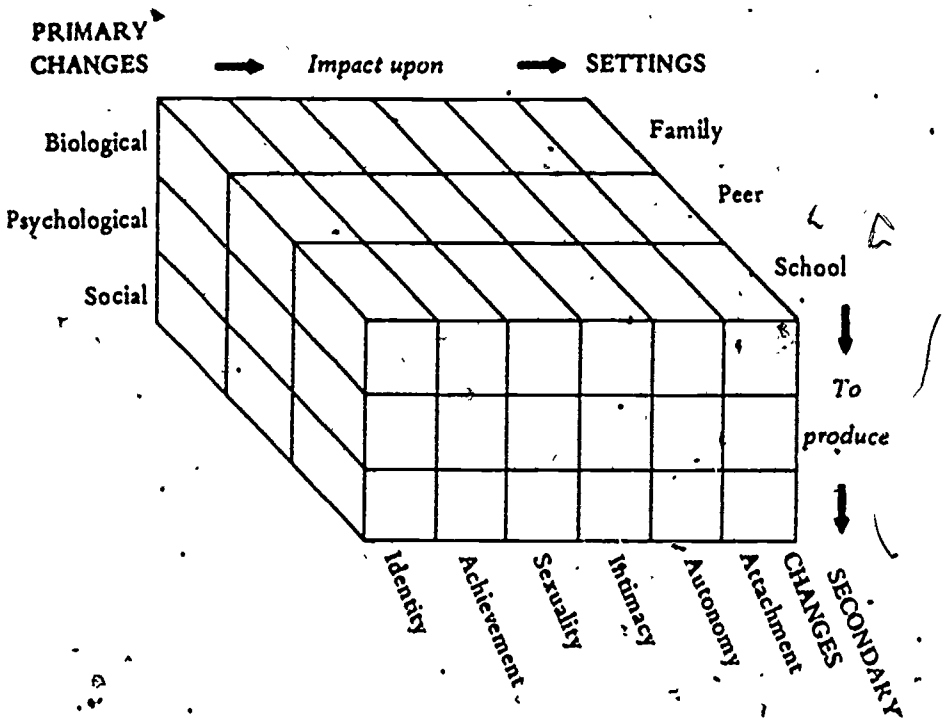

Figure 2. Hill's framework for the primary and secondary changes of adolescence and the settings of their relationships (from J. Hill, 1980, p. 27).*

of those settings for different persons or groups close to the teen-ager. In other words, the settings present a range of possible relationships which a youngster may engage in as he/she confronts the transition to adulthood.

Hill sees the six secondary changes as three pairs of psychosocial issues in adolescent development. Not only must the teen-ager deal with the basic changes of biological, cognitive, and social development; he/she also must move among various settings each of which mediates the primary changes. Ultimately, the adolescent must resolve three

*Reprinted with permission from the Center for Early Adolescence, Suite 223, Carr Mill Mall, Carrboro, NC 27510.

significant issues embedded in secondary changes. Hill proposes these issues are in tension, if not in conflict, with one another. These issues of adolescent development warrant full discussion, for in order to plan an education that is harmonious with teen-age development, the educational researcher must consider the school's potential role in the context of such issues.

The Issues of Adolescent Development

In Hill's heuristic framework (see Figure 2), the six secondary changes of adolescence involve three pairs of variables constantly interacting in a youngster's development. These three paired-variables are Hill's major "issues" of adolescent development. The paired-variables include: attachment-autonomy, sexuality-intimacy, and achievement-identity. Much of the current literature on adolescent development relates to one or more of these variables. It is important to examine each pair.

Attachment relates to the youngster's concern about detaching himself/herself from parents and family dominance, while at the same time extending his/her self-initiated activity and confidence to wider behavioral realms. Adelson (1972) finds that the apolitical adolescent gradually develops a sense of community. Through his/her detachment from home base, he/she becomes aware of the myriad of social-political organizations which comprise the community such as church or synagogue, youth group, and sports team. Having learned about these other social arenas, the adolescent gains experience and seeks to develop an independent role in them. Several types of autonomy are suggested by research.

Gilligan and Kohlberg (1978) study moral autonomy in adolescent development; Douvan and Adelson (1966) examine the development of value autonomy and the necessity for the forging of internal controls. In both instances, the precariousness of adolescent development is underscored. The tension between attachment and autonomy is played out in a state of ambivalence:

> The adolescent's circumstances are riddled with ambivalences. His parents, and the community-at-large, want the child to take and master autonomy, and yet remain uneasy that the youngster, not really ready for it, may lose control altogether, and in one rash act damage his total life chances. For his part, the adolescent pushes on for independence, and yet often frightened, unsure, ready to run back to the sweet life of the child. These ambivalences are important in giving us a sense of the emotional turmoil of the adolescent experience, but they are not ultimately important, for in the not-so-long run the adolescent does decide for autonomy. And once he does, he commits himself to internal rather than external controls. If he is to cope with internal drives and external demands, if he is to take the decisive leap into adulthood, he must accomplish that final act of socialization in which he regulates himself through his own internal resources (Douvan & Adelson, 1966, pp. 80-81).

According to other literature on adolescent development, the interplay of sexuality-intimacy presents the teen-ager with the opportunity both to transform gender roles and to build unique associations of friendship into deeper relationships (Lidz, 1968). Innate tension between these variables becomes apparent. The physical assertiveness of the young adult capable of sexual reproduction appears at the same time that he/she is challenged to be a socially responsible, trusted member of

society. Personal appetites and drives must be experienced and regulated in a community context. In defining the new personal roles of adult-male or adult-female, the adolescent looks to both cultural models and peer examples for guidance on sexuality. The impact of his/her friends at school is an obvious influence on the young teen-ager seeking new gender identity. Cliquishness and conformity in peer groups emerge as youngsters learn the risks of independence and the isolation of adulthood. According to Chandler (1978), the segregated character of peer culture is understandable because:

> . . . adolescents . . . often voluntarily constitute themselves into social collectives and pledge to differ from one another in as few ways as possible. By binding themselves together into a univocal social whole, they ward off the sense of estrangement that accompanies their new-won sense of subjective relativity and create an enclave of common conviction (p. 142).

The peer culture plays an equally important role in the development of the third pair of variables in adolescence, the interplay of achievement and identity. Gordon (1972) maintains that the core dilemma of adolescent development lies in "the problem of integrating the partially contradictory value themes of social acceptance and social achievement" (p. 25). He defines achievement as "the symbolically validated performance against a socially defined standard of excellence or competition" (p. 39). Hill (1978) suggests that achievement drives are tied both to the youngster's ultimate ambitions and his/her more realistic knowledge of his/her own attributes. In the world of adolescence, to reconcile

the image of self as defined by new-found participation outside the home, the concurrence of friends and their opinions, and the demands of various "superiors" -- teachers, clergy, bosses, coaches -- is the major task of identity-building. In this reconciliation, the teen-ager sets both current and future goals. Bakan (1972) emphasizes the importance of identity aspirations for the long run; the adolescent feels the conflict between current demands and adult aspirations. Bakan suggests that teen-agers practice self-restraint or assertiveness during adolescence because of the hope for future payoff. Those who fail to have hope as adolescents may set the stage for a negative outcome much later in life. Similarly, Hill (1978) proposes that failure to secure peer acceptance as an adolescent can set a negative pattern for all future adult experience:

> . . . poor peer relations during adolescence is one of the best, if not the best, predictor of concurrent and subsequent social and psychological pathology of all kinds (p. 19).

The significance of Hill's three issues of adolescence does not lie in their individual relationships to a teen-ager's development. Rather, the three sets of variables help shape a common meaning for how the needs of a whole age group, a student population, may be characterized. In short, the major issues of adolescence, as discussed by current researchers, cluster around the precarious establishment of a strong independent identity, accepted by one's peers, as well as one's parents and teachers, based on acknowledged achievement, and looking toward a successful future. These are the ideal conditions that could accompany

the secondary changes which are so essential to adolescent development. These are the parameters within which the tasks of adolescence, as suggested by Conger, might be approached. The school is an important setting in which such ideal conditions can be cultivated. The model secondary school, in Epstein's (1981) words, which strives to meet the needs of adolescents would:

> . . . create an educational program and social environment that will capture the energies and intelligence of an energetic and curious population, meet the students at their skill levels, challenge them to increase their academic skills, and prepare them for adulthood (p. 2).

But the discussion of issues in adolescent development also provides other considerations about the quality of experience in the transition to adulthood. Lipsitz (1977) emphasizes that in the teen-ager's quest the most important central theme to underline is variability, for the time and rate by which adolescent transformation occurs are radically different from individual to individual in the school population.

> Since this variability is one of the aspects of being a young adolescent that contributes to the potential painfulness of this time of life, we underscore it time and time again in the hopes that those working with and living with young adolescents will be extremely sensitive to the issues involved (p. 41).

Along with recognizing the variability by which the change to adulthood occurs, a parallel problem is to comprehend the gradualness by which the maturation takes place. A comparison of Piaget's approach to the growth of intelligence with Hill's framework of adolescent development is very useful. Piaget (1970, p. 708) bases his argument in

assimilation/accommodation on biological structuralism. The interactive process of taking in new information (assimilation) as one acts on objects containing such information, and responding to it by changing one's internal structure of such information (accommodation) is the heart of Piaget's developmental theory. Piaget calls this time-consuming process equilibration. There is no question in his mind that the process is gradual, involves the active participation of the learner, and -- to become operative for the adolescent -- requires a positive social interaction, as well as a logical consciousness. Hill's delineation of primary adolescent changes, their impact on and interaction with specific settings, and the manifestation of secondary changes can be said to have the same requisites as equilibration. The development of resolutions to the issues of attachment-autonomy, sexuality-intimacy, and achievement-identity relies on a gradual process, involves the student in active participation and decision making, and requires extensive, positive social interaction. The result is a fully capable, operative adolescent well on his/her way to adulthood.

The interplay between primary changes and secondary mediating influences should also be emphasized when discussing variability and gradual change in the adolescent's transformation. The issue of identity provides a useful example. Hill (1978) points out: "First there is the business of transforming images of self to accommodate to bodily changes and changes in social expectations" (p. 13); these are primary changes. Then "there is the problem of coordinating these images

to attain a self-theory that incorporates uniqueness and continuity through time" (Hill, 1978, p. 13). This coordination constitutes secondary change. In building a new, adult identity, the adolescent assimilates the realization of primary changes as the body/mind/personality experiences initial development. Then the adolescent responds or accommodates to initial development with secondary changes, gradually achieved through positive experience under the influence of family, schools, and peer groups. The role of formal operations, as depicted by the Genevan theorists, in this interactive process, appears to be particularly significant. According to Hill (1978, p. 15), the identity formation process described by Erikson (1968) would be impossible without experiencing formal operations in the social realm. By the same token, the capability for mature intimacy described by Erikson (1963) and Lidz (1968), or post conventional moral development described by Gilligan and Kohlberg (1978), also seem to require the advent of formal operations in the adolescent's cognitive abilities.

In other words, the teen-ager's primary changes mature and develop in the significant settings of life to the extent that interplay of the issues which are manifest in secondary changes are permitted to exist and in terms of the quality of their interactive coordination. The school that provides the highest form of cognitive preparation, according to Piaget (1973), also must call for a proper ethical and social education that is "directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms" (p. 87). The secondary school which serves a population of maturing

adolescents faces both awesome tasks during this key period of development.

And finally, significant in Hill's analysis, is the interplay between the growing formal operations of the adolescent and the regulation of norms about his/her behavior as set by peer group, family, or the school itself. In the institution of the school, this interaction is a particularly important area of educational consideration. This is the larger psychological problem of creating environments for learning, the settings of behavior as Epstein (1981) defines them:

> Schools expect students to accommodate their behavior to the opportunities and constraints of each setting, to change behavior as they move from setting to setting, and knowledge unique to each setting. To a great extent, the students do accommodate their behavior for each new setting (p. 4).

In the relationship between what the student observes and consciously decides, and the encouragement or discouragement advanced by his/her peers and superiors, learning is supposed to occur. But little research about adolescents in schools is viewed from the point of view of outcomes of schooling. What do we want the settings of learning for teen-agers to accomplish? There is an underlying assumption in this paper that *effective* secondary schools will meet the needs of most youngsters between 11 and 18 years of age. An extensive discussion of these needs has centered on primary and secondary changes in adolescence. It is necessary now to examine adolescence in the context of the outcomes of effective schooling.

Effective Schooling and Adolescence

The literature on effective schools is beginning to rival that of adolescent development in size and scope. This paper makes no attempt to review or analyze comprehensively the current movement on school effectiveness.* Rather, it seeks to use the five factors considered the most critical aspects recognized by scholars (Brookover, 1980; Edmonds, n.d.; Mann, 1979; Rutter, Maughan, Mortimer & Ouston with Smith 1979) as high positive correlates of effectiveness as a means of analyzing research on adolescence. In summary, these factors include:

- a strong principal who is also an instructional leader;
- high teacher expectations of student achievement;
- safe, orderly facilities and positive school climate;
- priority of a basic skills program; and
- frequent and continuous assessment of performance and regular use of such data.

Assuming these factors describe effective educational institutions, how might these factors relate to the issues of adolescent development? Such relationships may prove to be hindering or helpful to the education of the individual teen-ager. In the analysis that follows, the school as a whole is the focus of discussion rather than the structure or content of specific, individual classrooms.

Strong principal/instructional leader. If an effective school is administered by a strong principal who is also an instructional leader,

*See another paper on this topic prepared by Joseph D'Amico, The Effective Schools Movement: Studies, Issues, and Approaches, Research for Better Schools, Inc., Philadelphia, PA, 1980.

how might his/her relationship with the population of adolescents in the school best be characterized? Obviously the question of *authority* in the institution is of primary concern, particularly the role and structure of disciplinary practices carried out in the exercise of the principal's leadership. According to the current literature on adolescence, the autocratic or authoritarian model of administration would not seem to be an effective approach for secondary schooling. Hill and Monks (1977) maintain that excessive authoritarianism, as well as excessive permissiveness, leads to continued dependency on the part of the youngster and, therefore, hinders the adolescent's development of autonomy. Epstein (1981) suggests that the tendency to over-control adolescents actually runs counter to the teen-ager's need to develop autonomy and independence. Mergendoller (1981) suggests school centralization leads to teen-age passivity. These researchers argue that what is needed at the secondary level is a balance between understanding the need for rules in the organization and the freedom to develop through action an understanding of the school as a total institution. The chief administrator in a school needs to support such a position.

Much of the literature on managing high schools focuses on the size of the institutions and the number of students attending them. Mergendoller (1981) points out that "students have significant power to disrupt the school, and sabotage the instructional process" (p.21). One response to this potential threat is narrowly to delimit student role and keep things under tight, centralized control. Heyneman (1976)

takes issue with such an approach, saying that although the adolescent needs to learn that some options are finite in the secondary school, he/she has a greater need to find out through actual responsibilities what significance rules, leadership, and authority have on the school as a real community and his/her role in that society. Newmann (1980) sees adolescent involvement in the decision-making and social activity of the school as a key commitment which can counter alienation in high school. Piaget (1973) would emphasize that the student cannot merely be told information about rules and activity; the adolescent learner must experience it directly in everyday events. Conger (1972) suggests that when a principal fails to provide opportunities for the growth of student autonomy, he/she allows for "more rapid and pervasive growth of alienation, apathy, drugs, delinquency, and violence" (p. 226) in the school community.

The importance of realizing that the school *is* a community, as Adelson (1972, 1979) discusses it, is also important to the adolescent in realizing the significance of the principal as school leader. How does the principal view the various groups of actors in the high school population: students, teachers, and support personnel? What roles are permitted for each group; what stake in the larger community is encouraged? If peer associations are so significant to the adolescent student, how does the authority structure of a school treat and work with the student council, various clubs and spontaneous social groups, sports teams, and the myriad of activities that exemplify peer

associations? Are student groups age-segregated organizations basically kept outside the instructional focus of the school or unrelated to the community-at-large? How are faculty roles or budgetary support allocated to student activities? In making decisions of this sort, the principal reveals his/her hidden values and informs students about what really counts in the school -- strict controls or opportunities for increasing student involvement in the institution.

The nature of the developing adolescent also suggests that the secondary principal has a particular role to play as an instructional leader in the high school. Although much of this role may be shared with department chairpersons, the emphasis of the principal's labors must be concerned with the quality and significance of the academic program in the school. This emphasis agrees with Brookover's (1980) findings about effective elementary schools, as well as the research of Clark, Lotto, and McCarthy (1980) which stresses the school administrator's role in setting standards of performance in improving schools. The literature on adolescence also stresses the importance of the school leader in structuring an institution that provides opportunities for teen-age students to build an awareness about learning and a consciousness of academic excellence within the school society (Mosher, 1979).

The secondary school principal, then, has at least a two-fold task in managing a large, departmentalized high school. First, he/she is the leader of a functioning community in which students as individuals and in groups should be encouraged to be active in the social

exchange of the school -- both formally and informally -- and to have success in such relationships. This emphasis suggests that the principal provides organizational leadership so that students and teachers alike have an integral role in planning, designing, selecting, and implementing the decisions that make the school a viable social institution. The "ethos" of the school, as recent studies of public (Rutter et al., 1979) and private (Abramowitz, Stackhouse et al., 1980) institutions indicate, may be intimately related to this leadership factor. But, the principal also has an academic influence on developing teen-agers. School is not a popularity contest. Academic excellence in a period of rapid cognitive change requires that the school leader work with subject specialists to advocate intellectual exchange, too. More will be raised about this topic in subsequent factor discussions.

Teacher expectations of student achievement. The role of teacher expectations and their influence on student achievement similarly becomes a complex relationship when adolescent development is considered in the secondary school. Achievement conceived narrowly as "working for grades" loses credibility among a student population that is geared more to peer values than to those of parents, teachers, or society. Kagan (1972, p. 99) finds "insufficient motivation" the primary problem in junior and senior high schools. Expectations concerning ability or personal attributes are shaped by many relationships adolescents have and by no means are they limited merely to classroom tasks or performance. According to Hill (1980) and Husén (1977), having increased opportunities to do things, to have contacts and meaningful roles in the larger school

organization or the community, has significance for teen-agers. One reason for this is the greater visibility of such roles to the student's peers. Another reason is the positive feedback of task success itself.

An examination of the area of expectation cannot help but raise the question of the relationship between the student's view of himself/herself and a sense of school achievement. Goldstein (1967) examines this relationship and suggests that the student associates his/her own self-concept with identity factors and feelings of belongingness in the school. If a student does not expect to be successful in school, he/she feels that he/she is not part of the system. Such lack of expectation for success is the mark of alienation, a permanently entrenched feeling of deficiency. To expect success and to feel that one has meaningful roles to play in the larger organization are motivating factors that may prevent adolescents from dropping out of school, as well as adults from burning-out in society.

Much of the research on adolescence has been focused on male subjects in high school settings. Lipsitz (1980) stresses the need to complete more studies on female subjects and junior high school programs. She also emphasizes that the relationships between expectation and achievement are in particular need of further study. She ties the beginnings of the drop-out problem in secondary school to the feelings of insufficiency and lack of high expectation during early adolescence, the years between 11 and 13. In Lipsitz's research, there are some relationships to home and family orientation that must be understood,

but the major point emphasized is that the school is the major institution that mediates between what the student expects of him/herself and the dreams of glory started in childhood. In addition, as Bakan (1972) notes -- drawing on Stinchcombe's (1964) research -- the images of the future, particularly in the job market, not only motivate immediate performance but play an important role in determining delinquent behavior and causing general rebelliousness, too. The student who sees little connection between real work and what is being studied at school, or between his/her career goals and what the teacher conveys as a job choice for a youngster, quickly opts out of competent performance in the classroom. Similarly, being able to do something is meaningless if the task performed is not linked to the child's ultimate work goals:

> When a student realizes he does not achieve status increment from improved current performance, current performance loses meaning . . . He claims autonomy from adults because their authority does not promise him a satisfactory future (Bakan, 1972, p. 83).

There is some evidence, too, that schools, as well as parents, can also expect too much of students. Literature in the 1960s (Stinchcombe, 1964) suggested adolescent "rebellion is a way of rejecting pressure for success" (p. 8). More recent studies (Elkind, 1982a) of the hurried child in American life characterize youngsters as unintended victims of rapid, bewildering social change. "Some of the more negative consequences of hurrying usually become evident in adolescence, when the pressures to grow up fast collide with institutional prohibitions" (Elkind, 1982b, p. 14). Problems of teen-age pregnancy and even teen-age suicide may be

traced to the stress of such unrealistic expectation.

School climate. Much of the literature on effective schools discusses the significance of a supportive school climate in promoting learning. Although some attention is given to the influence of pleasant physical facilities on instruction (Heyman, 1978), emphasis is not placed solely on the physical environment of the school but rather on the psychological base. In the settings and communication patterns that create meaningful relationships throughout the institution, some researchers locate the beginnings of factors like high expectations and student motivation (Rutter et al., 1979). Gump's (1980) research on environments that have social meaning is also relevant to this point. Gump suggests that effective educational institutions are concerned with the human components, as well as the instructional program. How people interrelate and what they study under what conditions are important aspects of supportive environments. The effective high school serves the adolescent's need for peer exchange and encourages learning experiences through more than age-segregated, academic relationships.

Barker and Gump's (1964) work on optimal school size is also important for the development of secondary educational climates. Where concerns are high for maximizing student involvement and developing program flexibility to serve the variability of the student population, the size of the school and the ratio of staff to students are important factors to consider. If the adolescent requires real and varied settings in which to act out and individually experience significant relationships in the school, overcrowded and mass approaches to instruction and

learning are obviously not appropriate. School climate conducive to learning requires some measure of personalization, if not individualization.

The research of the Center for Social Organization of Schools in Baltimore has implications for the study of school effectiveness and supportive climate. Projects conducted by the Center have examined the conditions for optimal peer associations in school (Karweit, Hansel, & Ricks, 1979), as well as the effects of cooperative learning strategies on instruction (Slavin & Karweit, 1979). In terms of adolescent development, the Center's work on peer relationships suggests that a supportive climate can influence student achievement, socialization, self-esteem, and other key aspects of schooling. Though many of the Center's studies have been conducted at the elementary level, research on adolescence suggests that the findings could apply to the secondary school as well.

The emphasis on the positive aspects of school climate should not lead educators to think there should be only an air of satisfaction in effective schools. Brookover and Lezotte (1979) found that teachers in effective schools, which they called "improving," are less satisfied than teachers in declining schools. These teachers are not complacent, but rather appeared more likely to experience some tension and dissatisfaction with existing situations. The energy of the staff and leadership in a school with a positive climate is directed toward *school-wide* improvement and the essential factors that can make that school safer, orderly, and more effective. The implications of adolescent literature for climate improvement in high school seem obvious. Adolescents need

to be part of the improvement process; meaningful roles for them in the process are the involvement patterns Newmann (1980) advocates. Through such involvement, the rules of the school and the orderliness of the school society can be experienced, in a Piagetian sense, directly.

Priority of basic skills. The effective schools literature emphasizes the priority of basic skills instruction and has been concerned primarily with the remedial needs of lesser advantaged students. Emphasis has been placed on the "basic skills" of mathematics and reading.

There is a rather strong divergence of interest between that perspective and the implications of research on adolescence for instruction and the development of curricula for secondary education. The formal operational patterns associated with cognitive development as a basic adolescent change stress the need for diversity of program and program content, the expansion of logical reasoning, and a growing awareness of possibilities and personal experience (Peel, 1971). If anything, adolescence is viewed as a period of academic extension, albeit in a context of specific cognitive abilities.

Three themes are suggested as alternate views of what is essential -- if not "basic" -- to skill development in adolescence. First, the importance of symbolic development is stressed. Peel (1971) suggests the teen-age thinker should be encouraged to discover new attributes of a nonperceptual, mediated kind. Understanding relationships through various forms of reasoning should also play a part in the secondary classroom; discovery methods should be experienced. These higher forms of cognition need to be extended to various subject areas and not merely to reading or computation.

Secondly, essential skill development in adolescence requires some attention to the social nature of learning among teen-agers. The interactive quality of group learning or the cooperative interplay of learning among peers are aspects of instruction that need to be stressed in the secondary classroom. Settings as discussed by Epstein (1981) or Gump (1980) can include debate teams, student council, school newspaper, and even the class play as vehicles of instruction which provide opportunities for new perspectives and different analyses. They may provide situations that are more convincing to the learner than text-oriented curricula bound between the covers of a book. For that matter, some researchers (Elkind, 1970) maintain that secondary instruction should not be limited to formal classroom or school instruction, but should include activities in the community-at-large as a resource for adolescent introspection.

Finally, with regard to the emphasis on effective schools and basic skills instruction, the issue of future promise and job perspectives is a realistic dimension to include in planning education for adolescents. To what extent is basic skills instruction keyed to productivity, real job attributes and youth employability? Making the classroom experience relevant to the actual marketplace may not be comfortable for adolescents but, according to Lipsitz (1977), it is essential for future economic success. Relating classroom work to the community's needs and interests is an important goal of such educational planning. It is interesting to note that Lipsitz takes a very dim view of not applying the knowledge of adolescence to the schooling of young people. She sees a narrow "basic skills" definition as an ineffective way to deliver secondary education:

> The effect on schooling for young adolescents may be dramatic. If schools are held accountable for teaching "basic skills" to everyone who is required to attend, the aims of schooling may be determined by an even narrower definition of the learner than we now have. Schools will be closer to Bereiter's vision than we might now expect. It will be easier for states to lower the age of compulsory attendance than to meet law suits, easier to flunk students out than to try harder to teach them, easier to crack down on them than to seek alternate ways of reaching them, easier to see them only in terms of the minimal standards of performance schools will be held measurably accountable for. It will be difficult to convince school systems to consider the holistic view in relating to a young adolescent when they know that they have only one or two more years to make good on society's investment. The pressure that will be on schools housing young adolescents, and therefore on the students in them, may be as wasteful as is the current lack of accountability. The sanction for noncompliance in practice may remain against the students (Lipsitz, 1977, p. 120).

The difference between educational policy and youth policy is highlighted in Lipsitz's statement. Perhaps society asks too much of schools and too little of other institutions. National service, work experience, outdoors education, Outward Bound, etc., come to mind as alternative, complementary learning experiences for adolescents. Education, even basic skills education, does not occur solely in the public school. With good community relations, effective schools can enjoy and learn from the success of other programs and institutions that serve teen-agers.

Gathering and using assessment data. Effective schools literature stresses the need for sound performance data on adolescents and a careful use of information to make instruction as relevant as possible to pupil needs. There is little in adolescent research that disagrees with this

position. The concern with the variability by which the adolescent makes the transformation to adulthood underlines the need to know, to assess in a variety of ways and under varying conditions, the biological, cognitive, and social manifestations of change. This also suggests assessment strategies beyond the standardized testing batteries that primarily measure basic skills performance. It would seem prudent to use information from such testing diagnostically and to prescribe, over a period of time, learning assignments that match the desired skills. The adolescent's gradual accommodation to new ways of thinking and performing suggest long-term approaches to both assessment and instruction.

There are assessment areas that are very limitedly discussed in both adolescent research and effective schools literature. Cultural influences and special problems, such as disadvantaged circumstances or giftedness, are not topics on which extensive information is available with regard to teen-age development. In one sense, both adolescent research and effective schools studies share a common position of ignorance on these concerns (Hill, 1978). Nevertheless, they are significant questions to resolve in the delivery of data-based education programs.

Summary

This section has examined the complex ways that basic adolescent changes are manifest in adolescent development. The settings of a student's life — home, peer, and school -- mediate the youngster's experience and present a series of secondary influences that strongly

effect the teen-ager's new found identity. At least three particular issues seem to emerge as long-range concerns for the developing adolescent. In the tension created by the issues of attachment-autonomy, intimacy-sexuality, and achievement-identity, the adolescent confronts secondary education. How these issues relate to the so-called factors of effective schooling is a topic extensively pursued in this section.

On the whole, the issues of asolescence and the factors of effective schooling address many similar concerns. Both areas seem to focus on human or humane dimensions; both literatures seem to approach education from a common sense, constructive, and positive attitude stance. There are some topics of potential conflict or contradiction and there are, no doubt, several significant questions about which both research areas are silent. For example, questions such as "What is the context of learning for adolescents in urban school settings?" or "What is the signficance of ethos (Rutter et al., 1979) in American secondary schools?" still need to be addressed when considering the implications of the two areas for practice in secondary education. The next section of this paper examines the implications of this rich research base.

IMPLICATIONS FOR PRACTICE AND FURTHER RESEARCH

There is no magic "fit" between research on adolescence and literature on effective schools. As in many topics of educational research, there are significant findings in both areas, and even truth, to be gained by study and comparison. There are some differences in approach between the two areas. Adolescent research is basically descriptive; it is concerned with detailing the variety of behaviors that characterize youngsters and their development. The resulting information is rich and diverse. The educational researcher must strive to understand the variation exposed and incorporate it meaningfully into a productive whole. Effective schools literature, on the other hand, seems much more prescriptive in nature. It seeks to build a careful sequence of factors as discrete entities which lead to smoothly operating, productive institutions. Given that the two areas address these different perspectives, what implications can be drawn about secondary education that are useful to practitioners, policy makers, or researchers working with adolescents?

Adolescent Needs and Appropriate Responses

One of the most noteworthy products of adolescent research is the catalogue of needs that are the peculiar requisites of youngsters in the second decade of life. These needs largely grow out of the basic changes that occur during adolescence, but they also reflect secondary influences and the issues of adolescent development discussed in the

previous section. Dorman (1981b) presents seven needs as characteristic of the young teen-ager:

- the need for diversity;
- the need for opportunities for self-exploration and self-definition;
- the need for opportunities for meaningful participation in their schools and communities;
- the need for positive social interaction with peers and adults;
- the need for competence and achievement; and
- the need for structure and clear limits (p. 5).

Although Dorman is speaking mainly about the student in middle school, the perspective she takes is not inconsistent with the needs Gump (1981) identifies at the heart of adolescent functionalism for the older student:

- gaining *competence* through activity;
- being *challenged* by competitive or difficult tasks;
- being *valued* by others; and
- being *part of an action group* (p. 2).

The parallels between these needs of adolescents and the good practices suggested by effective schools factors are relatively strong. This is true in the larger, (macro) perspective, as well as in the smaller (micro) detail. The effective schools movement calls for schools to pull themselves up by their bootstraps, to be systems ready to change.

The movement advocates self-evaluation on the part of the school as a whole, very much as the adolescent must learn to reconstruct his/her own reality in the transformation to adulthood. The particular factors of effectiveness are keys to that end; they are the dynamic means by which conditions in the school create an environment in which young people can best survive, if not thrive.

The first implication to be drawn is to realize that "responsive" schools consider the . . . adolescent as a *whole* person and recognize that young adolescents learn better in an environment which takes them into account (Dorman, 1981a, p. 4). This realization brings to mind the universal tasks of adolescence suggested by Conger (1972). While the teen-ager deals with both primary and secondary changes and tries to integrate these developments in everyday life, the universal tasks are also confronted. A school that does not expect that the youngster's energies are so tapped, is probably not only unrealistic -- it will be ineffective as well. The school's major problem is to determine how to create an environment and a program in which the student can become an active, contributing member of the educational setting, while he/she is caught up in the throes of adolescent transformation.

The second implication suggested by comparison of the two research areas is to realize that schools that are responsive to adolescents are *open systems*, more democratic than authoritarian, more progressive than restrictive. As Piaget's action-oriented learning was useful for understanding Hill's framework of adolescent development, Dewey's (1938)

approach to education and experience is fruitful in characterizing the school that must capture the vast potential of human enterprise, organize and deliver it to each new generation. The ideal school for adolescents expects them to be active learners, provides the opportunities for knowledge-building experiences, and protects the freedoms that make the interactions necessary possible. Some researchers (Mergendollar, 1981) suggest many American high schools are exactly the opposite of this ideal and challenge the educational enterprise to re-orient itself:

> The typical comprehensive secondary school has a deleterious effect on adolescent development. Schools are too big. Students are often excluded from taking an active role in school governance and directing their own educational program. Classrooms are too often competitive environments where recitation remains the predominant mode of instruction. Such schools can main in the name of education (p. 37).

Suggested Changes in Secondary Schools

To make secondary schools more effective institutions for adolescents, some researchers have proposed changes in the institutions in at least five categories: school structure and organization, curriculum, staff orientation, student orientation, and support services. The following discussion is presented as an example of the thinking that has been sparked by adolescent research or effective schools studies. There is a need, beyond the confines of this paper, to explore in greater depth these suggested changes.

Barker and Gump (1964) have long been advocates of smaller high schools in which students have greater opportunities to be active members

of the school community. If the school cannot be reduced in physical size, then the organization must be reshuffled to allow for more personalized exchanges which are closer to the students' interests. Glatthorn (n.d.) proposes changes in the physical space, as well as alternative school organizations to raise the possibility for autonomous behavior. The improved climate of such a school, as envisioned by Brookover (1980), would be a natural outcome of such restructuring and can be associated with greater achievement in the long run. The role of the principal and the administration is not to be underplayed in this transformation, and the emphasis is placed on school as an environment that is conducive to learning not as a center of punitive reprimand (Rutter et al., 1979).

The secondary school as the stepping stone to the great knowledge of humankind should be seen primarily as an institution of learning. The importance of the curriculum in that vision is a point to be emphasized. Unfortunately, that is not always the case. Cusick (1981) criticizes American secondary education for creating a hodgepodge of fragmented, unrelated course offerings. Glatthorn (n.d.) questions whether the ways students are grouped by curricular program should not be examined, especially in terms of embedded differences of social class and vocational limitations. In either case, the secondary school program is not the diverse, inspiring, and mind-expanding experience that presumably the cognitively capable adolescent is ready to cope with.

If schools are to be effective institutions for young adults, the attitude of the staffs in secondary education is another area ripe for

change. Do high school teachers really see schools as *academic* institutions? Edmonds (n.d.) stresses the importance of positive expectations for academic success on the part of teachers for *all* children. He emphasizes that teachers must be confident that they can meet the demands of successful instruction, too, and that implies their own professional growth and development. It can involve exploration of new teaching methods and materials. Teachers who feel overwhelmed or burned-out cannot hold much hope either for personal achievement or for that of their students.

The improved attitude of students is another area of potential improvement in secondary school reform. Mergendoller (1981) questions whether passive student bodies are meeting the challenge of education. Douvan and Adelson (1966) advocate experiences that can teach students internal controls, as Newmann (1980) proposes increased opportunities for participation and decision making. The emphasis here is upon the learner becoming aware of what he/she should know and be doing and why, to become responsible for their own growth and development. Competence in secondary education is not to be enforced from above; rather, the learner plays a pivotal role in constructing his/her own achievement. Part of this relationship between the learner and the school involves a knowledge of the goals of education in one's community, a commitment to similar goals and expectations, and a belief that one is moving ahead on task (Dorman, 1981a). This is as important for the students' families as for themselves, and often involves the learner's view of the future and career or vocational opportunities in that future.

Finally, the support services in a secondary school must also advance the academic emphasis of the overall program. Effective schools literature stresses the importance of change capability at all levels of the organization and among all members of the staff (Timpane, 1980). Monitoring test results and using assessment information diagnostically and productively requires the cooperation of the instructional personnel with the counseling staff. Working with students on physical fitness or team participation could involve physical education coaches, as well as academic faculty. The greater the communication among the actors of the school setting, the greater the chances for integrated learning.

The changes recommended in this section represent the parallel thinking that is suggested by adolescent research and effective schools literature. However, the two research areas do not totally complement each other. There are areas or concerns to which complete resolutions or final answers are not readily available. In particular, the problems of urban schools need much greater consideration, beyond the discussion and the suggestions made for all high schools in general.

Looking at Schooling in Urban Settings

What are the particular problems of developing effective schools for adolescents in America's urban settings? It seems questionable whether we have a sound understanding of what the multicultural population of teen-agers is like in urban environments. Educators have used convenient labels to apply to these youngsters: "black," "white," non-reader," "learning disabled," "disruptive," etc., but it is very possible that

"some in one group resemble the other group far more than their own" (Goldstein, 1967, p. 34). It seems that categories have been shaped more by fiscal policy than educational strategy. We need more information about these youngsters as actors in school. We need a better understanding, too, of the cultural influences these students experience and the significance that these experiences have to supposed success on school-based tasks. Lipsitz (1977) gives examples of some cultural practices in conflict with secondary school attendance: "machismo" for the Puerto Rican male is far more important to him than academic success; loyalty to family for the Puerto Rican teen-age girl is valued ahead of decisions about her personal life, education, and work. These factors obviously influence the youngster's development of identity to a greater degree than society's demands for achievement. Such cultural realizations may direct educators to a different understanding of the motivation for education, or lack thereof, among adolescent urban youth.

With regard to the delinquent tendencies of youth in urban schools, research seems to suggest that a student's experience in junior high school and earlier needs to be examined. A recent study by the Center for Social Organization of Schools (Wiatrowski, Hansell, Massey & Wilson, 1981) found that curricular tracking practices in junior high may have a significant influence on the socialization patterns and peer relationships that ultimately shape delinquency in high school. There is some evidence that peer group influences on adolescents peak in junior high

school (Gold & Petronio, 1980). These data suggest that secondary institutions requiring further study should include groups prior to the tenth grade.

Secondly, it is not sufficient merely to categorize urban youth as poor readers or as students deficient in computational skills. One really needs to know how these students' cognitive operations are impaired or what was lacking in earlier education that must be corrected during secondary school. In trying to determine how formal operations might manifest themselves in the development of an urban adolescent, a fuller description of his/her elementary school background may be very useful. Goldstein (1976, pp. 34-35) reports on earlier studies of city youth and cites multiple problems that may be potential avenues of intervention by the secondary educator: experience with correction of enunciation, pronunciation, and grammar, difficulty in handling items related to time judgments, using adults as sources of information and correction, etc. What is interesting about Goldstein's work is the breadth of the urban students' deficiency; something much greater than "basic skills" is involved. Lipsitz (1977) points out that the difference between disadvantaged and middle class youngsters widens even more during adolescence, "as the intellectually less rich environment becomes a greater handicap" (pp. 101-102) for the teen-ager. Urban schools need to explore how to diversify and enrich their environments to be more challenging and appropriate for adolescent youth. If secondary schools in large cities are going to tackle the gap between concrete street experience

and formal thought and logical reasoning expected at adolescence; they need to find ways of building complementary experiences for these urban youngsters in the communities in which they live.

Third, the relationship between urban adolescents and their families and communities needs much better elucidation. The school is an important mediating influence on adolescents, but so are family and community. In urban settings, where many students drop out of school by age 16, or even fail to enroll, the family and cultural community may often supersede the school's role as educator. Similarly, conditions influencing the family, like divorce or unemployment, obviously affect teen-agers.

Because of the high incidence of crime among adolescents in urban centers, the juvenile justice system and related welfare or regulatory agencies are also important influences to examine in the lives of urban youth. In determining identity or motivation achievement patterns, such community institutions may be as important as the schools in shaping student conduct. School programs should be implemented in concert with such community agencies to strengthen all the staffs involved. The school or the school district can play a leadership role in shaping a community-wide youth policy.

Finally, a careful study of values regarding education in a particular urban setting should be pursued. Lipsitz (1977) found that success in schooling for minorities pretty much "depended in general on the degree to which the value systems and/or physical appearances of the minorities were already similar to the predominant culture" (p. 109).

The school's role in providing information that might influence value development regarding education might be examined in the urban setting. The school can be the major force in long-range career guidance and preparation. It can offer first-hand information on technological employment (Anderson, 1980). Similarly, the urban school's role should be examined where value conflict with prevailing biases of American society is evident. Lightfoot (1978) uses the example of drug usage and escalating violence in this context. How can urban teachers maintain high expectations for student success where drugs and violence are everyday classroom occurrences? How do administrators build effective school climates amidst economic breakdown and abject futures? For information about adolescents or effective schooling to suggest even tentative changes in urban education, some of these issues obviously need to be addressed. The differences between schools in urban settings and higher income areas may only be differences of emphasis, as Edmonds (n.d.) suggests, but they are differences that need examination nonetheless.

Concluding Comments and Areas for Further Research

Where do we go from here? This paper has been an initial exploration of two very large literatures which are still expanding. Our problem is not one of finding more information. Rather, we are confronted with determining effective means for re-organizing and reshaping our findings in order to make them useful to practitioners and leaders in secondary education. Timpane (1980) makes a similar comment about the

factors of effective schooling and their ultimate impact on school practice:

> These are all factors that have been associated with effective schooling. We find ourselves in a sea of correlations. We do not know in just what combination or by what manner these building blocks bring about effective schooling. Nor, certainly, having discovered that, how best one would foster more effective schooling (p. 15).

Actually, what educational research offers to practitioners is a mechanism for choosing between sensible suggestions. Some relationships between adolescent research and effective schools literature may be more significant than others and offer greater promise of future payoff. It is important to identify these relationships and to characterize further research studies which might help transform such information into effective guidelines for practice.

For example, there is a strong concensus in the two research areas for characterizing secondary schools as environments for the social, as well as the cognitive development of adolescents. There is need for research that more fully documents exchanges of students with peers, as well as adults, including the school principal, which contributes to the positive climate of the overall institution. Such studies might address issues related to the work ethic and to concerns of prospective employers or colleagues on factors such as student cooperativeness, reliability, and loyalty to the community-at-large. Questions of competence and standards of excellence as perceived in a social context could also be examined. Findings from such research would be useful to secondary school administrators and faculties for re-orienting their institutions, as in the changes previously discussed.

Secondly, there is a need to examine the relationship between student participation and activity in the community of the school and the development of a personal sense of autonomy within the context of internally regulated goals and limits. What interrelationships should be fostered between the content of the school's program, the instructional method and style in the classroom, and the ways outcomes are assessed in the learning activity? Results of such studies might help educators understand the complexities of motivating youngsters, as well as eliminate the more punitive aspects of discipline. There is room in such studies for better coordination with home and community agencies and linkages to other arenas of participation for teen-agers.

There is need for studies of secondary school staffs in terms of their understanding and attitudes regarding adolescent behavior and development. Particular focus could be given to analyzing the roles adolescents play in peer groups associated with the schools, as well as with organizations and informal affiliations beyond the educational institution. Special attention should be given to understanding the needs and circumstances of urban youngsters, the problems they face and the combined influences of the adolescent transformation and life in the central city. These studies could be significant for teacher preparation and for in-service staff development, as well.

Finally, there is a need to address the curricular question of basic learning and adolescent development. Given the importance of social perspective and peer influence on teen-age learning, what is the appropriate organization of subject matter and what are the most effective

ways to deliver that information? In an era heavily influenced by television and microprocessors, how can these media best be incorporated into the teen-age student's instructional program? The secondary school is not only responsible for teaching the knowledge of most worth but the cognitive processes of greatest power. Hopefully, with the results of such research, the secondary school can become an effective academic institution.

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