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ABSTRACT

This paper emphasizes that one of the main concerns in year-round education is the effect upon the social, emotional, physical, and psychological development of children. Alteration of the school calendar, and the curricular innovations that tend to piggy-back year-round programs, may well provide the impetus for individualizing and humanizing instructional methods and enhancing the cognitive, affective, and psychomotor development of children. (Author)

CHILD DEVELOPMENT IN THE YEAR ROUND ELEMENTARY SCHOOL

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Recent societal and technological advances have drastically changed the demands being placed on school systems. The knowledge explosion, computerization, television, atomic power and space travel have brought a change in what the public expects from its schools. In addition, pressures from within such as overcrowded schools and small budgets are causing concern among educators resulting in continual re-examination of traditional education procedures. One focus of recent concern is the school calendar; across the nation many educators are questioning the validity of the 180 day September to May school year.

A three month vacation from school was originally designed to meet the needs of an agrarian society -- needs which no longer exist for most students in our industrialized society. Why then, has use of the nine month calendar continued? Reasons vary from children's need for release from the pressures of school to the fact that the 9-3 arrangement is the basis for the life style most families follow. More important for our purposes, however, is a common factor which seems to surround most reasons for maintaining the present school calendar--the dearth of research on the effects of a change in the calendar. This is even more true when evidence of any effect of calendar changes relative to child development is sought. Educators "believe" that a three month break from school helps children return refreshed in September, but little or no evidence exists to support this assumption. If educators are looking at the year round school as a possible means of improving education, the impact of the change in time on children must be substantiated by research; without such information there is no adequate basis for making good decisions on the issue.

The purpose of this paper is to determine how year round education can provide support for the basic assumptions underlying a system of education

based on a child's naturally developing propensities. After stating the assumptions of the cognitive developmental theory, the implications of the statements for developing an ideal education system will be explored. The components of a year round program will then be analyzed to determine their impact on the ideal system.

The discussion of year round education in this paper is based on a mandatory year round school calendar as opposed to an optional or extended school year. That is, the implications would not necessarily hold true if students had an option that enabled them to continue the 9-3 arrangement or if more than 180 days attendance was required. The latter arrangement, called the extended school year, requires school attendance of 210 or 220 days or more and clearly has different implications for child development.

The most commonly implemented mandatory year round program is the 45-15 plan developed by the Valley View School District #96 in Romeoville, Illinois. The plan structures the school year so that each child attends school forty-five days followed by a fifteen day vacation throughout the year. In this way only three-fourths of a district's population is in school at any one time. The children are out of school for traditional holidays as well, but there is no three month break during the summer. Of the year round programs described in the literature, the 45-15 plan is the one viewed by the authors as having the most potential for facilitating the implementation of a developmentally oriented curriculum. This is primarily due to the fact that it provides a radical enough departure from the traditional school calendar to provide a real difference which could conceiveably have an impact.

As with most other innovations in education, year round schooling has been developed and implemented with a top-down approach. That is, it is viewed as

feasible, acceptable and possible by educators because in some way it facilitates administration at the top level of the organization. The common criteria of cost and space utilization for conversion to year round schools is evidence of this fact. Most school districts begin serious consideration of year round schools only when the tax base and rate of taxation are at a maximum, spiraling costs of construction are prohibitive, buildings are operating well beyond student capacity or census figures indicate a rapid increase in school enrollment. Although such situations clearly indicate a need for alternative solutions, the crisis orientation and resulting reactions inevitably lead to problem solutions which ignore the most important component in the education system -- the student.

The top-down approach can be effective only if what proves to be beneficial for the top of the organization also results in gains for the students at the bottom. Imagine planning and development of an innovation in education, with a bottom-up approach; the rationale being that the innovation will benefit students. There would be no need to "sell" the new program to parents or the community; they would support it because it could be shown to be better for their children. Parent and community resistance to change, often cited as a major reason for failure of year-round programs, would be at a minimum if plans were conceived on the basis of child development rather than administrative convenience.

What all too often happens is that the student is considered in educational planning only as an afterthought, at the time an idea is taken to the public for tax support. A nationwide look at recent results of bond referendums indicates that the public is not supporting this approach. The time has passed, and rightly so, when educators can successfully implement programs which do not have direct impact on students.

Concern for students should be guided by a theoretical orientation of how children develop, adopted as a basis for planning, developing, implementing and evaluating an alteration in an education system. The developmental theory of Jean Piaget provides such a framework for development and evaluation of educational revisions.

The cognitive developmental view is based on the premise that the cognitive and affective structures which education should nourish are natural emergents from the interaction between the child and the environment under conditions where such interaction is allowed or fostered. More specifically the basic assumptions of this position are:

(1) Basic development involves transformations of cognitive structures which cannot be defined by the parameters of associationistic learning (contiguity, repetition, reinforcement, etc.) and which must be explained by parameters of organizational wholes or systems of internal relations. These transformations are more popularly labeled stages and have the following general characteristics:

   (a) Stages imply distinct or qualitative differences in children's modes of thinking or of solving the same problem at different ages.

   (b) These different modes of thought form an invariant sequence, order, or succession in individual development. While environmental factors may speed up, slow down, or stop development, they do not change its sequence.

   (c) Each of these different and sequential modes of thought forms a structural whole. A given stage response on a task does not just represent a specific response determined by knowledge and familiarity with that task or tasks similar to it; rather, it represents an underlying thought-organization.

(2) Development of cognitive structure is the result of processes of interaction between the structure of the organism and the structure of the environment, rather than being the direct result of maturation or the direct result of learning.

(3) Cognitive structures are always structures of action. While cognitive activities move from the sensori-motor to the symbolic, to the verbal propositional modes, the organization of these modes is always an organization of actions upon objects.

(4) Social development and functioning, and cognitive development and functioning are not distinct realms. Social and cognitive development are parallel; they represent perspectives and contexts in defining structural change. (Kohlberg 1968b, p. 348)

(5) The optimal conditions for development entail some optimal balance of conflict and match between the cognitive structures of the child and the structure of his psychological environment.

(6) All men are inherently motivated to develop and learn.

In addition to these major assumptions there are two other principles that have direct applicability to education. They are:

(1) Children in the preoperational and concrete operational stages require concrete experience with objects and phenomenon before they form ideas or symbolically represent these stimuli.

(2) While there has been limited success in accelerating a child from one stage to the next, there has been extensive success in facilitating development when a child is in a transition period between stages.

From these assumptions a number of educational implications can be derived. It is the authors' belief that these implications should be the focal point of any elementary curriculum.

Educators should respect the child's own view of the world. Each individual perceives and understands physical and social reality relative to his stage of development. Adult standards and explanations must not be legislated; if they are, the result will be memorization of adult responses rather than increased understanding. Consequently the school must consider the developmental readiness of the child - how and what can be learned - and subsequently structure the classroom environment to meet his capacities and limitations. This demands that the school be ready for the child - not that the child be ready for school.

Sigel (1969) states that another important consideration in applying the principles of developmental stages to education is that children do not move

on all fronts simultaneously. In effect, the rates of growth may vary among children as well as for a particular child (p. 471) in different subject matter areas.

One of the strongest implications of cognitive developmental theory is that we should let children learn by doing. If intellectual development is to take place, the pupil must have an active exchange with his surroundings. At the elementary school level particularly, the pupil needs concrete aids to help him develop a clear and stable understanding of the world. He needs materials to manipulate; he needs opportunities to be active, to explore, to touch. (Clarizio 1969, p. 175). The role of the teacher is then to help the child construct his own knowledge directly from the feedback he receives. This can be accomplished by encouraging experimentation rather than offering direct answers. For example rather than teaching about volume in a traditional telling-listening relationship the teacher should provide the necessary material with which a child can experiment to discover the principle underlying volume.

Another implication is derived from the concept of equilibration, the idea that the pupil's intellectual equilibruim must be upset if he is to acquire more mature knowledge. Consequently, teachers must deliberately disturb the child's equilibruim in order to cause further development. Teachers can do this by pointing out dissonant elements in a given problem, by confronting the pupil with contrasting viewpoints and contradictions and by providing moderately novel experiences.

According to cognitive developmental theory one of the prime causes of an immature conception of the world is egocentric thought. Children perceive objects and phenomenon according to their own perspective and consequently develop a highly egocentric view of the world. To assist in reducing egocentrism children should be allowed to work, play, disagree and

talk with one another. This allows the child to put his thoughts against those of others and gain a perspective of others' views and positions. Again, Clarizio feels that such interactions lead to conflict and argument - to a state of disequilibruim. In the process of proving his point, the child is forced to re-evaluate his beliefs and clarify his thinking.

As was stated before there has been limited success in accelerating a child from the middle of one stage of development to the next stage. However, accelerating children through transition periods between stages has been successful. In order for teachers to be able to facilitate development during these periods the teacher must be in close physical proximity to the child, he must know how to assess when a child is in a transition period and he must know what to do to further development.

Finally education based on cognitive developmental theory would dispense with most of the unnecessary information and skill acquisition presently monopolizing a student's efforts. Instead, the major emphasis would be on the development and strengthening of thought processes. This change in focus would provide the necessary justification for eliminating the rigid differentiation between content areas and require educators to treat the world as an integrated whole rather than one divided into reading, mathematics, science, etc. Implementation of this orientation would require that the teacher not be satisfied merely with children's verbal and written responses, but rather probe the child's level and quality of understanding and integration of diverse stimulus sources.

To analyze the implications of the cognitive developmental theory relative to year round education it is convenient to group the implications into three categories: those which identify the child's cognitive capacities,

those which concern the creation of developmental teaching strategies and those which relate to the construction of a developmentally oriented curriculum. The analysis will focus on both direct and indirect relationships between year round education and the developmental implications.

It appears that conversion to a year round calendar has direct bearing only on the implication relating to the transition periods of a child's development. As these periods occur between developmental stages, the absence of an extended break in school attendance could increase the likelihood that the student will be in contact with the teacher during periods of transition. Such contact could result in acceleration which would not be possible within the framework of a traditional calendar.

Actually it is not surprising that conversion to a year round calendar directly affects only one of the many implications for a developmentally based education system. Considering the number of variables involved in an education system it should not be expected that varying only one--time-- would produce significant changes in the whole system. When all other components remain constant a change in time can result in no more than a different time frame for continuing to do what has been done in the past. If however, a time change were allowed to interact with other components in the educational system the possibility of significant change is enhanced.

If a district allows the impact of changes in time to interact with other aspects of the program, significant effects on child development may be observed. Although consistent with systems theory this is somewhat different from saying that change in any one component facilitates change in other components. There are elements peculiar to an alteration in time that can bring about change which would not necessarily result from varying a different component of the system (e.g. space). The indirect effects of time do support

many of the implications of the cognitive developmental theory.

The group of implications pertaining to a child's cognitive capacities points to the need for children to associate with those older and younger than themselves and to progress through stages of development unrestricted by superficial barriers. Implementation of a 45-15 plan results in the eventual mergining of the beginning and end of the school year. There are multiple points of entry and exit for students and no specified time when everything begins or ends. A program in which this merger is encouraged can lend strong support to the implications for pedagogical change by removing grade level barriers and allowing children to work in multi-age groups, progressing through stages in their own style and at their own rate.

However, conversion to a year calendar alone can do little or nothing to foster action regarding the implications relating to the creation of developmental teaching strategies unless this is a specific objective of the school district. There is nothing inherent in the 45-15 plan which provides for or promotes the development of classroom environments that are structured to meet the needs of individual learners or which allow children to learn by doing. Of course such environments could easily be part of a year round program, but changing the component of time only would not require the employment of such teaching strategies.

The implications which point to the need for curriculum change can be supported by a 45-15 year round plan. Although possible, it would be difficult to continue use of a nine month established curriculum when school attendance is divided into four forty-five day periods. Furthermore if efforts indicated by the implications relating to children's cognitive abilities are being undertaken curricular change will be imperative. Again, the multiple entry and exit points during the school year emphasize the need for

an integrated, continuous progress curriculum based on objectives defined as a function of a child's developmental stage and acquired knowledge. Both the readiness of the learner and the inherent logic or sequence of the subject matter would need to be considered in developing such a curriculum.

The relationships between the implications of the cognitive developmental theory and the components of the 45-15 year round plan are, for the most part, indirect. However, the evidence is strong enough to conclude that year round education <u>can</u> support the basic assumptions of a system of education which focuses on the child's naturally developing propensities. This is not to say that year round education, per se, supports these assumptions, but that potential support exists and, if coupled with other system changes, could potentially be a valuable educational innovation.

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