RUNNING HEAD: Effects of School Calendars

Effects of School Calendars on Student Achievement and Retention

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Abstract

This literature review offers a critical look at year-round education. An alternative to the traditional school schedule, year-round education has become a more accepted solution to some of the problems recognized in the American educational system, particularly the dilemma of over-crowded school facilities. Remedies to this kind of situation and others can be found by implementing one of the several variations of year-round schedules. Schools must decide what their need is in order to determine the proper plan. The background and definition of each schedule is described briefly in the following pages. Effects of year-round education on student achievement and retention remain the two main areas of concern for school administrators and educators. Recent studies are included in the review that address this issue. Reasons are also given that show the need to restructure the current agrarian school calendar.

Effects of School Calendars on Student Achievement and Retention

Tradition has held a tight reign on most of society, including educational systems throughout this country. Facing problems of over-crowded schools and little money budgeted for new facilities, an increasing number of schools in the United States have chosen an alternative to traditional school schedules to assist in alleviating this problem. The great debate regarding year-round education among politicians, educators, and community members primarily centers on the effectiveness of this kind of schedule for educating children.

The purpose of this literature review is to document previous work that has researched the effects of traditional and year-round school calendars on student achievement and learning retention. This is a beginning step in observing the structure of the majority of American school calendars and their conduciveness to success in learning. Though on a small scale, this information is designed to hopefully be valuable in future planning for American school systems.

History of School Calendars

At one point in time, farming was the primary source of income for families, and everyone in the family was obligated to help. With this in mind, school calendars were scheduled to revolve around the harvesting and planting of crops. The farming population in America , however, suffered a drastic decline (Huitt, 1995), leaving the agrarian school calendar obsolete. The shift away from farming did not bring about the subsequent change in the educational system. Schools continued to be structured according to agricultural needs, namely having the summer months - June, July, and August - as scheduled vacation time from formal schooling. Climate appeared to be one apparent reason for remaining with the traditional school calendar in certain sections of

the country. With the lack of air-conditioning, most schools opted for summer holidays due to the extreme heat and humidity (Glines, 1992).

As determined by the New York State Board of Regents (1978), this school schedule encouraged forgetting. Longer breaks between formal instruction inhibited a student's ability to retain information. As a possible remedy to this problem, Alcorn (1992) stated, "If students' longest break from the classroom is one month instead of three, it is possible to avoid what can be called the long summer of forgetting'" (p.13).

According to Glines (1992), year-round education surfaced in this country as early as the turn of the century. Renowned for his work and vision for public school systems, William Wirt was credited with founding the first year-round school program in 1904 in Bluffton, Indiana. Other important contributors to this movement included Superintendent Addison Poland of New Jersey and Superintendent Harold Weber of Tennessee. Very similar to the Bluffton design, Poland introduced a year-round K-12 program as well as English classes for European immigrants that remained in effect from 1912 to 1931. Weber's goal was to improve the quality of education, and he implemented a non-graded, summer program that would provide continuous learning for any interested student. Due to their voluntary nature, these programs did not set the standard for future American school systems . Few, if any, pioneering year-round schools were in operation at the onset of the Second World War (Serifs, 1990).

In 1992, year-round education had been implemented in 1,668 public and private schools in 23 states (Bradford,1991). Research (e.g., Ritter, 1992; Serifs, 1990; Weaver, 1992) documented that the main reasons for implementing year-round education in present school systems coincided with those reasons given for beginning year-round schools in the early 1900s. Lack of

classroom space because of growing student populations and a desire to improve student learning prompted the second on-set of year-round education.

In addition to maximizing space and enhancing education, Glines (1992) and Rodgers (1993) cited the lack of success with the traditional school system for restructuring American education. In some areas, the community wanted schools to get involved with children by offering activities or programs in the summer months to curtail the onset of boredom, and taxpayers wanted to see school facilities used more efficiently (Rodgers, 1993). Glines (1992) listed areas where traditional schools have failed the children:

> An examination of dropout rates, low test scores, discipline concerns, accumulation of C, D and F grades given on progress reports, and boredom among the majority of gifted youth confirms that the traditional nine-month schools, or year-round programs that only save space, are not the answer (p. 21).

In order to prepare students educationally for the future, Bradford (1991) stated that, "schools will have to provide programs that are developmental at the elementary level, interdisciplinary at the middle level, and individualized at the high school level." p. 21). Attention was also drawn to other factors effecting the quality of performance in traditional schools such as teacher stress and burn-out. Opinions gathered from experienced teachers recognized a reduction in this characteristic when schools had more frequent vacations. A social reality dealt with the American tradition of family vacation time. Most parents in the working force were allowed no more than a two-week vacation each year. With revision of the schedule, mini-vacations could be taken in different seasons other than the summer without children missing school.

Models of Year-Round School Calendars

Definitions of year-round educational calendars varied according to the researcher. Most calendar plans maintained the traditional number of 180 school days (Bradford, 1991) with short vacations scattered throughout the year. Implementation of a single-track or multi-track method was determined by the needs of the school. When overpopulation or cost-effectiveness was the primary concern, multi-track methods allowed for increased school capacity by assigning students and their teachers to a certain group. When one group or track was on vacation, those classrooms were used by another group of students and teachers.

The most popular concept, according to Weaver (1992), was the 45-15 plan. Forty-five days of school were followed with fifteen days of vacation, and this has repeated four times throughout the year. Glines' (1990) definitions of the various school calendars showed that the same principle was used in the 60-20 plan, with the cycle being repeated three times instead of four, allowing for three twenty-day vacations. The 60-15 plan was similar to the 45-15 plan, yet this schedule allowed one common three-week vacation for students and teachers. Another variation allowed for ninety days in the classroom followed by one month's vacation. This was known at the 90-30 plan.

The Atlanta or Four Quarter Plan (Serifs, 1990) was sectioned into four 12-week blocks. Students chose which three quarters they attended. The Quinmester system divided the school calendar into five nine-week times of instruction; students chose four of the five quins.

Students attended six of eight blocks in the Concept 8 curriculum (Glines, 1990). Each block was six weeks long. With the Concept 6 idea, students were divided into three groups. Two groups each attended two consecutive teaching/learning sections of approximately sixteen

weeks. The eight-week vacation time alternated, in order to maintain two groups of students in school at all times. The Modified Concept 6 arranged intervals of four weeks. After the completion of eight weeks of school, vacation was held for four weeks.

Glines (1990) noted that additional teaching was required of teachers in the Orchard Plan. With a supplement in salary, teachers worked 225 days. The basic idea of the Orchard Plan began with a 60-15 calendar. The entire track went on vacation at the same time, with 20% of the class having a three-week vacation. This allowed students to rotate by groups of seven that aided in reducing the maximum students in a classroom at a given time.

The most innovative plan discussed by Glines (1990) was the Flexible or Personalized Calendar. Best suited for specialized schools such as magnet, continuation, or alternative programs, these plans maximized potential by tailoring to individual needs regarding curriculum as well as vacation time. The difference between flexibility and personalization rested in the amount of curriculum provided. Flexible plans needed to be in small units, whereas individual aptitude and ability determined the amount of covered curriculum for personalized plans.

Year-round scheduling plans primarily concerned with enhancing academic success usually offered intercession on a voluntary basis (Bradford, 1990; Glines, 1992; Oxnard School District, 1992; Serifs, 1990). In the instance of Buena Vista High School in Virginia (Bradford, 1990), the summer quarter was offered as a way for students to receive enrichment, acceleration, promotion, or remediation. Other programs scheduled remediation during vacation time for ten to fifteen days at half-day increments (Bradford, 1991). Rodgers (1993) recommended that educationally at-risk students be mandated to attend these sessions to continue the learning process.

Student Retention

The Virginia State Department of Education (1992) verified that forgetting was expected at some degree in all students. In reality, it was reported that most forgetting occurred within an hour to a day after instruction. A 1978 study (New York State Board of Regents) reported distinct differences in student classification and retention patterns. Forgetting learned material was shown to be different for each type of student, with disadvantaged students forgetting as much as three months of learning during summer vacation. Disadvantaged students are seldom introduced to motivating environments and subsequently often acquired no additional learning during this time. On the average, these students not only experienced more difficulty in attaining knowledge, but they also tended to forget the material more quickly.

The New York State Board of Regents (1978) also recognized that learning occurred during summer months, but the majority of children given opportunities to continually learn were performing above average in school. These children were provided with stimulating environments, and they were shown the importance of learning. This supplementary learning, however, more often than not interfered with previously learned material, making review necessary at the start of each new school year. Therefore, the length of holiday determined the extent of interference, which, in turn, decided the amount of review that was needed in the fall.

Alcorn (1992) and Rodgers (1993) pointed out that at least the first four to six weeks of the traditional school year was spent reviewing previously taught material. Hypothetically, this time of review could be decreased by allowing students additional practice during the summer months (Virginia State Department of Education, 1992). In limiting review, Alcorn (1992) also hypothesized that educators would have more time to teach new material.

Year-Round Education and Achievement

Bradford (1990) reported positive results from a Virginia high school that had been on a four-quarter plan for ten years. In 1987, an analysis was done that marked an increase in Science Research Associates (SRA) achievement scores. These scores reached the national average or higher since the four-quarter plan had been implemented.

Similar results were found by Alcorn (1992) in his study that included third, fifth, and sixth graders in the San Diego California District. He compared previous California Assessment Program scores of third and sixth graders who had participated in single- or multi-track programs for one year, three years, and six years. The fifth grade Comprehensive Test of Basic Skills scores were analyzed at the first, fourth, and eighth years. The year-round students outscored their counterparts in seventeen of twenty-seven testing areas. Of the nine possible intervals for mathematics testing, eight showed significant increases in year-round student scores.

Disagreement with this conclusion had been substantiated as well. Campbell's (1994) research focused on academically at-risk elementary students. No significant improvement in achievement scores was seen as measured by the California Test of Basic Skills when this test was administered at the end of two consecutive school terms.

Similar findings were also documented by Ritter (1992) among gifted students at the middle school level. Math achievement was compared at the middle and end of the school year by administering textbook-formulated competency tests. Results indicated a slight improvement in the year-round students' scores, but not at a significant level.

Several studies (Glines, 1992; Virginia State Department of Education, 1992; Weaver, 1992) mentioned that one of the primary reasons for implementation of year-round school was that it

had an effect on student achievement. When multi-track plans were adopted to relieve over-crowdedness and use facilities more efficiently, little improvement was seen in student scores or achievement. Started solely for the purpose of increasing the quality of education, single-track schools outscored traditional schools (Weaver, 1992).

Summary

Findings pertaining to the success of year-round school schedules are at this point inconclusive. Year-round education remains an unrefuted solution when over-crowdedness was a school's main concern, but there is a question as to whether 180-day year-round education programs will improve student learning as measured by standardized tests of basic skills. The consensus remains, however, that traditional schools are also lacking in their ability to provide what the students needed in terms of instruction.

According to most researchers, an improvement will not be seen in education until improvement is the primary concern. As noted by Bradford (1991), American schools have the shortest school calendar than any other industrialized country. As long as America continues to mandate a 180-day school calendar, little progress in the quality of education will be seen. When this is recognized by the majority of citizens, year-round education will most likely be seen as the next "tradition" in public education.

References

Alcorn, R. (1992). Test scores: Can year-round school raise them? Thrust for Educational Leadership, 21, 12-15.

Bradford, J. (1990). Year-Round schooling: A school for all seasons at the secondary level. (ERIC Document Reproduction Service No. ED 343260)

Bradford, J. (1991). Year-Round schools: A national perspective. (ERIC Document Reproduction Service No. ED 343 259)

Campbell, W. (1994). Year-Round schooling for academically at-risk students: Outcomes and perceptions of participants in an elementary program. ERS-Spectrum, 12, 20-24.

Glines, D. (1990). Maximizing school capacity. Thrust for Educational Leadership, 20(1), 49-54.

Glines, D. (1992). Year-round education: What lies ahead? Thrust for Educational Leadership, 21(6), 19-21.

Huitt, W. (1995, September). The future and education. Lecture presented in PSY 702: Conditions of Learning at Valdosta State University, Valdosta, GA. (URL: http://www.valdosta.peachnet.edu/~whuitt/psy702/lectures/future.lec)

New York State Board of Regents. (1978). Learning, retention, and forgetting (Tech. Rep. No. 5). (ERIC Document Reproduction Service No. ED 172324)

Oxnard School District of California. (1992). What YRE can do to enhance academic achievement and to enrich the lives of students that the traditional calendar cannot do. (ERIC Document Reproduction Service No. ED 352223)

Ritter, C. (1992). Effects of the year round school calendar on gifted and talented students. Master's thesis, Sam Houston State University, Huntsville, TX. (ERIC Document Reproduction Service No. ED 350739)

Rodgers, L. (1993). The pros and cons of year-round education at the elementary public school level. Master of Early Childhood Education Project, California State University, Long Beach. (ERIC Document Reproduction Service No. ED 370160)

Serifs, D. (1990). Year round education: A closer look. (ERIC Document Reproduction Service No. ED 329008)

Virginia State Department of Education. (1992). Instructional time and student learning: A study of the school calendar and instructional time. (ERIC Document Reproduction Service No. ED 356555)

Weaver, T. (1992). Year-round education (Report No. EDO-EA-92-1). Washington, DC: Office of Educational Research and Improvement. (ERIC Document Reproduction Service No. ED 342107)