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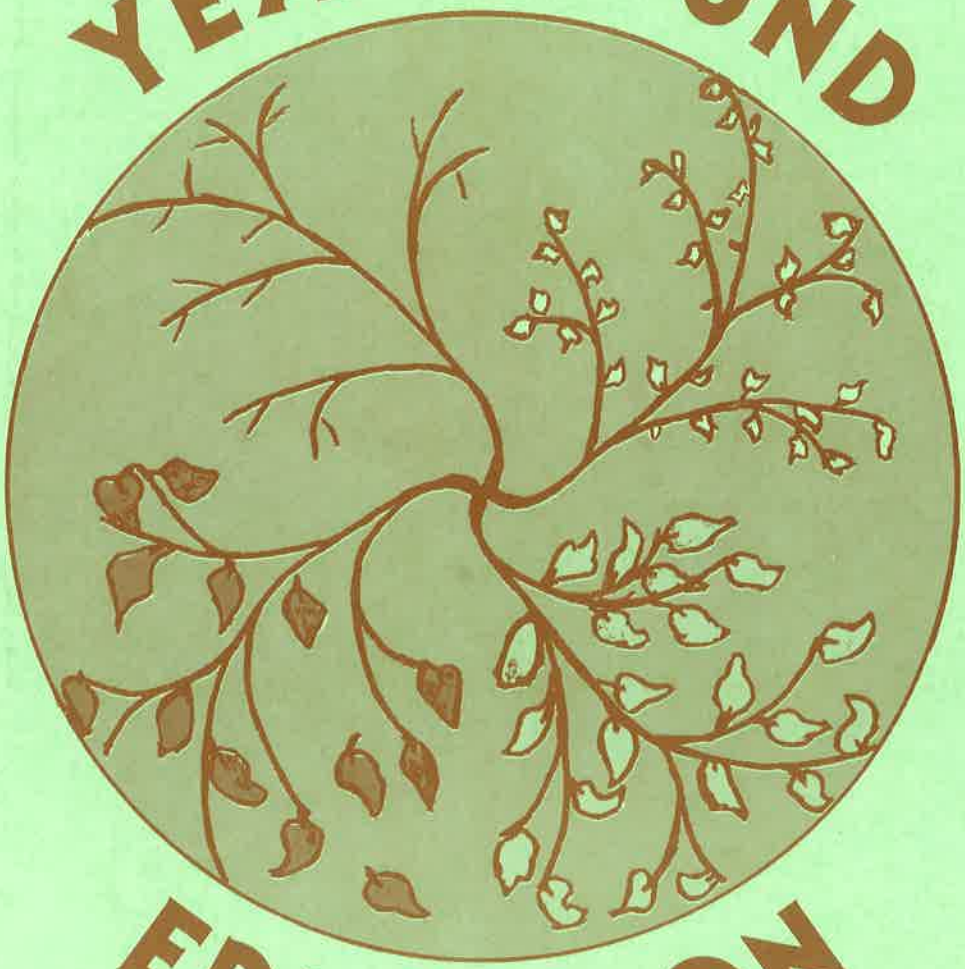
THRESHOLDS IN EDUCATION

YEAR ROUND EDUCATION



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EDITORIAL

Richard Hansen, President
National Council on Year-Round Education

In November, 1978, the Stanford Research Institute International published a study on Year-Round Education which it had been commissioned to undertake by the United States Office of Education. One of the conclusions cited in the Executive Summary indicates that some 14,000 school districts could conceivably save our nation's taxpayers as much as 100 million dollars if Year-Round school programs were universally implemented.

This conclusion once again supports what many year-round proponents have been saying for years; this being, that there is an excellent ratio between costs and benefits when year-round programs are carefully planned, developed and implemented.

In the wake of the Proposition 13 backwash, responsible educators can do no less than to give serious consideration to the benefits, including financial savings, derived from implementing year-round programs.

The early growth in the number of year-round schools was due primarily to a shortage of classrooms in many districts. As an additional management strategy to aleviate overcrowded conditions, many variations on the theme of a year-round calendar were developed and implemented, 56-15, Concept 6, etc. Now, after this initial growth in the YRE movement, followed by a plateauing of interest, there is renewed interest based on a new felt need—cost savings.

Thus, the purpose of this special issue of **Threshold**, devoted entirely to the topic of year-round education, is an attempt to pull together a number of topics, including trends and current status, type of programs, what the research indicates, etc. It should serve as a viable update to the seasoned and familiar as well as a good "Primer" for those who wish to know more about year-round education.

This project was sponsored by the National Council on Year-Round Education (NCYRE) as one of many projects undertaken this school year. It was made possible by the gracious offer of the College of Education, Northern Illinois University, to devote an entire edition to this topic. Our special thanks to the NIU College of Education.

Also, the NCYRE would like to thank co-editors Dr. Roy Bragg and Dr. Edward C. Pino and the other contributing authors for their efforts in this regard.

The next 20 years will be particularly challenging for American Education. Our task is to provide maximum educational benefit along with a high degree of economic efficiency. We, of the NCYRE, believe year-round programs provide a viable management strategy to assist in this quest. We hope this publiction will help guide us in the serious exploration of this program alternative.◄

Historical Background of Year-Round Education

By Donald Glines,
John McLain and
Edward C. Pino

In 1904, Bluffton, Indiana, developed a year-round calendar. In the first three quarters of the twentieth century, a number of other communities followed suit, among them being Newark, New Jersey; Omaha, Nebraska; Knoxville, Tennessee; and Ambridge, Pennsylvania. Most of these efforts were either mandatory or voluntary four quarter plans. The reasons for adoption were numerous: assisting the language and cultural assimilation of foreign-born immigrants; providing needed space for expanding school population growth; and increasing the learning opportunities for students.

Further, it should be noted that most city school systems operated from 240 to 260 days per year in the 1800's, examples being Detroit, 259 days; Boston, 244 days; Philadelphia, 251 days; and Washingon, D. C., 238 days. By 1915, most of these had been reduced to 190-195 days. On the other hand, most rural communities had schools which operated only five or six months a year as a result of winter weather, inadequate financing, and summer harvesting.

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The early year-round plans generally were successful. However, a number of societal problems erupted, such as the depression and a world war. Year-round programs slowly faded. Following World War II, the expanding population of the baby boom was met by communities which passed bond elections and tax overrides, the Korean War, and economic growth.

By the late sixties, changes were occurring. Population growth patterns became unbalanced; bond issues began to fail; the economy took on a new look; education was just emerging from a decade of innovation. As a result, St. Charles, Missouri; Romeovile, Illinois; and Hayward, California, for a variety of reasons, between 1968-1970 led the reintroduction of year-round education with variations of a plan now referred to as the 45-15 calendar. In the past ten years, a number of other calendar options have emerged.

Current year-round education calendars are still in the propeller age; they in no way have reached the jet age. Elementary school plans may have progressed as far as Charles Lindbergh and the "Spirit of St. Louis". High school programs are further behind, probably still in company with Eddie Rickenbacker and the World War I tri-planes. It is doubtful they have reached the Billy Mitchell court martial stage; so few high schools have yet made the effort.

Year-round education plans hopefully will reach the jet age within the next few years. Once this happens, the space age should rapidly follow—once the barrier of the jet age is broken, innovative persons ought to be able to develop the kinds of year-round programs that really make a difference.

Currently, over one fifth of a million elementary and secondary students are currently enrolled in schools that operate all year. This includes urban and rural schools in all geographic regions of the continental United States. One state that stands out above all others is California where many more students are enrolled in such programs than is found in any other state.

The most popular plan, in terms of number of schools and students in the program, is the 45-15 plan with over 147,000 students in 234 schools operating on that schedule. Second, with aproximately 43,400 students enrolled in 49 schools, is the quinmester plan. The major reason cited by the local school officials for adopting the 45-15 and the Concept 6 plan is to save building space, although numerous schools have adopted the programs to improve the quality of education and/or to adapt to parental or student preference for vacation. Together, the 45-15 and the concept 6 programs account for over one half of the school systems and 85% of the students involved in year-round education today.

The following articles in this issue provide a summary of the school programs operating on an all-year basis, indicating how they have implemented the various plans for year-round operation of academic programs.◄

Year-Round Education: A Philosophy

Donald Glines

Year-round education is a philosophy - a concept - related to the quality of life. Year-round education is not a mechanical system designed to house more students in overcrowded schools. Instead YRE helps people and helps society by providing calendar and curricular options to meet the needs of changing life and learning styles. Continuous lifelong learning thus becomes an essential characteristic of the new age the world is moving toward.

There are a number of reasons for adopting year-round programs now. First, **flexible** twelve-month calendars are more humane by permitting learning interests, vacations, and other activities of life to better fit the personal needs of each individual and family. Second, YRE programs extend the learning opportunities available to all students by keeping schools open more days of the year, and by increasing the learning choices offered through continuous programs involving the summer months and/or year-round intersessions in more creative ways. Finally, year-round education increases societal resources in three ways: (1) human - by arranging for 25 to 35 percent to be out of school and available for such volunteer work as year-round hospital Candystriper programs, migrant student tutors, and other such badly needed community assistance projects; (2) physical - by allowing districts to build less facilities, thereby saving precious land for more valuable ecological use, saving the nation's parks and recreation areas, and cutting down on the immediate use of raw materials, and long-range energy consumption; and (3) fiscal - by saving millions of dollars in growing districts, by making unnecessary much new construction and followup maintenance and/or by allowing declining districts to close older buildings more rapidly, thus saving thousands of dollars in maintenance and repair, and returning the building and/or site to other community uses. Nationally, in most any district, a minimum of 30 percent, realizing these advantages, normally will volunteer for a year-round calendar; 70 percent is generally the maximum number of volunteers during the first and second years the program is offered. The average number usually falls between 45-55 percent.

These percentages lead to the conflict between voluntary and mandatory year-round education, and to win/lose battles between proponents and opponents of the system. Such splits in communities are unnecessary and contrary to the productive energy of the district. It only occurs where people do not comprehend the philosophy and purposes of YRE.

For example, if a district is going under in its search for facilities to house students—perhaps being 40 classrooms short, plus having overcrowded special facilities such as gymnasiums and shops—it has four options: (1) to pass more bond and tax money and build; (2) to double shift and/or extend the day; (3) to have a voluntary year-round program and hope enough participate to alleviate the load; or (4) to mandate a year-round calendar to pick up 25-35 percent more space and thus eliminate the overcrowded conditions. In view of the above situation, mandating year-round education in a community is perfectly acceptable, if it appears to be the best of the four alternatives. Mandating a year-round calendar is no worse than the mandated nine-month calendar which is currently enforced in most districts. Unfortunately, opponents of YRE usually fail to acknowledge the dictatorial aspects of nine-month calendars, and continue to fight against the proposed solution through year-round education.

However, if a district has status quo enrollment, or even is declining, year-round education should still be offered as an option to all who could benefit. If a community understands the philosophy of year-round education, then the 30, 40 50, 60, or 70 percent who volunteer should be allowed to begin. Suppose only 30 percent volunteer; that is beautiful. If a flexible year-round calendar can help those families, then the district has the moral responsibility to provide such a program. It is simple to implement, does not cause great conflict, and can be done at no ex-

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tra expense. Proof of that is available from throughout the nation. It becomes a district with a win/win philosophy, where programs are offered for those in the minority. Further, in status quo enrollment districts it frees needed space for such facilities as art, industrial arts, home economics, music, physical education, and resource centers which are currently nonexistent in most elementary schools, and allows those subjects to expand in space, which is usually badly needed, in most secondary schools.

Year-round education must be accepted as a philosophy if the advantages are to be understood and ultimately outweigh the disadvantages. The more flexible the more personalized the program, the fewer the disadvantages. Most of all, though, YRE should be available to all persons in a district, from pre-kindergarten through adult levels, who could benefit, whether the district is growing or declining. Too many districts offer YRE only at the elementary school level or only in the section of town which might have one overcrowded school. These are not viable options; the districts do not understand the philosophy of YRE, of offering choices to all persons in the community regardless of age level or location of their home. Further, year-round education is an exciting option at the secondary level. Fortunately, more educators are beginning to understand that it can and does work well in high schools.

In implementing this philosophical stance, a number of common patterns have developed throughout the nation. One is the school-within-a-school plan. A number of buildings, including high schools, now offer both YRE and traditional calendars in the same building. Other districts have chosen to pair nearby schools so that people have a choice of a neighborhood YRE school or a neighborhood nine-month school. A third pattern is to cluster schools so that one of each three or four schools is a continuous learning opportunities design, thereby providing the "neighborhood cluster" a choice of school programs. A fourth effective pattern is to develop a YRE plan that can accommodate either a nine-month or YRE program in the same structure, such as is possible with the Concept 8 arrangement or the Flexible All-Year plan. There are several other methods. The point is that creative humane districts have been able to offer win/win choices in the true spirit of democracy wherever YRE has been understood as a philosophy, not just a method of housing students and/or saving money. Districts which have started and then dropped YRE calendars have been guilty of this latter thinking — they revert to win/lose thinking.

Further, a growing variety of organizational plans has increased the options related to the method of implementation Though each state currently seems to have its preferred plan, no one calendar arrangement has been proven best — only the most acceptable at this moment in time for a given situation. YRE is still in the propeller stage. Perhaps in the 1980's it will reach the jet age.

Nationally, a number of states currently offer some form of a true YRE program. The majority of the districts have been using the 45-15 calendar approach (nine weeks in school, three weeks on vacation on a rotating cycle) at the elementary level, started because of space problems. However, this picture is changing. Concept 8, an exciting K-12 compromise calendar (8 six-week terms — students choosing any 6 of the 8) is now emerging. The Quinmester (5 nine-week terms — students choosing 4 of the 5); (Concept 6, 6 forty-four-day terms — students attending 4 of the 6); (the Quarter Plan, 4 twelve-week terms — students attending 3 of the 4); (Concept 16, 16 three-week terms — students selecting 12 of the 16; and the individualized Flexible All-Year plan (students selecting any 175 days out of 240 that school is open) are now in operation. The Personalized Continuous Year, a completely individualized drop-in/drop-out plan is under development, as is the 45-15 Flexible Calendar — an individualized 45-15 rotation, and the 60-20, a variation of the 45-15, and Concept 7, nine five week blocks of time. Growth is occurring at the secondary level; more junior high age schools have joined, as well as high schools, the largest of which has an enrollment of over 2,000. Inter-session programs, those which are offered when students are technically on vacation, are increasing in popularity and creativeness.

Year-round education is not new. The records of the early 1900's show programs in Neward, New Jersey; Bluffton, Indiana; Ambridge, Pennsylvania; Memphis, Tennessee; and Omaha, Nebraska — just to name a few examples. For various reasons, these programs did not survive the trauma of the 1930's and 1940's. However, the latest resurgence may lead to YRE becoming a permanent fixture on the American scene. Even international interest is growing.

To assist this revitalization, a group of lay-citizens and professional educators joined together to form the National Council on Year-Round Education. Each year this group, in cooperation with a state department of education, has sponsored a national seminar to assist the study of year-round education. Information about each seminar and other data about the status of year-round education can be obtained by contacting the headquarters of NCYRE.

If year-round education can be understood as a win/win philosophy, as a means toward assisting the improvement of the quality of life of individual persons, and of society as a whole, the concept will continue to grow as a viable alternative which can enhance the potential to improve education and living in those communities willing to personalize learning opportunities for all of its citizens. A rapidly changing society will force schools out of nine month calendars. Thus current year-round efforts are merely stepping stones toward a different and hopefully better future.◄

The Current Status of Year-Round Education

Roy L. Bragg,
Donald Glines and
Edward C. Pino

Part 1: Overview

Nineteen states offer year-round learning opportunities involving 326 schools. California leads the nation with 43 districts having year-round-calendar programs enrolling approximately 77,602 students. These statistics are from an unpublished survey of year-round education programs compiled by Dr. Don Glines with assistance from the California State Department of Education in July of 1978.

The most popular year-round calendar at the elementary level is the 45-15. Students attend school for nine weeks, have a three-week vacation and then return for another nine weeks; the cycle continues throughout the year. Eleven other plans are in operation, including the 60-20-12 weeks in school, four weeks off; Concept 6—six 44-day terms with students attending four of the six (see accompanying article); Concept 8—eight six-week blocks of time with students enrolled in six of the eight; and the Quinmester—five nine-week terms with students attending four. Other forms include the Quarter Plan, Concept 7, the Flexible Year-Round Plan and the Personalized Continuous Year. Voluntary intersessions—classes and activities during vacation periods—are especially exciting and beneficial aspects of each plan.

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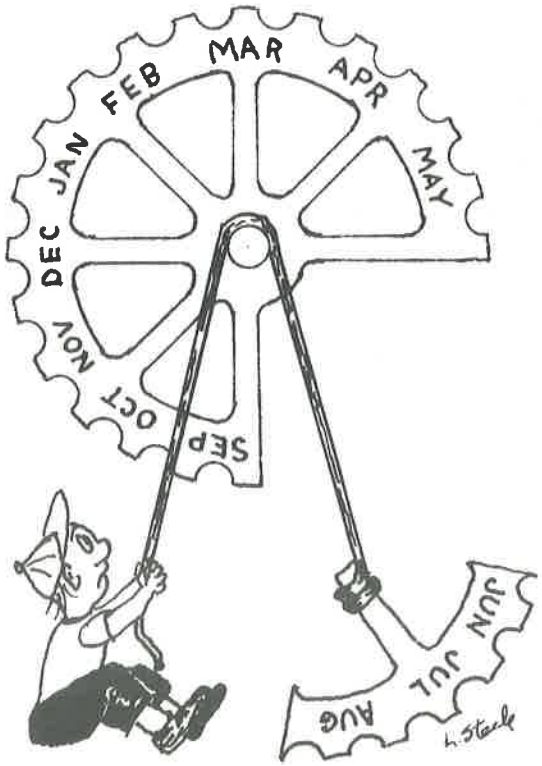
Of the 141 year-round California schools, 124 are K-6, 10 are junior high schools and 7 high schools; the remainder are a mixture of various elementary grades. The majority of the elementary schools have the 45-15 plan, with a mixture of programs at the junior and senior high levels. The largest district, Corono-Norco, has year-round programs in 19 buildings. The systems that have programs with the greatest longevity, dating from 1971, are Chula Vista and La-Mesa Spring Valley in San Diego County.

Colorado has been a leader in developing the Concept 6 plan in the Jefferson County (Denver) and Colorado Springs school districts. The Cherry Creek system (Denver) has several 45-15 schools. Valley View in Romeoville, Ill., Prince William County in Virginia and Francis Howell in St. Charles, Mo., are three of the pioneer districts that have been in continuous operation. The Valley View and Howell programs began in 1970 and Prince William County in 1971. Florida, Michigan, Pennsylvania, Arizona and Oregon are other states that have developed solid and influential year-round programs.

The growth of year-round educa-



tion reached a plateau in 1977-78. Since most school systems originaly embraced the concept in order to save space and money for construction in overcrowded districts, some communities lost interest when enrollments decreased. However, more are now realizing that year-round eduction is a viable option because of its many other advantages: choice of family life-styles, continuous year-round learning opportunities and reduction of environmental overload. In addition, studies indicate that shorter vacations throughout the year eliminate much of the summer learning loss suffered by disadvantaged children during the traditional three-month summer vacation period. In response to this finding, Congresswoman Shirley Chisholm (D-New York) has introduced amendment HR 9968 to the Elementary and Secondary Education Act to earmark five percent of federal Title I funds for year-round programs.

It is expected that year-round education will continue to plateau for the next two years. However, year-round eduction leaders throughout the nation expect a renewal of interest and growth in flexible scheduling during the eighties as societal and global conditions begin a period of more rapid transition.

Further the passage of "Proposition 13" in the State of California with its resulting implications on the financial welfare of local school governance, may well prove to be a real boost to the Year-Round Education Movement. This forecast is supported by the recently published study of year-round schools by Stanford Research Institute International which reports in part that as much as 100 million dollars a year of taxpayer's monies could be saved if year-round programs were adopted nation wide. Further information on year-round education can be obtained from those programs that now exist in the 19 states or from: Dr. Edward Pino, Executive Secretary, National Council on Year-Round Education, International Graduate School of Education, Parker, CO 80134.

Part 2: Program Options

The most commonly used calendar cycles are outlined below. Each needs much more explanation. Contact persons and districts are listed to allow interested individuals to ascertain further detail. Those districts listed are in no way cited as "the best." It is impossible to mention all the programs. Those randomly selected are merely starting points for evenutally gathering a great deal of data about the plan and program.

In addition, several "paper plans", yet to be implemented, or currently not operational, but still sound designs, are listed as potential catalysts for those creative leaders who may be willing to assist the movement out of the propeller age, through the jet age, and into the space age. The plans follow.

1. The 45-15 Block Plan

   This calendar is one of the easiest to implement, especially at the elementary level. The 45-15 block, or single track plan, divides the year into four nine-week terms, separated by four three-week vacation periods. The entire student body commonly begins the school year sometime in July, and attends together for nine weeks; then everyone, including staff, takes a three-week vacation. They return for another nine-week term, and then repeat the vacation pattern. This sequence repeats twice more, thus providing the usual thirty-six weeks of school.

   A feature of this plan is the provision for exciting intersessions. During the three-week period when students and staff are on vacation, volunteers may return to school for special one, two, or three-week sessions. Traditional curriculum can be offered, but more important is the opportunity to provide elective creative on-campus and off-campus learning opportunities, especially expanding the curriculum in the areas of the arts, the environment, ecology, and other former non-emphasized potential, and to cooperatively utilize the resources, the talents, and the programs of a large number of community agencies and organizations, as well as businesses and industries in the communities.

   This plan does not save space, but it does not cost more, breaks up the long summer vacation, and may contribute to the elimination of the "learning loss" common in the long vacation pattern calendars. The nine-week/three-week pattern is not always pure, depending upon the dates of Christmas and other required holidays. In other words, some sequences will follow the 45 days in, 15 days out; other terms may see a 47-day, 13-day arrangement, and may see a 10-week, 4-week pattern develop around the Thanksgiving and Christmas periods, for example.

2. The 45-15 Staggered Plan

   The 45-15 staggered is the same as the 45-15 block or single track, with one major exception. In this plan there are normally four tracks of students, though it can be implemented with only two or three tracks.

   Students are placed in one of the four groups and rotate their vacations. For example, while groups A, B, and C are in school, group D is out of school on vacation. When D returns, A goes on vacation. The rotation continues every three weeks, thus providing for 33 percent additional space in the school. Students follow the nine weeks in and three weeks out on vacation, as in the block plan. Each track has its own 45-15 scheudle. Teachers follow the track schedule of their students, or they can jump tracks and teach twelve months.

   This plan allows an elementary school, for example, built for 600, to house 800 students. The plan will work at the secondary level, but has been more popular in elementary schools. The advantages and disadvantages of the staggered plan are generally the same as with the block, except that saving space is a feature in the staggered approach, while teachers sharing rooms, lack of storage space, multi-tracked classes, and baby sit-

ter difficulties have been cited as additional disadvantages. Intersessions can be conducted as in the block, but often space requirements dictate that most intersessions must be held on off-campus sites.

3. The Flexible 45-15 Plan

This plan can be operated on either the single or multiple track system. It basically has all the advantages of the two other 45-15 approaches; the mechanics and scheduling are similar; however, the flexible plan has one big additional advantage, in that the curriculum is individualized. This provides for many more learning opportunities for students, and humanizes the calendar for families.

Creative intersessions are essential in this plan. Students basically follow the traditional 9-3 pattern; however, because the curriculum is individualized, if they need to vacation in the middle of a nine-week block, or if they need four or five weeks for vacation, instead of three, or if they have long long periods of illness, there is no problem; the approach is more personalized; therefore students and families have the flexibility of coming and going as needed. Thus, with flexible nine-week terms, and flexible intersessions, the flexible 45-15 plan has the advantages of the flexible all-year calendar, yet provides the basic structure of the 45-15 for the majority of students the majority of the year for administrative convenience.

4. The Concept 8 Plan

One of the newest year-round plans is Concept 8. The year is divided into eight six-week blocks of time. If it is a voluntary plan, students choose any six of the eight terms. If it is a mandatory program, students are assigned to six terms to balance the enrollment; usually terms 1 and 5, 2 and 6, 3 and 7, and 4 and 8 are paired, with students following the two assigned as their vacation cycle. Exceptions are made on an appeal basis for individual needs.

The plan only requires that the curriculum be placed in six-week units. This makes it appealing to secondary programs. It is a good compromise between elementary and secondary levels, as it can be used effectively K-12. Six weeks is usually long enough for most vacations, but not long enough to create extended learning loss. For students and families who need a twelve-week vacation, two six-week terms can be put together back-to-back in either the fall, winter, spring, or summer; or two periods of six weeks each may be selected any time during the year. Students who wish to extend their school opportunities can attend seven of the eight, or all eight, as school is open 48 weeks, they still have vacation time at Christmas, Thanksgiving, Fourth of July, and other such periods which total the remaining four weeks of the year. Further, Concept 8 at the secondary level blends well with those elementary and junior high schools already on the 45-15 plan. At least two of the four three-week periods can fall within the six-week vacation sessions.

5. The Concept 6 Plan

Concept 6 has been used successfully at both the elementary and secondary levels. It is the best spacesaver of the current year-round calendars, if implemented on a mandated basis. Students are divided into three groups. One group is always on vacation, thus providing fifty percent more space. For example, a high school built for 1600 can house 2400 under a mandated Concept 6 plan.

Concept 6 provides for six terms of approximately 40 days each. Students attend four of the six, but attend each two of their four terms consecutively. As an illustration, Group A may begin in July; they attend 40 days; they are then joined by Group B for another 40 days. Then Group C enters, but Group A, having completed its 80 days, goes on vacation for 40 days.

The plan provides for 160 or more days. In states where 175-180 days are required, the additional days can be made up by overlapping the groups on half-day sessions the first and last day of each term, or through independent study and intersession programs, and/or through creative off-campus activities. In states such as Florida, where the number of minutes per year can be substituted for the number of days, Concept 6 can operate effectively for 164 days a year for each track by extending the minutes per day, and thus prevent double shifting or independent requirements for a given number of days.

6. The Concept 16 Plan and Concept 12 Plan

Concept 16 and Concept 12 are basically the same, except for calendar variations. They both are an offshoot of 45-15. However, the potential flexibility is much greater. Concept 16 consists of 16 three-week curriculum modules. Students select or are assigned to twelve of the sixteen for their basic 36 weeks. They may attend additional three-week modules if they wish. Concept 12 consists of 12 four-week modules. Students select nine of the twelve.

With the curriculum in three-week modules, for example, students potentially have the option of entering or leaving school at any three-week interval. For vacations, they have the potential of short three-week breaks, or six, nine, or twelve weeks off, if they select consecutive modules. If the school is overcrowded, Concept 16 can save 33 percent space if students are assigned to four tracks, while concept 12 can save 50 percent space on the basis of three assigned tracks.

In the best current example of Concept 16, most students and faculty follow a 45-15 schedule, that is, in school nine weeks, off three weeks.

In Concept 12, they can stay in eight weeks, out four weeks. The real potential of this plan

lies within the mini modules which provide flexibility every three or four weeks of the year.

7. The Quarter Plan

One of the best known plans, and perhaps the easiest to understand, is the quarter system, the first year-round calendar implemented in the early 1900's, soon after the adoption nationwide of a fairly common nine-month school pattern.

The Quarter Plan divides the calendar into four, twelve-week periods of time: fall, winter, spring, summer. Students may select, or are assigned to any combination of three of the four quarters. They may attend the fourth on a voluntary basis, either on or off campus, if there is a desire. The curriculum is organized so that each quarter is a separate entity. The course begins and ends within the twelve-week period. In social studies and English programs, there usually is a series of separate or related mini-courses. In sequential subjects, the curriculum is usually developed on a quarter I, II, III basis to complete a year of work.

One advantage this system has is the longer vacation period for those who wish to work; they can also work in the fall, winter, or spring, rather than the summer. Ski enthusiasts enjoy this calendar, especially if they live in a mountain area where they can work in ski resorts, be on the ski patrol, be a member of the ski team, and ski throughout the winter. It has the disadvantage of long twelve-week breaks for those who wish shorter vacations more often during the year and has a built-in "learning loss" potential.

8. The Quinmester Plan

The Quinmester offers five nine-week semesters, or terms, or blocks of time. Students attend any four of the five if it is voluntary, or are assigned four of the five if mandated. This plan has been particularly popular at the high school level, especially those high schools which already have strong summer school programs which can easily be converted to a nine-week semester.

The faculty must put each course into a nine-week package so that a student begins and ends the course within the nine-week period. This is essential, as a student may register for Quin I and II, take vacation during Quin III, and then return for Quin IV and V. Any combination of Quins is possible. For those students who just must have the traditional nine-month calendar, they sign up for the four quins that best parallel September to June.

9. The Flexible All-Year Plan (California and Pennsylvania Versions)

The Flexible All-Year Plan is gaining in popularity, with six California districts now using some version of it; another version has been developed in Pennsylvania. Basically, this plan calls for school to be open approximately 240 days per year. In states like California, where Saturday and Sunday are now legal schooldays, and where only approximately thirteen holidays require schools to be closed, in theory, a school could be open about 350 days per year. No one has yet achieved that potential.

To operate this plan, teachers must be willing to individualize learning. It will not work with rigid group-paced teaching. When the curriculum is individualized, and this plan is adopted for approximately 240 days a year, parents, students, and even teachers in the most flexible plans, have three choices: (1) they may attend all 240 days if that is desirable—thus additional learning opportunities are available, although only 175 days are required; or (2) they may attend only the 175 required days, but these may be spread over the 240—this is possible because the curriculum is individualized. Families may select the time off they desire on an in and out basis throughout the year; or (3) if a family needs or insists upon the traditional nine-month calendar, they can start by a set date in September and finish by an agreed upon date in June—175 days after they start.

This plan is a great asset related to illness too; students never are behind; they never miss school (related to the required 175); they have an additional 65 days to attend. This can increase ADA for districts too. When students go to grandma's for a few days in February, they can still equal their 175 day total by attending in August.

In the California versions, the majority stil use the traditional curriculum, but have developed methods by which students can move in and out of the program. Reading, for example, provides for individual student folders and progress charts which allow a student to move through the reading materials at his or her own rate. The Pennsylvania version is similar, but has developed more curriculum packages; students can work through a package when in school, and/or can interrupt the package to be on vacation.

10. The Personalized Continuous-Year Plan

This is by far the most advanced of the current plans and is not in operation on a pure basis. It requires personal curriculum and a flexible organization to conduct this calendar.

This is by far the most advanced of the current plans and is not in operation on a pure basis in 1976. It was developed at the Wilson School in Mankato, MN., but the current version there is presently not a pure YRE program. However, the Wilson School and the St. Paul Open School in St. Paul, MN., illustrate the personal curriculum and flexible organization necessary to conduct this calendar.

This plan is difficult, generally impossible, to sell districtwide in a large district, or even schoolwide, for example, in a large high school of 2.000-3,000. However, it works

beautifully as a school-within-a-school, or if one school is selected and made voluntary enrollment for the district or a neighborhood cluster. It requires teachers who not only are ready to individualize, but to personalize. There are no required courses for everyone, no fourth grade curriculum, no subjects that are essential as a group. Each student, K-12, assisted by parents and school staff, selects a personalized program designed just for that student. Then the methods are individualized.

Students may drop in, drop out, speed up, slow down, start, stop, interrupt any time during the year. There is group interaction, but on a small group interest and need basis. There is no large group except as a common thread presentation. The school is open approximately 240 days. Students may attend all, or may come and go throughout the year as long as they are making an effort to reach toward the 175 days. A great deal of learning in this plan occurs off campus; the universe is considered the classroom.

It is a practical, viable year-round plan. It has not been widely implemented because people look at it through a win/lost lens—either all or none adopt it. Since the majority are usually not ready for the plunge, it is turned down. However, in every district, in most every school, there is a strong critical mass minority ready to begin. The key to adopting this plan is to provide for it to begin with a minority group of excited, voluntary, dedicated staff, students, and parents.

This plan can save space on a voluntary/mandatory basis. That is, students are told that most all must take some time off between September-June, and be in school part of the June-September period. Students select vacations on a first, second, third choice. All are guaranteed first choice for at least 3-4 weeks of the year. The enrollment is balanced on a flexible basis.

11. The Multiple Access Plan

    The Multiple Access Plan has some of the characteristics of the staggered 45-15, some from the flexible 45-15 plan, and some from Concepts 12 and 16. Basically, it is a variation of a 45-15 calendar.

    In the multiple access, as proposed first in Vermont, courses run for nine weeks; however, rather than starting and ending all courses at the same time, opening and closing dates are staggered on a three-week interval. Some classes start, for example, July 10. Others start at three-week intervals later in the summer. Nine weeks later, the courses started July 10 are completed, so those students and instructors are free to select new courses, go on vacation, or jump tracks and take a variety of courses all with different starting dates. This means that students can start or stop their school attendance at any three-week period that follows their nine weeks of courses, or can put several three weeks together for an extended vacation. This approach helps to reduce the multi-track teaching in secondary 45-15 schools.

12. The Potpourri of Plans

    There are dozens of other YRE plans which have either been proposed on paper but never implemented, or implemented for a short time and dropped, or which are in operation, but are merely local variations of some of the more common plans. Below a few examples of these are described. They all have potential merit for implementation in the near future, or for providing a suggestive stimulus to creative YRE inventors who wish to devise new and better plans, or are of historical significance.

    a. The Trimester Plan

       The trimester has been attempted off and on over the years. The true year-round trimester version has never stuck in the public schools. It calls for three equal semesters

throughout the year. Students select or are assigned to two of the three semesters. A difficulty of this plan is that under most state attendance laws, the Trimester does not work, as there are not enough calendar days to provide for three 88-90 day terms. It can be done by independent study or more time in school each day, as with Concept 6.

b. The Living-Learning System Plan

This is by far the most exciting, most advanced YRE system yet designed. It was ready for implementation in the spring of 1975 in the proposed Minnesota Experimental City, which, unfortunately, was, after six years of planning, not given the go-ahead by the 1973-74 version of the Minnesota legislature. The city was the living-learning laboratory. It was truly a flexible, continuous life-long learning system. Many parts of the plan are adaptable to current YRE schools.

c. The Flexi-Term Plan

Basically this plan provides for a series of flexible terms, most of which are not of common length. It is a cross between the Quinmester in its most conservative form, and the Flexible All-Year in its most liberal form. In the former, a school can offer, for example, four nine-week terms, a six-week term, a four-week term, and several one-week terms—any combination of varying length terms which add up to 50 weeks. The latter more flexible version provides for a series of one-week terms. Students can sign up for any 36 out of the 50 weeks which are offered.

d. The 60-20 Plan

This is a variation of the 45-15. Instead of attending school 45 days and then vacationing for 15 days, students attend for 60 days, and then vacation for 20 days. The student rotates through the year until he or she has had three 60-day terms and three 20-day vacations. The length of the 60-20 terms can be varied according to holidays and state attendance regulations.

e. The Concept 9 or 7 Plan

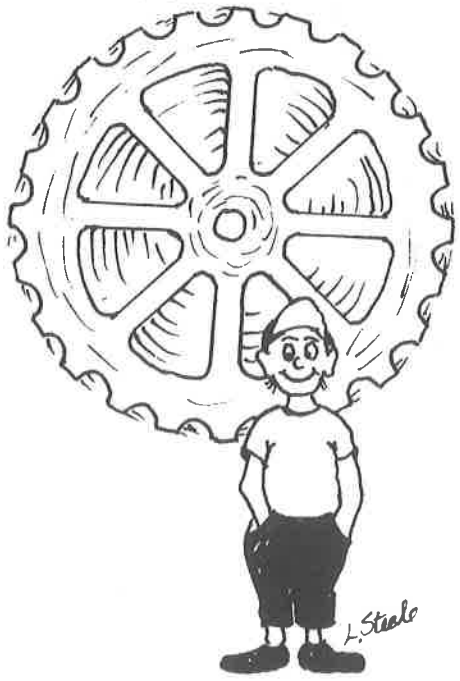
Concept 9 or 7 is a variation of the Quinmester. The curriculum consists of **nine** five-week modules. Students attend **seven** of the nine terms. Three additional one-week terms can be provided as intersessions. A variation of this is the Octamester. It consists of eight, five-week blocks, and six one-week blocks. Students attend combinations of five and one week terms to equal the minimum of 36, or may attend more.

f. Additional Modifications

Concept 8 can increase its space potentials by combining it with an extended day. For example, a school can offer eleven, forty-five minute periods. Students attend the first seven or the last seven periods, reducing enrollment in the first four and last four. The three-period overlap is relieved through lunch provisions. This combination increases the space from 33 to 50 percent.

Concept 9 can increase its space potential by providing two periods of twenty-five days each of double shifting. Concept 6 can do the same thing within the framework of 240 days available by double shifting a minimum number of days.

Though these kinds of variations are not exactly the most ideal, they can provide for 50 percent additional space under present laws in schools which are more than 25-35 percent overcrowded, the space saved by YRE without extending or double shifting in addition



Part 3: A Graphic Summary

It is recognized that the standard 180 day school year as it prevails in most schools is not universally satisfactory. The concept of year-round education has been adapted in many districts in an attempt to satisfy local community situations, and to provide a higher level of educational opportunity for students. Several types of organizational patterns have emerged to meet local conditions. A summary of those patterns is provided, along with the standard school year, to demonstrate how various school districts have opted to design the school year in their efforts to obtain quality education and maximum economic efficiency.

THE STANDARD 180 DAY SCHOOL YEAR

HOW IT WORKS

All students enrolled in school at the same time.
Students are not divided into sections for attendance purposes (but may be ability grouped or grouped into specialized curriculums).
School year is continuous, from beginning to end of school year.
Student progress (pass or fail) determined at end of year.
All students on vacation at same time.

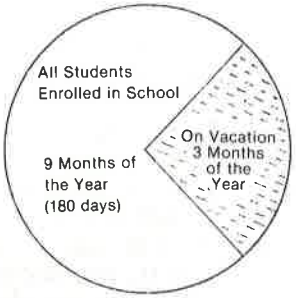


Figure 1

RELATED PLANS - SAME BASIC PRINCIPLES

Standard School Year With Semester Plan

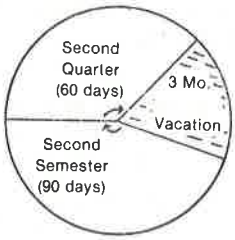


Figure 1a

All students enrolled in school at same time.
Students are **not** divided into attendance sections.
Student progress (pass or fail) determined at end of semester.
All students on vacation at same time.

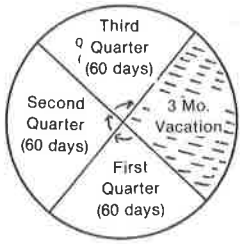


Figure 1b

Standard School Year With "Quarter" Plan

All students enrolled at same time.
Students not divided into attendance sections.
Student progress (pass or fail) determined at end of quarter.

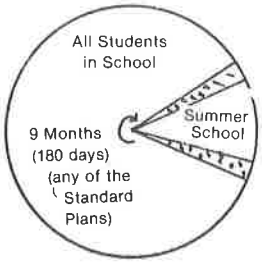


Figure 1c

Standard School Year With Summer School

All students enrolled during regular school year.
Summer school attendance is optional.
Summer program **may** be (a) remedial,
(b) acceleration,
(c) enrichment,
(d) recreational.
Summer school is generally for four to eight weeks.

ELEVEN MONTH PLAN

HOW IT WORKS

Students are **not** divided into sections.
All Students enrolled at same time.
School operates 11 months.
Students attend school 11 months.

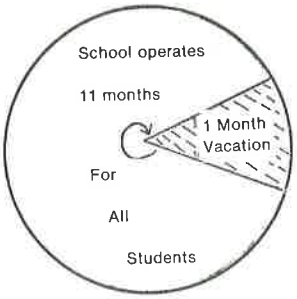


Figure 2

RELATED PLANS- SAME BASIC PRINCIPLES

Continuous Four-Quarter Plan

School year is 11 months but divided into quarters.
Each student attends all four quarters.

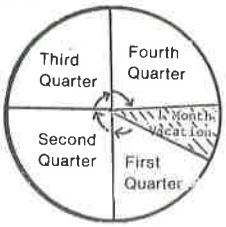


Figure 2a

THE ROTATING 4-QUARTER PLAN
(Also called Quadrimester Plan)

HOW IT WORKS

Students are divided into 4 equal sections.
School operates 240 days instead of 180.
Each section of students is enenrolled 180 days.
(Attends 3 consecutive quarters on vacation 1 quarter.)
Schedules of sections are rotated so that 3 sections are in school and 1 section on vacation each quarter.

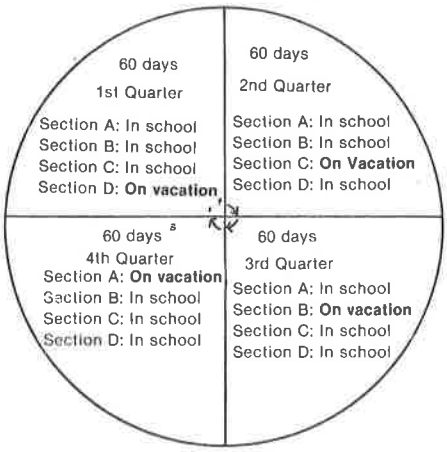


Figure 3

RELATED PLANS
SAME PRINCIPLES

Trimester Plan

Students in 3 equal sections.
School operates 270 days (3 mesters).
Each student enrolled 180 days (2 consecutive "mesters")
Each section of students on vacation at different time.
Two thirds (66 2/3%) of students enrolled at a time.

Figure 3a

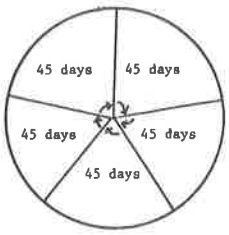


Figure 3b

Quinmester Plan

Students in 5 equal sections.
School operates 225 days.
Each Student enrolled 180 days (4 consecutive mesters).
Each section on vacation at a different time.

Concept 6 Plan

Two-Thirds of the students attend school at one time.
School operates six 44 day terms, students atending four of the six terms.

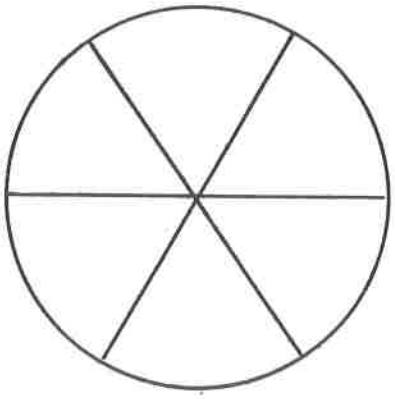


Figure 3c

OPTIONAL
FOUR QUARTER PLAN

HOW IT WORKS

School operates four quarters of 60 days each.
Each student must attend three quarters but may attend all four.
Each student may take his vacation any one of the four quarters.

RELATED PLANS
SAME BASIC PRINCIPLES

Optional Trimester

Same as optional four quarter but school divided into three 90-day sessions.

Optional Quinmester

Same as optional four quarter but school divided into five 45-day sessions.

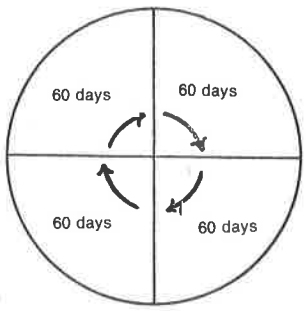


Figure 4

SIMILAR TYPE PLAN

Optional Four Quarter Plan

School operates four quarters of 60 days each.
All students **must** attend three quarters during the regular school year.
Any student **may** attend summer quarter for (a) acceleration (b) remedial (c) enrichment (d) recreation.
This basically is an extended summer school. (see Figure 1c.)

FOUR-QUARTER PLAN WITH VACATION TIME DISTRIBUTED BETWEEN QUARTER

(Known as the Hayward Four-Quarter Plan)

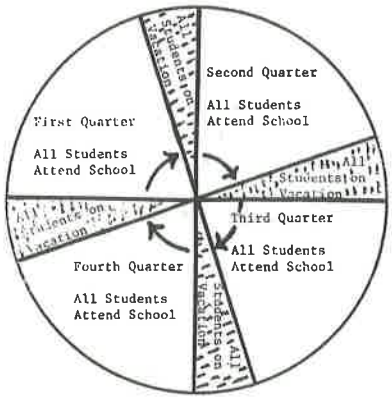


Figure 5

HOW IT WORKS

Students are **not** divided into sections. All students enrolled at same time. School year divided into four quarters.

School vacation divided into four quarters.

Students attend all four quarters with short vacation after each quarter.

ROTATING FOUR-QUARTER WITH VACATIONS DISTRIBUTED BETWEEN SESSIONS

(Known as the 45-15 Plan, also known as the 9-3 Plan)

HOW IT WORKS

This is a combination of the Rotating Four-Quarter Plan (see Figure 3) and the Four-Quarter Plan With Time Distributed Between Quarters (see Figure 5).

Students are divided into four equal sections.

School operates 240 days.

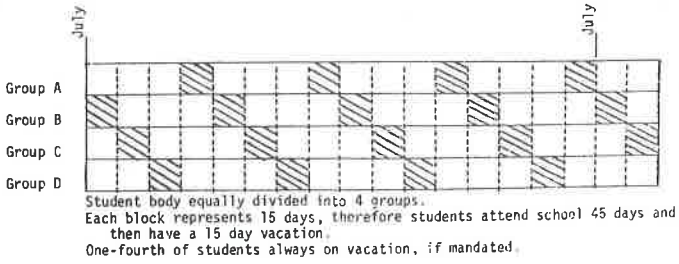
Each section of students is enrolled in four 45-day sessions.

Each section has four 15-day vacations, one after each session in school.

Sections are rotated so that three sections are in school and one section on vacation at any time while school is in operation.

RELATED PLAN · SAME BASIC PRINCIPLES
12-4 Plan

Same as the above plan except each student goes to school three 12-week sessions and has three 4-week vacations, one after each session.



Student body equally divided into 4 groups.
Each block represents 15 days, therefore students attend school 45 days and then have a 15 day vacation.
One-fourth of students always on vacation, if mandated.

Figure 6

THE FLEXIBLE ALL-YEAR SCHOOL

HOW IT WORKS

School is open all year (except for holidays or at other times when there is no "demand" for its use).

Students are to be enrolled in school the **required** number of days (180) or the required number of hours (900-990) each year.

Students (with parental and school consent) may schedule their own time in school to meet requirements.

Students (with parental and school consent) may schedule vacation or vacations any time and for any length of time so long as they meet required time (180 days, 990 hours, or as the case may be depending upon state law).

Length of day and/or week may be variable to meet students' needs (as scheduled with school and parental consent).

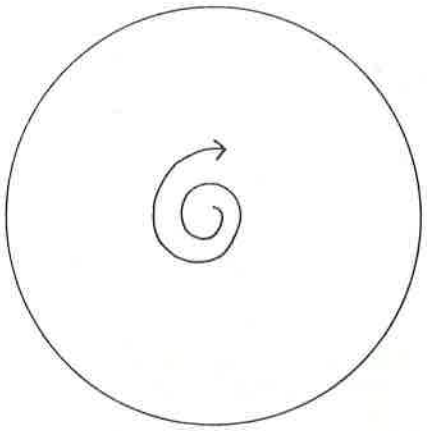


Figure 7

RELATED PLANS

The Flexible All-Year School Plan can operate as described above **only if** the curriculum and instructional methods are flexible enough to adapt to students' time needs. As intermediate measures, a school system may use the curriculum materials designed for the Four Quarter Plans (12-week units) or the 45-15 Plan (9-week units), with students scheduling a "flexible" quarter, any quarter during the year if they want to be out of school a partial quarter.

(Material adapted from mimeograph, the source of which is unknown.)

One Case Study: The Pajaro Valley United School District

Sol H. Pelavin,
Robert W. Burnett
and Susan M. Peterson

Introduction

For the past 50 years, the standard school year in the United States has been 9 months long, generally beginning around Labor Day and continuing until early June. During these 9 months most schools are required by state law to be open approximately 180 days. During the three summer months most schools are closed, although some operate optional summer school programs. Although this is still the norm, the past decade has seen the growth of an alternative approach: year-round schooling. Children in year-round schools usually are not required to attend school more than 180 days, but these days of attendance occur during a 12-month period rather than during the 9-month, September-to-June traditional-calendar school year. Attendance periods are staggered for different groups of students so that two-thirds to four-fifths of the school's students attend regular classes at any given time, while the remaining students are on vacation.

During the past 10 years, hundreds of schools have implemented year-round educational programs. The most common reason for such a change is a rapid increase in a school or a district's enrollment. By simply changing its calendar, a school may increase its capacity by as much as 50%. Other reasons for a change to a year-round program include the ability to provide attendance options for parents, to provide more remedial opportunities for children, to reduce time spent in re-learning forgotten material, and to serve as a catalyst for changing the curriculum.

This study of a year-round school (YRS) program was conducted for the office of the Assistant Secretary for Planning and Evaluation (ASPE) of the Department of Health, Education, and Welfare. ASPE began studying year-round schools in 1974, and the first ASPE-sponsored report on YRS programs was issued in May 1975. This first report described the many models for YRS programs and discussed their major objectives and effects. Later that year a second report, by Abt Associates, documented the history of the YRS movement in the United States and proposed a research design for a larger, more comprehensive study of YRS programs. In 1976, ASPE issued a Request for Proposals (RFP-71-76-OS) reflecting the influence of a research design proposed in the Abt report. The RFP called for a study of the YRS program in the Pajaro Valley Unified School District, located in California about 90 miles south of San Francisco. The contract for the study was awarded to SRI International (then Stanford Research Institute) on June 30, 1976.

The three basic objectives of SRI's study were:

- **To assess the economic impact of the year-round school program** on the cost of education. Construction costs avoided through year-round use of existing facilities were estimated, and actual operating costs were compared with a simulation of costs that would have been incurred under the traditional school calendar. The impact of the year-round program on a district's annual budget was estimated, and areas in which the year-round schedule resulted in a significant saving, or a significant added expense, were identified.
- **To assess the educational impacts of the year-round school program**, particularly on educationally disadvantaged and migrant students. Using the results of standardized achievement tests, patterns of achievement of migrant, disadvantaged, and nondisadvantaged students in YRS programs were compared with those of similar students in traditional-calendar school (TCS) programs.
- **To assess the social impacts of the year-round school program** on parents, teachers, and the community at large. Attitudes of parents whose children were in year-round programs were compared with attitudes of parents whose children attended

Sol H. Pelavin, Director of the Pajaro Valley Project, Robert W. Burnett, and Susan M. Peterson are staff members of Stanford Research Institute International, Menlo Park, California.

school on the 9-month schedule. In particular, parents' attitudes about the quality of education, about their children's schools and teachers, and about year-round education were compared. YRS and TCS teachers' attitudes were compared, especially toward year-round school programs. Members of the community at large were surveyed to determine what impacts the change in school calendars has had on recreational facilities, businesses, youth centers, and delinquency.

After a brief description of the Pajaro Valley Unified School District and its YRS program, we summarize our findings and conclusions regarding the economic, educational, and social impacts of the program during its first 5 years of operations.

The Pajaro Valley Unified School District

The Pajaro Valley Unified School District (PVUSD), covering an area of 155 square miles over portions of three California counties (Santa Cruz, Monterey, and San Benito), operates 16 elementary schools, 3 junior high schools, 2 four-year high schools, a continuation school, and an adult evening school. As of 1976, the district employed 1,044 full-time-equivalent staff, including 536 teachers, 71 certificated nonteachers, and 437 classified personnel. Student enrollment was slightly more than 13,000, of whom 64% were Caucasian, 30% Mexican-American, 5% Oriental, and 1% Black.

Watsonville, with a population of approximately 17,100, is the only incorporated city in the district. PVUSD's financial base is provided primarily by agriculture (truck farming, food processing and canning, and commercial flower growing) and recreation (the resort area around Monterey Bay). The district includes a substantial population of migrant agricultural workers, who reside in the area mainly between April and October.

Between 1965 and 1971, five bond elections and four tax override elections were held in an attempt to meet the educational needs of a growing population. All failed to gain the two-thirds approval needed for passage. As a result, in 1971 almost 15% of the students enrolled in the district were on double sessions or were housed in overcrowded classrooms or in facilities not constructed for classroom use.

As an alternative to expanding the facilities, the district began a "45-15" year-round program at one junior high school and its four feeder elementary schools. Under this system, students attend school for 45 days (9 weeks) and then have a 15-day (3-week) vacation. Students are grouped into four attendance tracks, and vacations are staggered so that three tracks attend school and one track is on vacation at any given time during the year. This program was continued from year to year and in 1974 the PVUSD Governing Board voted to continue it at the same level as long as the shortage of facilities remained a problem.

PVUSD's involvement in the 1975 study of the YRS movement brought the district to ASPE's attention. ASPE was particularly interested in conducting a comprehensive evaluation of a YRS program in the district because of its substantial population of disadvantaged and migrant students, and especially because it contained both year-round and traditional-calendar schools.

Summary and Conclusions

We studied the effects of year-round schooling through a detailed investigation of the experience of one district, the Pajaro Valley Unified School District in California. We do not believe, however, that our findings are limited to this single district or to year-round schools on the 45-15 schedule. Rather, we believe the results of our study provide insights into the impact of year-round school programs in general and should be of interest to anyone considering either the implementation of a year-round program or its evaluation.

As stated earlier, this study had three basic objectives:

- To assess the economic impact of the YRS program
- To assess the educational impact of the YRS program
- To assess the social impact of the YRS program.

This section summarizes the results of these three assessments and presents our overall conclusions.

The Economic Impact

As was the case in PVUSD, year-round school programs are frequently adopted to alleviate overcrowding in classrooms and to eliminate double sessions without increasing the cost of education. Although it is relatively simple to determine that the YRS program has alleviated overcrowding and eliminated double sessions, it is an extremely complex task to determine whether the cost of education has changed. To overcome these difficulties, we developed a unique methodology. Previous studies, in either comparing school costs before and after conversion to a YRS program or comparing costs at a year-round school with those of a "matched" traditional-calendar (9-month) school, have improperly compared the costs of a YRS program with those of a nonequivalent TCS program. In our cost analysis, the actual costs incurred by the YRS program are compared with those costs that would be incurred if the same educational services were provided to the same student population by a TCS program. Through this simulation, we are able to determine the impact of the YRS program on capital, operating, and transition costs. Moreover, by varying parameters of the simulation, we are able to identify which district policies have the most direct and substantial impact on costs.

We found that the YRS program reduced PVUSD's annual per-pupil cost of education by 4.1%, producing an annual saving of more than $150,000. More than 90% of this saving resulted from more efficient use of classrooms and schools. Since the 45-15 year-round schedule increases the maximum student capacity of a school by one-third, overcrowding and double sessions were eliminated without having to construct new schools or classrooms; consequently, $138,248 per year of construction costs were avoided. Had PVUSD not already had land available on which to build a new school required by the simulated TCS program, the total savings

would have exceeded $170,000 (representing an annual per-pupil saving of 4.7%).

We also found that the YRS program reduced the district's overall operating costs. This finding, which contradicted the results of most previous feasibility and cost studies of YRS programs, was most surprising. In the past, school boards and study commissions often looked only for potential increases in operating costs caused by YRS programs because of, for example, extensions of principals' contracts. Such studies incorrectly determined that a district's operating costs would increase under a YRS program. Our simulation shows that some operating costs are higher under a TCS program and that others are higher under a YRS program. In PVUSD, for example, we found that teacher wages (salary plus fringe benefits) would have been higher under a TCS program, while administrative costs, such as secretaries' and principals' salaries, were higher under the YRS program. Overall, we found that the annual operating costs of the five year-round schools were more than $13,000 less under the YRS program than they would have been under a TCS program.

Transition costs—the final cost component—accompany the implementation of any educational change, and it was necessary to determine the exact magnitude of such costs in the implementation of the YRS program in PVUSD. We found that the annualized transition cost was $826. We included this cost in our overall assessment of the YRS program's impact on the PVUSD budget for illustrative purposes only, because the State of California actually reimbursed PVUSD for the full amount of its transition costs.

We were able to identify several factors that can be controlled by school districts and that could dramatically affect the cost of a YRS program. Foremost among these were the district's policies on variable-length YRS teacher contracts, pupil-teacher staffing ratios, and classroom use. We found that the use of nonstandard teaching contracts in the five year-round schools saved the district just over $20,000 in teacher salaries and about $4,000 in benefits; that a small change in pupil-teacher ratio could substantially increase or decrease per-pupil costs; and that savings are substantially reduced when schools operate at less than their full YRS capacity (if all five year-round schools had served their maximum YRS enrollments, the savings in annual capital costs alone would have increased by over $86,000).

It is difficult to say, based on this study and the flawed studies elsewhere in the literature, precisely how much a YRS program can save a school district. A few studies report increased costs of 1% to 3%; most have found savings of up to 8%. Given that capital costs account for only 15% to 20% of a school's budget and that a YRS program's greatest cost impact is on capital costs, an annual saving of 12% to 15% seems to be the outside limit for YRS program savings. We think a school can reasonably expect to save about 8% of its total annual budget with a carefully planned YRS program. (PVUSD's YRS program was particularly wasteful in student transportation.) We should reiterate that this is an annual—not a one-time—saving: a YRS program saves money every year it is in operation. Expressed another way, an 8% annual saving means the taxpayers get 1 year of schooling free for every 13 years the YRS program is in operation.

The Education Impact

YRS programs are rarely implemented to increase student achievement gains. Rather, most frequently they are intended to alleviate over-crowding and to eliminate double sessions without increasing the cost or adversely affecting the quality of education. By this criterion, a YRS program is a success as long as it has no adverse effect on learning. Our study of the education impacts of the YRS program in PVUSD clearly indicates that it has had no such adverse effect.

To determine how a YRS program affects student achievement, we compared the achievement gains of YRS students with the gains of TCS students. These students came from eight schools; four year-round and two 9-month elementary schools, and one year-round and one 9-month junior high school. From administering the Comprehensive Test of Basic Skills (CTBS) to this longitudinal sample of students in Grades 2, 5, and 7 three times (Fall 1976, Spring 1977, and Fall 1977), we concluded that there was no difference in the size of achievement gains between students in the YRS and TCS programs.

Additional analyses were conducted on several different samples of students, each defined to represent a particular population of interest. We found that disadvantaged students in both the YRS and TCS programs made 12-month gains that were substantially larger than would be expected based on prior research. The disadvantaged students in the YRS program did not suffer a loss in achievement from Spring 1977 to Fall 1977 (a "summer loss"), but—contrary to expectation—neither did the disadvantaged students in the TCS program. Were it not for the unexpectedly large gains made by the TCS students, the gains made by the YRS disadvantaged students would be large enough to conclude that the YRS program had a dramatic effect on the achievement of disadvantaged students.

The Social Impact

The social impact of any new and innovative educational program must be assessed. This is especially true in the case of the YRS program, since the associated change in vacation schedule can be expected to have substantial impacts beyond the classroom or school. It has been argued that introduction of a YRS program will affect community vacation patterns, child care, recreational programs, local business, and many facets of YRS teachers' and students' lives. We attempted to investigate how the YRS program in PVUSD affects each of these areas by surveying parents, teachers, and members of the community at large.

Parents—We interviewed 943 parents, each of whom had children that were included in our longitudinal sample of students. Approximately half the parents had children in the YRS program and half had children in the TCS pro-

gram. In general, both sets of parents were equally satisfied with their children's educational progress, social development, and attitudes toward school.

Parents of YRS students thought highly of the program. Over 70% of the YRS parents preferred it to the TCS program, and 55% believed that the YRS program should be expanded to include additional schools. Over 75% of YRS parents believed the program helped to improve school programs, lower juvenile crime, and provided migrants with a better education. Moreover, through investigation of the results of previous PVUSD surveys, we found that the YRS parents' attitudes had gotten progressively more positive from 1972 to 1977.

The YRS program seems to have had very few negative impacts on family life. YRS parents did not report more child care problems than TCS parents, nor did the adjustment to the new vacation schedule pose many problems. Only about 20% of the YRS parents found it more difficult to plan vacations, while almost 40% found it easier.

Most TCS parents also appeared to have accepted the YRS program as the preferred solution to overcrowding. Less than 23% would prefer to build new schools. Although the vast majority of TCS parents preferred the TCS program for their own children, only about 25% thought the YRS program should be reduced to include fewer schools. However, TCS parents who had had no first-hand experience with the YRS program generally held more broadly negative attitudes toward it. Overall, the situation seems to be that TCS parents prefer the TCS program as the "normal" mode of schooling, but the YRS program is the preferred alternative when overcrowding forces a choice. Once parents have direct experience with the YRS program, the majority come to prefer it to the TCS program.

In short, neither program is a panacea. It would be unrealistic to expect that any new program would have the unanimous support of all parents; and, in fact, about 25% of the parents under each program said they would prefer the other program. However, in PVUSD the majority of parents—regardless of which program their children were in—had come to accept the YRS program during its first 5 years of operation.

Teachers—Questionnaires were administered in Spring 1977 to teachers at all eight schools that participated in our study. A total of 156 teachers completed the survey instrument. The teachers were classified into three groups based on their degree of exposure to the YRS program: (1) faculty teaching in a YRS program; (2) faculty teaching in a TCS program at a year-round school, and (3) faculty at a 9-month school.

We found no difference among the three groups in terms of age, sex, training, and teaching experience; and there was no difference in average class size or access to classroom resources. Most teachers expressed a preference for the program they were then teaching in, with vacation schedule apparently being the major factor behind this preference. Teacher attitudes ranged from a general dislike of the YRS program by TCS teachers without direct YRS experience to a broad-based preference of the program by YRS teachers. For example, the majority of YRS teachers considered the YRS program equal or superior to the TCS program in flexibility of work schedule, problems with student discipline, ease of providing remedial services, time lost in getting students to settle down to work after vacation, tiring effect on students, educational value for the average students and especially for below-average and migrant students, and learning loss over vacation periods. In almost all these items, however, the majority of TCS teachers favored the TCS program. On the negative side, YRS teachers considered coordination of school activities more difficult under the YRS program and felt that teaching in the program was more tiring and difficult than teaching in the TCS program. On balance, though, the positive aspects of the YRS program far outweighed the negative for the YRS teachers.

We found that teachers' acceptance of the YRS program increased through exposure; teachers with the most exposure to the YRS program were the most accepting and positive while teachers with little or no exposure to the YRS program generally had negative attitudes toward it. Moreover, the YRS teachers' attitudes become increasingly more positive over time. The TCS teachers at the year-round schools generally had more positive attitudes toward the YRS program than did teachers at traditional-calendar schools.

Community Survey—Twenty-one persons representing various interest groups were interviewed in an attempt to assess the impact of the YRS program on the community at large. The results of these interviews indicate that the YRS program provides improved vacation opportunities for families whose children attend year-round schools, with evidence of a slight trend toward winter vacations. The YRS program appears to have little impact on the business community and, in fact, has not had much effect on the community in general. Most respondents had neither strongly positive nor strongly negative attitudes toward the YRS program. Overall, the program appears to be well accepted by the community, and therefore receives no more attention than the more traditional 9-month program.

Overall Conclusions

We believe the YRS progam in PVUSD is an unqualified success. The program has accomplished its primary goal of alleviating overcrowding in classrooms and eliminating double sessions at no increase in the cost of education. In fact, the YRS program has accomplished this goal while reducing the costs of education. At the same time, the program has certainly not adversely affected the educational gains of its participating students. The YRS students make substantial mean achievement gains, with disadvantaged students making especially notable progress. Moreover, the program has overcome the stigma of being "the new kid on the block"; it is now well accepted by parents, teachers, and the community at large. The majority of YRS parents and YRS teachers prefer the 45-15 YRS program to the traditional 9-month program and, in general, have very positive attitudes toward its educational

outcomes. In summary, the results of our three assessments were:

- Quite positive with regard to economic impact.
- Neutral (with positive overtones) with regard to educational impact.
- Positive with regard to social impact.

Our study has shown that once parents and teachers have been exposed to the YRS program, they prefer it to the TCS program. The only people who are truly in a position to judge the acceptability of a YRS program are those who best know it: the parents and teachers of children participating in the YRS program. Both these groups now strongly accept and support the program.

However, acceptance did not come all at once; it has grown and increased over time, until now the vast majority of the community assumes that the YRS program will continue to be a part of the PVUSD educational system. A program could have no stronger endorsement.

What can we conclude about year-round schooling in American education from this close look at a YRS program in one school district? First, the YRS program is a very promising solution to overcrowding. It can be instituted quickly, saves money, and probably will be preferred over the alternatives by parents, teachers, and students. Although school enrollments nationally have declined in recent years, population shifts will result in overcrowded schools in certain areas of the country. A recent survey estimated that 3.6% of all elementary schools in the United States operate on double sessions. The implementation of YRS programs could eliminate this practice. In fact, during the 1976-77 school year, YRS programs could have saved the taxpayers of the nation more than $100 million in comparison with building classrooms to relieve this current overcrowding.

But a YRS program should not be looked on only as a solution to overcrowding. As we have seen, by making more efficient use of classroom space, year-round schooling saves money. Further, teachers and parents seem to prefer the YRS to the TCS program, mainly because of the opportunity to take family vacations throughout the year. School districts that are not overcrowded may also realize advantages from a YRS program by selling or renting excess buildings or by closing old buildings instead of replacing them. We are not aware of any YRS program that has been implemented for this purpose, but the idea seems promising.

Perhaps the most striking finding to emerge from the study is that, despite the catalog of favorabe reactions from YRS parents and teachers, TCS parents and teachers have a low opinion of the YRS program. This finding reinforces the reported experience of many year-round schools that getting people to try the YRS program is a monumental effort. Ingrained habits are hard to overcome, and unquestioning acceptance of the TCS program as the way schooling is meant to be is a well-entrenched habit. Although this study did not consider the questions of how to successfully implement a YRS program, the difference in attitudes between the YRS and TCS parents and teachers points out the importance of this problem. Attempts to start a YRS program can be expected to encounter stiff opposition; but once people have actually lived with the program, they will most likely prefer it.

We believe research is needed to verify our findings. Specifically, we hope that others will further investigate the opportunities for disadvantaged students in a YRS program. Though our findings regarding the achievement of disadvantaged students are not conclusive, they are very promising. With a large degree of confidence, we feel that the YRS program can be recommended to other districts whose enrollment has exceeded the district's current physical capacity for serving students. The program is likely to save the district a substantial amount of money, is not likely to have adverse effects, and may improve the overall quality of education.

Implementing A Year-Round Program

Donald Glines

Mechanical Ways to Implement Program Options

1. **One school(s):** One school in the district is selected as the pilot. Those who wish to attend volunteer; others can remain in a nine-month program. One school can mean several schools; for example, one at the elementary, one at the junior high, and one at the high school level.
2. **Schools-Within-A-School:** A school can offer both programs in the same building. For example, in a school of 800, 400 can be on a year-round calendar and 400 on a nine-month calendar. Size of the school makes little difference.
3. **Plan-Within-A-Plan:** Some plans, such as Concept 8 and the Flexible All-Year allow a school to offer both programs at the same time. For example, in Concept 8, all that is necessary is to put the curriculum in six-week units. Families that desire the nine-month calendar choose the six, six-week periods that fall between September and June. Those wishing a year-round calendar can select any of the eight, six-week periods.
4. **Cluster Schools:** In larger districts, every three or four schools, for example, can be clustered. One of the three or four can be a year-round school. Persons in that neighborhood cluster can select either the school with the year-round calendar, or can stay with the nine-month approach.
5. **Paired Schools:** Two schools can be paired. Either school is a neighborhood school for the extended geographical area. Parents can select either the nine or twelve month plan.
6. **Mandated Plans:** Wherever necessary, to solve a space program, for example, YRE can be mandated on a districtwide basis. Everyone is required to attend the twelve month plan.
7. **Mandated with Appeals:** YRE is mandated, yet the plan selected provides humane alternatives. If a family absolutely needs a nine-month calendar, they can appeal. Exceptions can be provided for a small minority.
8. **Three-In-One-Plan:** If space is not at the "beyond crucial" stage, there is no reason why a school cannot house three separate calendars. A simple example: an elementary school has 21 teachers - seven can teach in a 45-15 plan; seven can teach in a flexible all-year plan: and seven can teach on a nine-month calendar. The same concept can be implemented with nine teachers or any number of teachers beginning with at least three teachers in a school. The same concept can hold true for a district. Three or more plans can exist in the same district as long as all are compatible in the K-12 pyramids or possibilities for that district.

Do's and Don'ts for Implementing YRE

1. Don't use the term summer school. Eliminate the term "summer", except as it relates to the season of the year, not to a school program.
2. Don't close school the last week of August—the first week of September. You never overcome the back-to-school sales and the fact that school "starts in September".
3. Don't hold teacher workshops the first part of September.
4. Do start school in July, if you operate within the fiscal year. Announce school opens July 5, for example, and closes June 28.
5. Do encourage people to take vacations between September and June—point out the opportunities and reasons for taking time off during that period, even if just to stay home and rest.
6. Do plan with community agencies for year-round swimming, parks and recreation programs, camps, Bible Schools, YMCA programs, scout programs, and all.
7. Do involve the business community. The moving van lines, for example, are tremendous supporters of YRE.
8. Do close the last week of June, the third week of October, the fourth week of March, or whenever, if you desire common school vacations, but do not close for long periods during the summer (as a general rule of thumb).
9. Do make sure that the program offered in July and August is the

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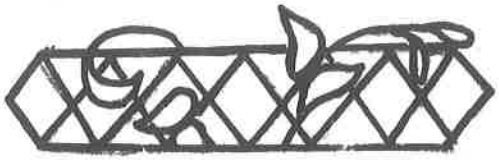
equivalent to that available in January and February, if it is a voluntary YRE program. Mandated calendars usually automatically take care of this problem.

Differences Between YRE and Nine-Month Calendars With Summer Schools

1. Learning opportunities are continuously available every month of the year in YRE—not nine-months continuous and four-six-eight weeks of discontinuous programs.
2. Students can take time off between September and June, and not be penalized.
3. The programs offered in July and August are equivalent to those in January and February.
4. Good YRE programs offer full-days or the equivalent during the summer, not half-day summer programs. Wherever possible, intersession programs offer the option of full or half-days.

Creative Curriculum and 100 Percent Space Increase

If maximum space is really a problem, to the extent YRE must be mandated, yet the district wants to move toward creative living-learning systems as an option for some, while still maintaining structured curriculum for others, the following plan can increase a high school capacity by 100 percent. The students are divided into four groups of 500 each. At a given period, A and B groups (1000) are in the school building, C (500) is in school but on community projects, independent study, and Parkway type learning activities, while group D (500) is on vacation. This means that a high school built for 1,000 actually and honestly has increased its space by 100 percent (now enrolls 2,000 at the same time), and still improves its program. The space age potential of YRE is truly yet ahead for creative inventors.



A Summary of Doctoral Dissertations in Three Areas of Year-Round Education

Roy L. Bragg

The National Council on Year-Round Education is now completing ten years of operation. A complete listing of doctoral dissertations in the area had not been compiled until last year. This task was accomplished after the request was made by Past President Don Glines that such a project be undertaken. A total of approximately 90 dissertations was found to have been completed in the area of Year-Round education and are on file in the national office. Since the compilation was completed, it seemed appropriate to select some which dealt with areas of interest to those working in the field. A brief summary of each of the selected dissertations is included in one of the three areas discussed in this article: attitudes toward year-round education, costs, and curriculum.

Attitudes Toward Year-Round Education

The attitudes of parents in a California school district were assessed by Alm (1) to determine whether the community was favorably disposed toward the year-round school. He found that the school curriculum was a primary concern of the community, parents, teachers, and students. This concern focused on student achievement of a minimum level of competence in the basic subjects along with a career orientation before graduation. Various curriculum options were viewed as being necessary to realize these objectives, including a continuous progress instructional plan, wider use of community opportunities, any year-round operation of schools. The respondents indicated that they understood year-round education and that they were also concerned with vacation scheduling, community recreational facilities, building use, and a minimum level of achievement for graduation.

An investigation by Bobby (2) surveyed teacher opinion toward an extended school year and the feasibility of its implementation in a New Jersey district. Teachers' responses to choices concerning their willingness to become involved in the implementation of an extended school year program revealed a tendency toward remaining in the traditional framework. It was concluded that a part of this tendency was their concern not so much with change itself but how the change would be effected. Teachers were not overly concerned about preservation of the traditional summer vacation and would not leave the district if an extended year program were adopted. Teachers indicated that they would be receptive to many of the advantages inherent in the flexibility of an extended school year program in regard to teaching schedules and contractual possibilities and not so much concerned about preservation of traditional summer vacations. The investigator concluded that implementation of an extended school year program should be made only after thorough and open dialogue had been completed.

Byrne (3) conducted a study to ascertain the attitudes of parents, students, and school staff toward a mandated 45-15 school schedule in an elementary district in California. It was found that a greater percentage of parents and students indicated that there were more advantages than disadvantages to the year-round plan. It was felt that

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the year-round calendar made education fit the needs of students to a greater degree. A greater percentage of teachers, however, indicated that students' needs were better met under the traditional nine-month calendar, as long as students were able to attend school in single sessions. All groups agreed that academic achievement was not affected by the change in school calendar and test scores and student cumulative records substantiated this. Parents and students supported continuation of the year-round schedule. The staff indicated non-support.

A study involving seven 45-15 schools throughout the United States was made by Deason (4) to determine teacher opinion toward aspects of year-round education. The data indicated considerable teacher reservation about the possible advantages of 45-15 year-round schools as compared to a traditional school year. Teachers indicated a significant difference, however, between agreement and disagreement on the questions contained in the survey instrument. These differences of opinion were found in all the six variables of student achievement, student attitude toward 45-15, student extra-curricular activities, teacher working conditions, teacher in-service training and professional growth, and teachers' personal lifestyle.

A state-wide survey in Oregon was conducted by Maynard (5) to determine the preference of teachers regarding a rescheduled school year. He found that the majority of Oregon teachers favored a year-round plan other than the traditional school year. Only 23.5 percent of the respondents preferred the traditional plan, the remaining 76.5 percent favoring either the year-round, extended, or extended summer school plan. He reported that a higher proportion of younger teachers favored the year-round school plan when compared to the responses of older teachers.

Fifteen year-round programs in the United States were surveyed by Lyday (6) in his analysis of certain selected components of the programs. Some of his findings were: 1. Attitudes toward year-round education improved after implementation of the program with students showing the greatest positive change. 2. The number of failures and dropouts decreased in several districts while regressing in none. 3. Generally year-round programs reported greater program and schedule flexibility, a greater capacity of individualization, and a greater variety of course offerings.

Miller (7) conducted a study to determine the attitudes of Chief School Administrators, Board of Education Presidents, and Education Association Presidents with respect to the year-round concept in New Jersey. The respondent groups expressed a favorable attitude toward the year-round concept, but less favorable to the concept than was reported four years earlier. Similar results in attitude were obtained from wealthy, less wealthy, rural, industrial, coastal and interior school districts. It was not thought that New Jersey would have many year-round programs in operation during the next ten years.

In a Virginia research project, Rice (8) made an assessment of teachers' attitudes toward the 45-15 year-round school concept using the **Teacher Attitude Inventory On Year-Round Education**. He found a significant relationship between personal and situational variables and teacher attitudes toward year-round education in such areas as favorability toward year-round schools, morale, fatigue, quality of the educational program, providing adequate support to staff, and fringe benefits.

Vouga (9) researched the attitudes of parents in 20 year-round schools in southern California whose children attended schools on the 45-15 plan. He concluded that parents preferred year-round school for their children over the traditional calendar year; parents did not consider year-round school deleterious to family activities and vacation; year-round school allowed for a more efficient use of school facilities; parent preference for year-round school was not related to the length of their experience with year-round school; and parent preference for year-round school was significantly greater in families that had children attending only year-round schools than in families with children attending both year-round and traditional year schools.

Costs

Applegate (10) developed a model adopted from the Unesco Asian Model of Educational Development to study the effect of his all-year model on the costs of education in Panama. The study revealed that the term rotation plan applied in simulation to all the urban public schools in Panama produced savings when public schools in Panama produced savings in recurrent and non-recurrent costs; raised teachers salaries and reduced teacher salary costs per pupil; reduced teacher education costs; and increased classroom utilization which reduced construction costs. The total savings in recurrent costs was approximately 11% and the savings in teachers' salaries about 13% per pupil. Teacher demand was reduced by one-third producing savings in teacher education. The classrooms served one-third more pupils than under the traditional plan eliminating the need for new construction of urban primary and secondary schools for five years and reducing all future needs by one-third.

In view of the declining enrollments in many districts today, a study in Pennsylvania by Coleman (11) should be of interest. His research dealt with comparative estimates of future expenditures in each of four annual operating budgets of the School District of the City of Allentown if the district operated under either the staggered enrollment, 45-15 year-round plan, or the traditional schedule. Capital and operational savings were more pronounced under the 45-15 schedule when new construction was contemplated as was the case in his study. Savings in capital and operational expenditures were projected even with limited renovation and no new construction in the four-year period.

Lloyd (12) identified a select number of school districts in California operating year-round programs and analyzed the financial experiences of those districts. The research indicated that program extension costs more money but at a proportionally lower per ADA cost than that of the tradi-

tional session. Year-round plans which provide for staggered attendance on a mandated basis can preclude costs of construction, equipment, and debt service resulting in a less per pupil cost. Additionally, the evidence indicated the possibility of less per pupil costs in overall operating expenditures. He concluded that there are significant implications for all school districts, but particularly those needing to replace buildings or to construct facilities because of growth or expanded curricular offerings.

One feature of Moortgat's (13) research in Michigan was an analysis of per pupil costs in year-round schools on the 45-15 plan. The study cited figures indicating savings on construction, heating and insurance. There was extra expense involved with air conditioning. He stated that the study of the financial effects revealed that, even after subtracting the cost of cooling and extra administrative help, the plan saved a minimum of fifty dollars per pupil per year.

One purpose in the study by Plank (14) was to analyze the feasibility of plans for year-round education which had economy as a major objective. His findings indicated that one Illinois district reported spending more for air conditioning, staff committee work, and consultant help. On the other hand, savings were recorded from postponement of construction projects, grants received to study the 45-15 plan, and decreased need for classroom by implementing the 45-15 plan. Although his findings presented little evidence of financial savings if school days were provided in addition to the traditional school year, he reported that financial savings resulted in the year-round program when the program featured mandatory staggered attendance patterns and greater utilization of available school buildings.

The study by Robison (15) dealt with establishing the economic feasibility of incorporating extended year programs for twenty-five elementary schools in the Granite School District in Utah. The findings indicated that the major economic advantage of instituting the extended year program came in the form of capital outlay, debt service, and operating and maintenance costs by avoiding construction. He estimated a 13 percent saving on the maintenance and operating budget annually for the next four year priod under study. These savings to the district would have to be balanced against problems associated with year-round operation in deciding whether to implement the program, including parental objections, climatic considerations, and curriculum development problems.

One aspect of the study of a Colorado school by Ricketts (16) was to assess the financial effects of Concept Six, a variation of year-round education which divides the school year into six sessions. Parents indicated support for Concept Six in preference to double sessions, busing, or increased taxes. Their degree of support would increase if an entire attendance area, kindergarten through twelfth grade, was on Concept Six. Operating costs were found to be slightly higher for year-round schools when compared to double sessions, but lower for schools with normal enrollments if teachers were allowed to teach five of the six sessions. Districts with growing enrollments saved money on capital costs since Concept Six permits a school to accommodate 150 per cent of its nominal capacity.

Curriculum

Crawford (17) investigated problems encountered by social studies teachers in quinmester extended year senior high schools in Florida. It was found that highest priority problems for efforts at solution centered around the adaptability of teaching materials to the mini-course applications, teaching strategies related to individualizing instruction, and faculty involvement in planning the curriculum offerings. Problems identified as unique to the quinmester program centered around lack of continuity related to non-sequential mini-courses. Emergent problems detected centered around personal interactions in the classroom and adaption of commercially produced materials to short non-sequential courses.

Guay (18) compared the achievement of first grade students who had the benefit of a 35 day summer program with those who did not have this experience. Testing was done at different times and the results compared. He found a significant difference in favor of those with a summer program. The difference was not significant, however, when both groups were tested during the following school year. Parents of children were highly pleased with the program and 90 percent indicated they would send their child to a similar program. The investigator recommended that school districts consider the possibility of providing extended school year opportunities for all primary school students with learning problems and especially for young males.

A research design by Phillips (19) was used to investigate curriculum changes made by two school districts adopting a 45-15-year-round program. Reading, language arts, arithmetic, student scheduling and attendance, reporting procedures and attitudes of parents, students and teachers were studied for three years prior to and one year following implementation of the year-round plan. It was found that considerable curricular change occurred with the change to year-round school. Curriculum guides in all areas were developed and increased expenditures were made for instructional equipment and materials. In addition, teachers, parents and students expressed a favorable attitude toward the year-round school after its first year of operation.

Ricketts (20) studied the effects of Concept Six on student achievement and attitudes as part of his doctoral research conducted in the Colorado Springs, Colorado Schools. Student achievement for those on the Concept Six calendar was neither better nor worse than for those on a conventional calendar. Attitudes of Concept Six elementary students were more positive toward themselves and school than were the attitudes of students in the nine-month school. Teachers, central staff and parents all held positive attitudes toward Concept Six over the conventional school year.

Summary

An examination of the doctoral dissertations reveals that studies

dealing with the economic aspects of year-round education and those dealing with attitudes about the acceptance of the year-round concept have tended to be frequent topics for research studies. The studies dealing with costs agree that the savings in capital outlay insure that education can be provided at a cost that is equal to, or less than, that provided in the traditional nine month arrangement. The studies also confirm that parents, students and teachers in many communities are supportive of the concept of year-round education and can visualize the benefits which can occur from the flexibility inherent in the year-round use of time.

The area which appears to have been somewhat neglected is that dealing with curricular programs. The dissertations dealing with this area, however, show that achievement is at least as high as that recorded in conventional settings. Parents and students have consistently expressed satisfaction with the education provided in year-round situations. These positive attitudes provide optimism and promise for the future of year-round education.

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Education - Future Tense and Its Implications For Year-Round Education

Edward C. Pino

My youngest child - Neenah - is now 5 years old. She will be 27 in the year 2001.

Her world at 27 will be vastly different because of rapid change of a most fundamental nature. These "gee-whizes" include:

a) **Population** - most demographers forcast a doubling of the world's population from 4 to 8 billion by 2001. (give or take a half billion) That which took 50,000 years to create will now be duplicated in just 25 years. The result will create the need for Neenah and all the other Neenahs to make critical choices dealing with the basic commodities of life - food, water, shelter and clothing.

b) **Knowledge** - most futurists forcast that about 90 percent of the knowledge that our "Neenahs" will have to process as they make critical choices in the year 2001, has not yet been uncovered. The result raises the basic question: "Of what knowledge is the most worth?"

Both of these "gee-whizes," and others not covered in this article, are crowding in on us subltely, but with enormous impact. They are moving in at a geometric, not arithmetical rate, like two gigantic snowballs rolling relentlessly downhill gaining ever increasing momentum as they roll.

The implication is obvious. Neenah will be going to school during this same period. Her high school graduation class of 1991, along with other classes that graduate before 2001, will inherit the dubious honor of solving the problems created by these gee-whizes and others. Neenah must be prepared as never before to process these problems.

The ability for Neenah to successfully cope with these problems rests with us; all educators who will have an impact in any way on Neenah's education from her current kindergarten experiences through graduation in '91. This obligation and responsibility raises several critical questions for us, including:

1) What curriculum will be the most appropriate?
2) How should this curriculum be presented?
3) How do we educators gear up for this kind of content and delivery system?

The answers to these questions are unclear at best and downright difficult at worst. One thing, however, seems clear. We must consider some fundamental changes. We can no longer assume that taking the prior year's programs and warming them over, year after year until the turn of the century, will suffice. This present model of program improvement will surely fall short of what is needed.

The first thing we need is a new approach to such planned improvement. This new approach might be called "En-Flight Planning." This approach calls for us to identify as best we can, what we think our Neenahs' will need in the year 2001 and then, once identified, to work backwards to the year 1979 in full recognition of the fact that progress will still come slowly. We should then inch our way forward one year at a time toward these predetermined goals, purposes, and programs changing as we go along, as reality in the year 2001 becomes more clear.

The critical difference in this approach is that we will be traveling down a different road - a road called the Future, instead of the road called the rehashed past. This does not mean we should not retain much of the past. It does mean that we should fit those things in and around the new central focus -the tentative Future as best our senario can preceive it to be, instead of trying to fit a little bit of the future in and around the central

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focus called past programs. The approach also calls for much more fluidity because the 2001 senario will have to be updated continually.

This zero-based enflight planning questions the continuing validity of the present curriculum and delivery systems, including the calendar. What then is needed?

We are living in a rapidly changing, technologically advancing society and world, with resultant changes in both educational needs and expectations. If our schools are going to deal effectively with these changing needs and expectations, educators must become sensitive to these changes. They must become aware of what the people being served by the school really want, need, and expect. They must learn how to adapt the educational programs accordingly.

It may be said that in a slowly changing society, a child may simply memorize the "proper" answers to many of the issues and problems they will face in their lifetime but that certainy is not true in the rapidly changing world of today.

Our present education system has emerged as our society advanced technologically from a predominately manual labor production system to mass production based on human operated assembly line techniques to a sophistocated system of cybernation with automatic self-adjusting machines that are directed by computers based on data automatically fed into the computers from sensors on the machines.

Our present education system has emerged as our society advanced from the era of human bondage for many, through the rise and organization of the working class demanding fair treatment, to the era of seeking equality in human rights.

Our schools reflect their heritage of the past and generally can be classified into three models:

1. **The Jail Model** - where students actions and behavior are severely regulated, much like they were in jail. This lock up model considers school as a place instead of a process as others have admonished.
2. **The Factory Model** - with students being processed on the assembly line in a mass production system that has become too large to manage adequately and to the end that education's central purpose is to make sure we produce a standardized product.
3. **The Warehouse Model** - with the curriculum neatly compartmentalized, labeled, and placed on the shelves and issued by prescription.
4. **The Church Model** - with a "preacher" telling the "parishiners" staff and a book - the book to reinforce thus memorize, regurgitate and forget delivery system.

In today's world, in our society, with the changing way of life there are some important educational objectives that must not be overlooked:

1. Choosing. Our society of the past provided a limited number of choices, and in many situations, no choices. For example, Henry Ford said the people could have any color of Model T Ford they wanted, so long as they wanted black. That was the state of the art. Now there are an almost unlimited number of options in color of cars. So it is with all of life. There are many options in terms of consumer products, in terms of occupations, in terms of places to live and to go, in terms of life styles. We are living in an era of options. Little, if any, attention has been given by our schools or any other agency of our society to help people make choices on a rational basis. At the same time, however, mass media advertising has put great effort into directing and controlling the selection processes to further the vested interests of a selected few.
2. Relating. In the era of yesteryear, the average person had little contact with people from outside his own community, and the number of different types of situations to which he had to relate was quite limited. The way of life today is affluence. People move from place to place. They constantly come in contact with new people in new situations. The school needs to help people learn how to deal with this ever increasing need to relate and adjust to new situations.
3. Learning. Much of traditional educational programs of the schools are based on rote memorization and assign-study-recite techniques. This may have been appropriate in an era when changes in the way of life were very slow. If a child were to face the same problems or issues as an adult as his parents, then perhaps he can be taught in advance what the answers are. But in a rapidly changing society such as ours today, with an explosion of knowledge and a constant change in the human situation, we do not even know the questions the adults of tomorrow will face much less the answer. To deal with this situation, the schools must help people learn how to learn, how to solve problems, how to find needed information, and how to apply these techniques to problems as they arise.
4. Producing/Consuming. In the past, during the industrial era of mass production, most jobs in factories required no formal training. A person could learn the job adequately with only a few minutes to a few days on-the-job training. Automation, computers, and other technologies are changing this. The repetitive jobs previously done by human labor are being done by machines. New jobs are being created at the same time but they generally require a higher level of skills and competencies. In turn, the school will have to provide the needed training to help people learn to earn a living.
5. Creating. As machines do the work previously done by humans, the average amount of time spent earning a living is reduced in the form of a shorter work day, work week, work year, and the number of years worked in a lifetime. The average person today has more leisure time than he knows what to do with. People must learn how to use

their time creatively and in self-satisfying ways.

6. Valuing. As the way of life changes, value systems also change. In this era of uncertainty and change, it is difficult for a society to transmit its value systems from one generation to the next.

The second basic question is how are we going to begin to move down this new road in a rational, deliberate and systematic way. The framework recommended is the creation of what might be called "Moon Schools." This concept and it's components are described below. (2)

Does America need to conceive, design, construct and operate moon schools? Before this question can be answered, one needs to know what we mean by moon schools. A moon school is simply tomorrow's school today. It is an honest-to-goodness space-age prototype school of dramatic end encompassing significance. The moon school concept would propose to make a mighty reach into the future and to point the way for education, 2001 A. D. (3)

The Concept: (1)

The moon school concept is simply one of conceiving, financing, designing, constructing, implementing and evaluating an operational future school prototype as a nation-wide joint venture by private and/or public endowment, for the expressed purpose of inventing, disseminating and assessing future building, personnel, curriculum, instructional, financial and evaluation designs which seem to provide the best potential for meeting future educational requirements.

The moon school concept does not infer the operation of a single prototype, location or the marketing of perceived bias. Multiple units (perhaps one per decade) should undoubtedly be considered for completion by 2001 A.D. and probably should be linked together in terms of purpose, scope, and function. By their very nature, however, units would necessarily be few and far between, geographically, philosophically, and in point of time. The concept does not propose a fixed pattern to be sold or imposed upon either the manufacturer or consumer. Because of its purpose, the moon school would likely be predictive but not narrow in its context. Its form should be flexible and varied, making it easy to accomplish program variance among units and components both initially and overtime as felt desired.

In short, the concept is based on the hypothesis that improvement in American education will move faster from point "X" along the continuum of education improvement if schools are built in the "Z" zone.

CONTINUUM OF EDUCATIONAL IMPROVEMENT(4)

X	(Y)(1)	(Y)(2)	Z
Today's Schools	All schools in 30 years if moon schools are *not* built	School in 30 years if moon schools *are* built	Moon schools should be built which are so far advanced along the continuum as to move all schools from X to Y(2) not merely to Y(1)
Present Condition			Condition of Greatest Improvement

The Need:

Why should America consider the mammoth task of conceiving, financing, constructing, and operating moon schools? Haven't we made good progress in upgrading the quality of American public education, particularly during the past few decades? Many educators, parents and students would say "yes" and the facts undoubtedly support our convictions.

Recent progress has come, in large part, as a result of substantial incentives from the federal government and private foundations. There is no doubt that increased federal support and assistance from philanthropic foundations such as Ford, Carnegie, Kellogg, and Danforth (to mention only a few) have left lasting impressions through their support of constructive educational improvement.

The strategy of such assistance by these external influences, however, with only a few exceptions, has been to provide assistance in relatively small amounts over a broad and broken front. No massive and concentrated effort, a la the current NASA's moonthrust, for example, has ever been launched in the name of and for the purpose of making a large step forward in the educational aspect of our national life. The popular pattern, especially at the elementary-secondary level, has been to request and receive grants of $10,000 here and $100,000 there to encourage local districts to proceed with individual school district or school building improvement projects. There is nothing wrong with this scattergun approach to national education improvement; and probably, in fact, it should continue at least at its present level.

It may well be argued, however, that this help *alone* will not be enough to meet the challenge of the next forty years. Massive funds need to be poured into a series of reasonably and carefully planned "Mercury," Gemini" and "Apollo" level educational missions so far advanced of our time as to not be feasible on a piecemeal basis.

Rationale:

The following rationale for the moon school concept could well be argued:

A. National Priorities:

The progress made in education has simply not kept pace with other rapidly changing aspects of our way of life. This divergence has been enlarged by extensive nation-wide efforts in other areas. The NASA thrust for example has greatly accelerated our knowledge and systems of communications,

transportation and health (to mention only a few). Rapid progress in these areas has only aggravated the problems facing American education.

Our school systems as presently constituted are not prepared to cope with the significant sociological trends which increasingly are going to have a tremendous impact on the quantity and quality of tomorrow's schools. Sociological explosions in such areas of population, knowledge, mobility, and technology, together with the very speed of change itself, are examples of the increasing momentum of every aspect of our existence. The American public must be made aware of the educational realities of our time. Americans must know that a "good" school by traditional standards is inadequate today, and will be totally inadequate for the future.

In order to educate the public it will be necessary to "market" education and educational change in a massive way. This in itself will require our best "imagineers."

B. Model:

Education lacks convincing, encompassing, and unifying models. The very pedagogical ideas we historically have strived to provide in the classroom setting are missing from the overall educational scene. The prototype constructs which become the focus in other aspects of our national life are conspicuously missing from American education endeavor. If, however, our national priorities are now such as to place the quality of our educational energies nearer to the top of our national goals and interests, then it would appear agreeable that significant educational models in the form of moon schools should be provided. We now have the "model cities" program to help solve our urban city problems; why not begin thinking seriously about model educational programs, perhaps one at least to be a part of a model city project.

C. Interrelationships:

Education lacks a vehicle for bringing harmony to the several educational components having important interrelationships. There are many faces to education in our schools including such components as: facilities, content, pedagogy, research people, teacher education, to mention only a few. All of these components need dramatic improvement.

The current pattern for bringing about such improvement essentially may be grouped into two streams:

1. The university-centered stream of *research*-oriented improvement with interest centers in particular components scattered in institutions of higher learning throughout the country; and
2. The school system-centered stream of *program*-oriented improvement with interest centers in particular components scattered in school systems throughout the country.

These improvement centers, dispersed and seemingly unrelated as they may be, are a vital base for research and idea development of separate elements. Our past failure, it would seem, is imbalance. This need for educational equilibrium may well be served by the infusion of large ideas and resources into a few notable prototypes as we have done elsewhere in our society.

Basic Feature:

A moon school model, of course, by its definition, purpose, and scope does not yet exist. It must be carefully developed over, let us say, the next eight-year period by the best educational minds in the nation. A "Board of Educational Advisors," appointed by the President of the United States perhaps might best serve the need to provide direction and substance to the project. The school or schools may or may not be attached to a local school district for logistical support. The vehicle of ownership, administration and authority might well be a non-profit corporation.

On the other hand, certain basic program features may well be forecast at this time, including but not limited to:

A. Objectives:

Educational objectives for the next thirty years need to be identified and clearly defined in operational terms by the Board of Educational Advisors.

B. Program:

A comprehensive program might be defined to include broad community needs — educational social, and recreational. The school might be an all encompassing preschool through senior citizen community education center. A center for the training of teachers might also be a part of the center. A selected population of, let us say, 5000-6000 students, ages 3 to 93, might be chosen, probably on a voluntary basis.

C. Space & Time

Flexible spacial arrangements might encourage and accommodate a wide variety of community services around the clock and year and allow for needed changes overtime. The calendar would undoubtedly call for continuous operation, 24 hours a day, 7 days a week and 365 days a year. Such a year round program would adapt time to the learner instead of the learner to a fixed block of time.

D. Technology:

Creative applications to all known media might be provided, utilized and studied as it applies to the learning process. This might include extensive use of computerized retrieval systems with both home and school terminals.

E. Personnel:

New patterns of deployment, assignment, evaluation, and compensation of professional and nonprofessional personnel might possibly be another feature

of the school. Patterns might include differentiated roles, utilization and compensation, cooperative teacher team arrangements, and patterns of improved staff evaluation not yet devised.

F. Curriculum:

Content might be carefully developed for the space age child to be educated. The curriculum might be individualized, process oriented and described in terms of behavioral outcomes. Individualized learning packets might be used to facilitate the instructional processes (see below). Finding new ways of humanizing the program and transmitting the crucial variables of our culture might be engineered.

G. Instructional Strategies:

Individually prescribed learning modules based on teacher-student-parent contractual agreements might be provided. Computer forecasts might be employed in the development of these contractual arrangements. Placement and progression through learning groups might be based on the requirements of the student and not on chronological age. The teaching act itself might be individualized with the teacher guiding the students in the search for answers using a wide variety of techniques. Individualized assessment might be in terms of the instructional goals initially defined. Concentrated attention might be given to developing student deployment patterns which would encourage independent action, self-reliance and responsibility.

H. Teacher Education:

A close wedding might be consummated between the elementary-secondary and the higher education segments of public education to implement new concepts of preservice, induction, and inservice training of teachers and administrators. Trainees might experience a longer training period, more actual work experiences, and be employed, at least part time, during the process. Developing competencies in both subject matter and pedagogy might be given serious attention.

Cooperative teaching patterns might be a major component of this training program as teachers become better teachers to the degree they exchange ideas, material, criticism, and actual teaching assignments.

I. Continued Program Development and Education:

Although beginning program commitments would have to be decided upon by the Board of Educational Advisors, careful planning can preclude instructionalization and fossilization of any of the initial program components. Both pure and action research by the best experts in the country might be conducted to help encourage continued change and improvement.

Getting Started:

Accepting for the sake of discussion the desirability of the concept, how could a moon school come into being?

Based on an enrollment of 5000 (K-12), 500 (Preschool), 1000 (Post high school) and 100 trainees, it might easily cost 100 million dollars for capital costs and about 30 to 65 million dollars per year to operate (6500 enrollment x 10,000). In other words, for construction and five years of operation, about 400-500 million dollars might be needed. Is this feasible?

If we want to continue to think small and piecemeal, the answer is obviously "no." If we want to tackle the problem as Uncle Sam is capable of doing, the answer is definitely "yes." If we can spend $85,000 to train (not educate) a jet pilot, we can certainly spend a fraction of that amount to educate those students who would be enrolled in a moon school. If we spend this amount in a matter of mere hours, then we can easily spend this much on this project in a year. It is simply a matter of wanting to do it, properly ordering our national priorities, and putting our shoulder to the wheel. People do things they want to do. The only question is . . . do we Americans really want to do it?

The first step would be for one or more agencies (probably foundations and/or the United States Office of Education) to fund a two-year feasibility and desirability study. This study would investigate at least the following areas:

A. Desirability of the concept
B. Means of financing the project
C. Number of locations of schools, if any, which would be built by 2000 A. D.
D. Nature of the project sponsorship and appropriate supervision of its development
E. Projectscope and timing

This study should be undertaken by a Commission appointed by the President of the United States and/or a sponsoring group.

American education can continue to move one step forward while falling two steps behind or it can take a giant leap into the future. When the United States wanted to get to the moon first, a massive effort was mobilized. If and when Americans *really* believe we should also be first in education, we can do the same thing by launching a moon school effort.

Does America need moon schools? It does seem the notion has enough merit to warrant further dialogue and very possibly a definitive study of the type suggested. What do you think?

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3) The Moon School Concept was first presented by Pino at the I/D/E/A National Seminar on Innovation held in Honolulu, Hawaii, July 13, 1967.
4) Adapted from thoughts of Dr. Harold Gores, Past President, E.F.L. as presented to the author during discussion of the Moon School Concept.

The artist work on illustrations in this issue is the work of Lawrence Steele, art student, Northern Illinois University.

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