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# Schools of the Future, Now an Educational Filmstrip Depicting Flexible Scheduling Programs in Selected Schools in the States of Washington and Oregon

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SCHOOLS OF THE FUTURE, NOW  
AN EDUCATIONAL FILMSTRIP DEPICTING FLEXIBLE SCHEDULING  
PROGRAMS IN SELECTED SCHOOLS IN THE STATES OF  
WASHINGTON AND OREGON

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A Thesis  
Presented to  
the Graduate Faculty  
Central Washington State College

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Education

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by  
Robert E. Meinhardt  
June 1965

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APPROVED FOR THE GRADUATE FACULTY

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## CHAPTER I

### THE PROBLEM AND DEFINITIONS OF TERMS USED

#### INTRODUCTION

The American high school and its development has been unique in the world-wide field of education. The goal of a secondary education available to all children has almost been achieved. As a result, education has been provided for the talented as well as the low ability student within our high schools.

This goal was being complicated by the swift and complex changes that were taking place in our society and the need to provide the best possible education to meet these changes. An increasing number of youngsters in our schools coupled with a shortage of competent teachers available in the classroom further complicates the situation.

The factors presented provide an overview of the problems facing educators. How are we going to provide education of the highest quality to each student that will allow for the development of his individual talents and interests?

Advancements in education to meet the needs of students have met with one major obstacle, the traditional schedule.

Eugene Howard states:



New methods, new media, and new staffing patterns can no longer be accommodated by archaic organizational structures. The conventional schedule is too rigid (14:288).

## THE PROBLEM

Statement of the problem. This study involves one proposal of breaking the traditional organization, by assuming a flexible schedule.

A new pattern of school organization must be adopted to allow for the new methods of teaching, curricular reforms, and to make effective use of the new technological advances. The new organization will have to accommodate a flexible scheduling for classes, taking into account the individual needs and differences of both the student and teacher.

Purpose of the study. The purpose of this study was to prepare a sound filmstrip which would inform educators of flexible scheduling practices being used in high schools in the states of Oregon and Washington.

Importance of the study. Swift and vast changes have forced education to view many different programs for improvement. The challenge facing educators was to keep abreast of the many trends in education, even though all persons did not agree on change or how it should be implemented.

Desired changes for improved schools were a constant challenge for every school administrator and teacher in the United States. Educators' reactions to these changes have pointed the direction of American education. Improved schools required an understanding by professional educators and the American public of what schools must do and how they must do it.

This writer felt a filmstrip can play an important part in the presentation of change. The filmstrip, with a sequence of still pictures, that allows for discussion, plus the addition of sound constituted an effective method of presentation. Brown stated:

Filmstrips teach and the combination of filmstrips with other types of learning experiences such as recordings, produces learning results superior to those obtained from one media alone (6:139).

This study made available a filmstrip on present programs of flexible scheduling to be viewed and discussed by educators, prospective teachers, and the lay public.

Perhaps the utilization of this study will provide a more efficient organization of secondary schools in the states of Northwestern United States.

Limitations of the study. Due to the experimental nature of flexible scheduling and this writer's intention to apply it locally, the study was limited in three areas.

1. The study involves only the states of Washington and Oregon.

2. In accordance with the writer's definition of flexible scheduling, the study is limited to Marshall High School, Portland, Oregon; Joel Ferris High School, Spokane, Washington; and Bend High School, Bend, Oregon.
3. The limited amount of literature available is supplemented with personal interviews.

#### DEFINITIONS OF TERMS USED

Secondary School is the period of schooling in grades 9 - 12.

Traditional Schedule is the organization of the schedule into a standard fifty five minute, six, seven, or eight period day. This rigidly organizes all subjects to meet for the same number of minutes per period for all levels of ability.

Flexible Schedule is the organization of the school where classes vary according to the nature of the subject, the ability and interest of the student, the talents of the instructor, and the type of instruction.

Large Group Instruction is the organization of the school that involves the presentation of material to a large group of students. The number of students could vary from the traditional class size of 25 to 30 to as many students as the facilities will allow. The

emphasis in this type of instruction is placed on presentation of material through lecture.

Small Group Instruction is the organization of the school that involves the personal contact between student and teacher. With the emphasis on group interaction the number of students will vary from 2 to 15. The small group instruction is used to clarify the concepts and generalizations presented in large group work.

Independent Study is the organization of the school that allows the student to pursue course material in depth. This is accomplished individually with teacher guidance. The emphasis in this type of instruction is designed to promote student self direction and responsibility.

Module is the shortest period of time desired for any type of instruction. Many varied combinations of time can be constructed by grouping together several modules to form long, short, or moderate length class periods. This is also applied to the class and refers to the minimum class size for a particular subject.

Master Schedule is the schedule developed involving the overall school program. This identifies students who are assigned to a particular subject and teacher, where the room is located, and what time the course is offered. The individual student schedules are developed from the master schedule.

Individual Student Schedule is the schedule developed by the individual student from the master schedule. This is formulated with the assistance of a guidance counselor assigned to the student. Factors such as ability of the student, knowledge of material, interest, and level of maturity are considered by the counselor in adjusting the students schedule.

## CHAPTER II

### REVIEW OF LITERATURE

#### INTRODUCTION

This investigation discovered little has been written relating to a complete reorganization of the schedule. The majority of the information gathered has been from the periodicals and books of a few educators. Much has been written discussing the revision of the curriculum and the introduction of the new technological teaching aids, but most of the proposals deal with the traditional schedule. It was becoming increasingly difficult, if not impossible, to adopt these changes within the conventional organization of the school.

#### IMPLICATIONS OF FLEXIBLE SCHEDULING

"What the advancement of education requires is not simply more money from outside, but sweeping changes on the inside" (5:250).

These words by Phillip Coombs, Assistant Secretary of Defense have pointed the direction education has taken. Many experimental studies were underway to change education from the inside.

One of these studies that perhaps holds the key to wide changes was flexible scheduling.

Robert Bush and Dwight Allen emphasized the need for flexibility in scheduling and for experimentation.

The promising results of many experiments now in progress will depend for their wide application upon arranging the schedule of the high school so that these different courses and curricular can be accommodated. To make possible the fitting together of separate facets of the problem a new design for high school education must be formulated. This design should strike a balance between curricular requirements and electives; it should not only guarantee the absence of significant gaps in the education of any pupil, but also take adequate account of that pupil's individuality. This new design should provide flexible arrangements for the conducting of classes, arrangements which consider not only pupils differences, but consider those unique talents and specialized competences of teachers and difference in subject fields as well (9:5).

Flexible scheduling is the reorganization of the schedule into arbitrary periods of time to fit the needs of the individual, teacher, and subject. This allowed for organizational structures such as large group and small group correlated with independent study.

#### HISTORY OF FLEXIBLE SCHEDULING

The idea of flexible scheduling as it was being viewed, emerged from the studies of Dr. Lloyd Trump and the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School.

The purposes of the Commission were to study better ways to utilize the teachers that were in the classroom, to find better ways to take advantage of the new technological

advances, and to better develop the individual students responsibility for learning.

It was found the methods developed by the commission could not be implemented successfully into the traditional schedule, thus a reorganization of the schedule was necessary.

The Commission, with funds from the Advancement of Education and the Ford Foundation, invited several schools to participate in experimental studies. One of the schools to include flexible scheduling in the entire system was Golden High School in Jefferson County, Colorado.

The prospect of flexible scheduling in the future seems unlimited. Delbert Lobb stated:

During recent years there has been increasing interest in investigation of schedule modifications. These changes are permitting more teachers to meet students in groups of various sizes for differing purposes and to redistribute professional time for more adequate preparation and planning. It may become possible to frame almost any kind of organization of time and activities (18:367).

Bush and Allen supported this premise by stating:

Schools that have begun to implement the ideas set forth and that are using computers to generate their schedules have also begun to adopt a variety of educational practices which they had not previously considered. New curricular alternatives have become possible, causing a definite break with traditional organization and teaching (9:186).

#### PROGRAMS OF FLEXIBLE SCHEDULING

A survey of current literature on flexible scheduling revealed many types of scheduling practices labeled as flexible.



One type was accomplished by rotating periods of different lengths and adding a floating period to allow for more subjects or some individual work by students. The scheduling of subjects to meet four instead of five days a week, with the extra day to be used as necessary, also was a variation of this type.

Another type of flexible schedule was the modular concept. Here the school adopts a 15 or 20 minute block of time which can be placed back to back or used singularly as the subject or the individual student's needs dictate. The subject can be scheduled for the same number of modules each day or use different modules on different days of the week.

A system with a little more flexibility was used by schools using a team teaching approach. A modular concept was used to form a two hour block with perhaps 150 students and five teachers. With this arrangement all 150 students were taught in large group instruction for a specified number of modules followed by small group discussion and independent study.

Trump emphasized the danger in assuming a schedule labeled as flexible:

While one of the basic reasons for changing schedules is to provide different institutional arrangements may themselves become inflexible (15:368).

Trump further stated:

If school leaders seek easy answers and change their schedules accordingly, largely because it has become fashionable, flexible scheduling is only a fad. However, if leaders engage in a never-ending search for the enlightened use of time, space, and numbers, and curriculum, then flexible scheduling is absolutely fundamental in the search for better education (15:371).

Marshall High School, Portland, Oregon used the modular concept with a 20 minute module and a 21 period day.

The time allotment was determined by the teachers with approximately one third of the students week relegated to independent study.

The school was organized around seven Resource Centers; math, science, English, social studies, business education, foreign language, and a combination industrial arts, physical education, and home economics center. This made available numerous areas for independent study. Each Resource Center was supervised by teacher aides and had available clerical assistance.

Extensive use was made of guidance counselors and teacher counselors. Both guidance personnel and teachers were available for conferences during unscheduled modules.

Instruction was organized around large and small presentations supplemented by independent study. Students were free to use the independent study time to their best

advantage with students assuming increased responsibility for their own learning (25).

Joel Ferris High School, Spokane, Washington, used a 15 minute module and a 26 period day during the year this study was being conducted.

Many of the features were similar to Marshall High School, yet there were characteristics that made the program unique.

Similar use was made of guidance, teacher, and teacher aide staff. Determination of time allowances and organization of instruction were also similar.

Joel Ferris was also organized around Resource Centers but only two main centers; (Humanities and Science and Mathematics). These were supplemented by laboratories designed for each specific subject available for use.

Individual study time was available for all students, but independent study times were areas that must be earned. Students taking part in independent study had to apply for an honors pass and show they were mature enough to move ahead on their own (24).

The organization of Bend High School, Bend, Oregon, was also very similar to Marshall and Joel Ferris, but also contained unique features.

All students at Bend had the opportunity to use independent study time. A supervised study hall was maintained for those few students that had not used this time to the best advantage.

Instruction was organized around large and small groups with independent study except English. This was the only subject the staff felt should wait another year before adopting large and small group instruction.

Facilities at Bend differed somewhat from Marshall and Joel Ferris. A new addition to the school provided small group seminars and large group rooms specifically designed for these types of instruction (23).

In Gardner Swensen's article, "Brockhurst Junior High School," perhaps the ultimate in flexible scheduling as it was known then was described. This arrangement required a daily preparation of a master schedule. The master schedule was used by the student in consultation with a counselor to formulate a daily schedule (26:84-6).

True flexibility was supported by Bush in his statement:

A genuine flexibility that enhances all pupils opportunities make more efficient use of staff time, and is financially economical, will require a thoroughgoing, bold, across-the-board approach to the whole schedule (8:207).

The many varying programs of flexible scheduling existing in schools were not patterns to be copied. Each institution decided what educational goals they were trying to reach. Lobb stated:

There is a multiplicity of patterns. Actually, every school should be unique and not a copy of some other program. It is worthwhile to study as many situations as possible, but a specific plan should be developed locally (18:370).

## ADVANTAGES OF FLEXIBLE SCHEDULING

A survey of current literature revealed many advantages in flexible scheduling.

Flexible scheduling provided for teaching and learning experiences with large numbers of students. Teachers experienced in specific fields taught large classes, thus assuring the best instruction in a particular subject. This made possible contacts between all students and the most experienced teachers aided by the newest technological devices.

Time was allowed for the organization of small classes of fifteen or fewer students to participate in periods of group discussion. Trump in discussing small group instruction listed possible advantages:

Provide opportunities for teachers to measure individual students growth and development and to try a variety of teaching techniques which will be suited to the students needs. Permit all of the students to discover the significance of the subject matter involved and to discuss its potential uses (28:24).

Small group instruction allowed for the exploration of concepts previously held concerning significant issues as well as providing the student the opportunity to know the teacher on a personal basis.

The creation of teaching teams with blocks of time for planning became a reality with flexible scheduling.

Here the teacher met with other members of the team to plan and evaluate presentations. The scheduled blocks of time were also used to work with individual students.

Flexible scheduling allowed for the proper time allocation of each part of each course. The teacher designated the length of time deemed necessary for a particular course. Bush stated:

In time each subject matter field ought to have a flexible structure for its teaching, one that is appropriate for the subject, for the teachers, and for the learners. This structural variation recognizes the fact that pupils differ widely in their abilities, in their capacities, and in the pace at which they learn (9:18).

The student was allowed flexibility in scheduling his own program. Modules of unscheduled time provided students opportunity to work as individuals in an area of interest or in groups of two or three in any subject area. Bush and Allen clarified this by stating:

In still other instances the pupil does not need to be under a teachers direction. He does not need to be taught in groups. He ought to spend his time learning, reading, writing, memorizing, drilling, or having individual conferences. Group work may not be as necessary for as much time as the schedule now makes mandatory (10:353).

Flexible scheduling made possible the more efficient use of building space. The combining of teachers, students, and the proper facility was made possible by the schedule. More efficient use can be made of auditoriums and laboratories.

The opportunity for grouping of students by interest and ability was increased with flexible scheduling. With close contact achieved by small group work and individual study, teachers recognized individual interests and abilities. The possibility of transfer from one group to another was also easier achieved with flexible scheduling. Discussing grouping practices, Trump stated:

Flexibility in grouping and regrouping of students, for example when the learning goals of a group of individual students are seen to coincide to a workable degree, small groups will be organized on the basis of which students need what kinds of teaching; and large groups will be organized by including those with some similarity in past achievement of skills or of content in the subject is question (28:46).

Howard emphasized the place of flexible scheduling in the present educational organization.

It is becoming increasingly apparent that if our schools are to be controlled by teachers and administrators instead of by inflexible schedules, a schedule must be constructed which serves rather than dominates and restricts instruction. This structure must however, be broad enough to allow teachers and students progressively more autonomy in decision making (15:283).

One of the primary disadvantages as discussed by Howard, was the complex nature of the flexible schedule, creating problems in designing and managing (15:287).

Computer scheduling has been discussed as the answer to the complexity of the flexible schedule. Stanford University has recently completed a four year study on

computer scheduling and were successful in constructing a flexible schedule. Bush stated:

We can now feed into the computer the courses which students request and need, the qualifications of teachers, and the building facilities available and receive from the computer a master schedule, a schedule for each teacher, for each pupil, and class lists for each teacher (7:144).

Both Bend and Marshall High Schools have programs that were prepared by the Stanford University computer. In the past, numerous visits to Stanford were necessary to coordinate details, but it is felt in the future as more programs are prepared, the need will be eliminated (23;25).

A similar situation existed at Joel Ferris High School, where the schedule requests were sent to Washington State University to be programmed and then to Cambridge, Maryland, for the computer work (24).

A possible justification for utilizing flexible scheduling might be revealed by comparing aspects of the traditional schedule with the flexible schedule.

- | <u>Traditional Schedule</u>  | <u>Flexible Schedule</u>   |
|--|--|
| 1. Standard number of students with the classroom.<br>Recommended number is 25-30.       | 1. Groups of students range from 2-15 in small groups to 75-100 in large group instruction.        |
| 2. A single teacher is responsible for the educational material within a single subject. | 2. Teachers are grouped in teaching teams with the best teachers responsible for the presentation. |



Traditional Schedule

3. Students are assigned to study halls for a specified length of time under close supervision of teachers.
4. Class time is rigidly assigned to a 50 or 55 minute period regardless of the nature of the subject.
5. The majority of educational experiences of the student take place in one standard sized classroom.
6. Students should study the same course content and learn at the same rate.
7. Teachers preparation for future classes is scheduled for a single period or outside of school time; little contact is allowed with other professional faculty.
8. Each class should meet the same number of days a week and at the same time each day.
9. The student is limited to the number of subjects to be carried by a rigid 6 or 7 period day.

Flexible Schedule

3. Students have the opportunity to pursue independent study during unscheduled time with teacher consultation.
4. Class periods are assigned time according to the nature of the subject and the needs of the students.
5. Students have the opportunity to use a variety of physical facilities from independent study carrels to large lecture halls.
6. Grouping of students according to interest and ability with the opportunity for in-depth study is easily accomplished.
7. Blocks of unscheduled time is used by teachers for preparation, evaluation, conference with individual students, and planning with other faculty members.
8. Class meetings vary from one week to another and at different times of the day depending on the nature of the subject, abilities of the students, and the evaluation of the teacher on student progress.
9. The scheduling of subjects in varying periods of time and on varying days allows the student to pursue optional subjects of intense interest.

10. Traditional Schedule  
Requires long man hours with busy teachers and administrators assuming the work.

10. Flexible Schedule  
Computers are being used to construct schedules for individual students and teachers. Better use of resources and economy of time and money result; schedule construction can take place prior to opening of school.

#### RESEARCH RELATED TO FLEXIBLE SCHEDULING

A survey of current literature failed to reveal available research on flexible scheduling.

Research studies are being carried out at the present time on flexible scheduling, but little has been accomplished in evaluating these programs. Robert Anderson stated:

Because schools that have embarked on experimental programs for altering the traditional patterns of vertical and horizontal organization are still modifying their master schedules, there has been no opportunity to examine the impact of schedule changes on student behavior (4:463).

In viewing the findings of Anderson, as described in the preceding paragraph, it should be noted a period of several years will elapse before an adequate evaluation of the program is possible.

Some generalizations concerning the effect of flexible scheduling on the school were beginning to appear, but no concrete evidence was yet available.

William Griffin reported the master schedule offers many possibilities for individual student's schedules. Test results using standard tests reveal no significant gains or losses by the students (14:126).

Donald Empey indicated the objectives of student self direction and the development of responsibility and citizenship were being met by flexible scheduling. A high degree of acceptance by students, faculty, and citizens toward flexible scheduling was also indicated (13:124).

Robert Johnson and Delbert Lobb reported on the Jefferson County findings:

There was a discernable movement in the direction of achievement results favorable to team teaching and schedule modification (16:74).

Joel Ferris and Marshall High Schools were both in the process of evaluating their programs. Test results were not yet available and evaluation consisted primarily of interviews with graduates and questionnaires to administrators, teachers, and students for their impressions of the program. Results from this form of evaluation have been favorable (24, 25).

One major step toward the justification of flexible scheduling and the establishment of a basis for research were the seven assumptions of Bush and Allen.

1. High school is the period of schooling typically included in grades 7 to 12.

2. All students should have continuous, rigorous study in breadth and depth in all basic subject-matter fields throughout the six secondary school grades.
3. In each subject area several groups of students whose needs are sufficiently distinct to require a discrete program of studies can be identified.
4. Each subject, when properly taught, will include four basic types of instruction.
5. Adequate instruction in each subject-matter field requires senior teachers who are both well-trained teachers in their subject-matter fields and highly skilled in teaching and who are assisted by less highly trained members of the instructional and supporting staff.
6. Class size, length of class meeting, and the number and spacing of classes ought to vary according to the nature and aim of the subject, the type of instruction, the level of ability and interest of the pupils, and the aim and purpose of the teaching.
7. It is possible to obtain scheduling assistance through the use of data processing equipment in order to implement a large degree of flexibility (9:8-19).

It would appear that several of the assumptions were being largely met by schools employing flexible schedules.

More experimentation and evidence was needed to completely judge the effectiveness of flexible scheduling.

Allen stated:

We need to try many arrangements of instructional time, class organization, and staff use. We need evidence regarding the relative effectiveness of

many alternative proposals. The objective is not change for the sake of change, but rather the consideration of possible modifications presently excluded simply through inertia or the force of tradition (2:34).

Bush and Allen commented further on the need for more research:

Since the evidence is meager as to the efficiency of learning as a function of the amount of time a course meets and as a function of the way in which meetings are scheduled, experimentation with different patterns is desirable in order to obtain such evidence (9:34).

#### SUMMARY

This chapter has attempted to provide a background and justification for flexible scheduling within the organization of the high school.

Flexible scheduling emerged from the studies of the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School. Studies by the Commission resulted in a consensus that the traditional schedule would need flexibility to adopt new teaching methods and technological aids to be effective.

Experiments being conducted were utilizing various types of schedules labeled as flexible. The rotating or floating period in a schedule was one type discussed. The modular concept of ten, fifteen, or twenty minute modules used singularly or back to back was also being tried.

Perhaps the most flexible was a program that formulated a daily schedule for both student and teacher from a master schedule. Regardless of the type of schedule being used, flexibility was the concept that was stressed. It should also be noted no two schools were identical and the schedule adopted should fit the individual needs.

In schools using flexible scheduling, many advantages were discussed. The use of large and small group instruction coupled with independent study was easily achieved with flexible scheduling. The proper time allocation for each course and providing for the individual differences of teachers and students were other advantages cited.

The major disadvantage, the complexity of schedule construction, was largely being overcome with the use of computers.

Research related to flexible scheduling was limited, primarily due to the short length of time the programs had been in existence. Evaluation was being conducted in schools using flexible scheduling and the primary need seemed to be for more programs, providing more data.

## CHAPTER III

### PROCEDURES USED

The following procedure was followed in the preparation of the filmstrip; Schools of the Future, Now.

Selection of a topic and careful screening of publications and film manuals, revealed two media pertaining to flexible scheduling; a film entitled And No Bells Ring, and a filmstrip entitled Focus On Change. Both of these media dealt with the theory of flexible scheduling, however, and did not present actual programs being currently used in the public schools.

Information was obtained from Mr. Alfred McCallum, Director of Secondary Education in the state of Washington, on schools using flexible scheduling. A search of current literature for programs in the Northwest coupled with Mr. McCallum's information, disclosed three schools in the states of Washington and Oregon using flexible scheduling. The following schools were selected because they exemplified the writer's definition of flexible scheduling:

1. Marshall High School, Portland, Oregon
2. Joel Ferris High School, Spokane, Washington
3. Bend High School, Bend, Oregon

Letters were sent to the three schools chosen, to set up interviews and view the programs. Because of the heavy visitation schedules of the schools and the distances involved, it was decided to film the programs at the same time as the interviews.

Two methods were accepted for preparation of a filmstrip:

1. The preparation of a script and film shot to the prepared script.
2. Shoot the film first and write a script for the finished slides. (17:22)

This writer chose the latter because of existing problems in scheduling more than one visitation to the schools.

During the month of April the schools were visited and the programs were filmed. Administrators, teachers, and students were also interviewed concerning various phases of flexible scheduling.

The equipment used during this phase was a Yashica 35 MM camera and a strobe light. The strobe was used because most of the shooting would be indoors. The film selected was Ektachrome-X color daylight film, primarily because of its wide latitude and superior use in reproduction (19:87).

The exposed film was sent to the Kodak Processing Laboratory at Palo Alto, California, in a prepaid mailer. The processing took approximately one week.



The script for the film was written and submitted to the graduate committee for approval or revisions.

Materials were secured for filming of the title slides and art work used in the filmstrip. These included:

1. Ceramic Letters
2. Colored Tag
3. Colored Burlap
4. India Ink
5. Charcoal

Assistance was obtained in preparation of art work used in the filmstrip.

Upon completion of the art work, title slides and the art work were filmed using the Yashica 35 MM camera and a copy stand.

The art work and title slides filmed on the copy stand were sent to the Kodak Processing Company.

When the title and art work slides were returned from Kodak, all the slides were reproduced into a filmstrip sequence using a Honeywell Reproner and a 36 exposure roll of Ektachrome-X color film. The reproduced filmstrip sequence was then sent back to the Kodak laboratory for processing and was returned in a week.

A narrator was then selected to record the script on tape. To familiarize the narrator with the filmstrip, a preview was arranged.

Background music was selected to accompany the narration, then both narration and music were recorded in exact sequence with the filmstrip. An audible signal was used to inform the projector operator when to advance the frame. The projector was placed in another room with a glass partition so the narrator could view the filmstrip and coordinate the narration with the filmstrip sequence. The separation of the tape recorder and filmstrip projector eliminated any unwanted noise on the tape.

The completed filmstrip was previewed before an audience of undergraduate and graduate students preparing to be teachers and administrators for any suggestions or comments.

A follow-up letter was sent to the schools used in this study thanking them for their cooperation.

## CHAPTER IV

### SCENARIO

#### Frame

1. Group of students emphasizing increasing number.

#### Narration

How is education going to meet the individual needs of this growing population? Dr. Lloyd Trump feels the challenge which is beginning to emerge is one of quality in education, provided for everyone in high school. Efforts must be made to provide for the individual differences of the students and to determine which learning experiences are the most significant for the success of the individual. The challenge for quality education encompasses not only the student, but the teaching staff as well. Individual differences in teachers must also be recognized and provisions made for better utilization of the staff.

FrameNarration

2. Traditional schedule illustrating rigidity of periods.

Does the traditional schedule with its rigid number and lengths of periods provide for the individual needs of the student and better staff utilization? Could the subjects viewed be taught in varying lengths of time to meet more effectively these individual needs?

3. View of Marshall High School.

Three schools are endeavoring to answer these questions by adopting flexible scheduling. One of these schools is Marshall High School, Portland, Oregon.

4. View of Joel Ferris High School.

Another is Joel Ferris High School, Spokane, Washington.

5. View of Bend High School.

The third is Bend High School, Bend, Oregon.

6. Schedule of Bend High School, illustrating 20 minute module, 24 period day.

What is flexible scheduling? What does it provide? Flexible scheduling is the reorganization of the schedule into arbitrary

FrameNarration

7. Schedule of Joel Ferris High School with differing module of 15 minutes and 26 period day.

8. Graphic lettering build beginning with Large Group Instruction.

9. Large group instruction showing size of group and lecture as a type of instruction.

periods of time called modules, to fit the needs of the individual, teacher, and subject.

This schedule of Bend High School uses a 20 minute module, 24 period day. . . . .

while Joel Ferris High School uses a 15 minute module, 26 period day.

What does flexible scheduling provide? It provides for large group instruction.

Large group instruction can vary from the traditional class size of 25 to 30, to as many students as the facilities will allow. Illustrated lectures by a guest speaker or teacher is one of the uses of this type of instruction.

FrameNarration

10. Large group instruction used for making tests.

It can also be used for making assignments, giving tests, and. . . . .

11. Large group instruction with emphasis on panel discussion.

panel discussions. The emphasis in this type of instruction is placed on the presentation of material through lecture.

12. Graphic lettering build.

Flexible scheduling provides for small group instruction.

Large Group Instruction

Small Group Instruction

13. Small group instruction illustrating the emphasis on face to face contact.

The emphasis in small group instruction is on face to face contact and interaction among the group.

14. Small group instruction showing the group can contain as few as five.

The number of students in this type of instruction can vary from five. . . . .

FrameNarration

15. Small group instruction showing the group can contain as many as fifteen.

to as many as 15 students for effective teacher-pupil relationship. Small groups are used primarily to clarify and reinforce concepts presented in large group instruction.

16. Graphic lettering build.

Flexible scheduling provides for independent or individual study.

Large Group Instruction.

Small Group Instruction.

Independent or Individual Study.

17. The library is a place for individual study.

The responsibility in this type of study is placed on the individual student. Perhaps the most familiar type is library study.

18. View of students assuming individual responsibility.

Independent study consists of those modules not scheduled for other purposes of instruction. In most cases the students study individually. . . . .

FrameNarration

19. Teacher assisting students in library.

however, a teacher is available for assistance if the need arises.

20. Woodworking project is a form of independent study.

Independent study assumes many forms. It might be a single student working on a woodworking project. . . . .

21. Art project as a form of independent study.

or an art project.

22. Two students working together in an independent science experiment.

It might be two students engaged in a science experiment. . . . .

23. As many as four or more working together in an independent biology project.

or four or more students working on a biology project.

24. Independent physical education activity.

Independent study may not always be academic in nature, but could be a physical fitness activity or an individual music activity.



Frame

25. Students using tapes of large group lectures.

26. Student using tape for review purposes.

27. Library is an independent study area with general reference material.

28. Social Studies Resource Center with specific reference material.

29. Student Union as an area of independent study.

Narration

Tapes of large group lectures are available to all students for use in their study.

These are used if a student has been absent and missed the presentation or simply for review purposes.

Independent study takes place in a variety of areas within the school. Students may go to the library, which has available general reference material on all subject matter fields.

They may go to any one of several resource centers, such as the social studies center which contains specific reference material pertinent to the subject.

The student union or cafeteria is available for socializing or study. . . . .

FrameNarration

30. Courtyard as  
an area of independent  
study.

as well as areas on the school  
ground.

31. Supervised study  
hall for those  
students not able to  
use independent study.

For those few students who are  
not able to use their inde-  
pendent study time to the best  
advantage, a supervised study  
hall is maintained. It should  
be noted, however, the number  
of these students is very  
minimal.

32. Graphic lettering  
build.  
Large Group Instruction  
Small Group Instruction  
Independent or  
Individual Study  
New and Improved Use  
of Facilities

Flexible scheduling provides  
for new and improved use of  
facilities.

33. Auditorium is used  
for large group  
instruction.

Space is provided for large  
group instruction, such as an  
auditorium. . . . .

Frame

34. Special classrooms designed for large group instruction.

35. Classrooms with folding walls used for large or small group instruction.

36. Small group instruction takes place in traditional size classroom with folding walls.

37. Individual carrels are provided for independent study.

Narration

a classroom especially designed for this type of instruction. .

and a classroom with folding walls that will accommodate large group presentations.

Small group instruction can take place in a normal or traditional size classroom with folding walls that can be adjusted for this type of instruction.

Independent study also dictates the facility needs in flexible scheduling. In addition to the areas mentioned such as the library, resource centers, and student union, individual study carrels are provided for students use.

FrameNarration

38. View of listening stations for individual tape listening.

Individual listening stations are available for large group lecture tapes and language lab training.

39. Small rooms are also available for independent study.

There are rooms where individuals or small groups can carry out assignments without disturbance.

40. View of individual teacher and office.

Offices for the teachers are arranged so an individual teacher can work independently. . . .

41. Office arrangement for team teaching assignment.

or are arranged to accommodate a teaching team.

42. Instructional Materials Center showing tapes available for student and teacher use.

An Instructional Materials Center houses films, filmstrips, tapes, and a variety of other materials for teachers and students use.

43. Graphic lettering build.

Large Group Instruction

Small Group Instruction

<u>Frame</u>	<u>Narration</u>
<p>Independent or Individual Study New and Improved Use of Facilities More Efficient Use of the Teaching Staff</p>	<p>Flexible scheduling provides for the more efficient use of the teaching staff.</p>
<p>44. Teaching teams in planning stages.</p>	<p>The use of teaching teams allows for the individual differences in teachers to be utilized and the flexible schedule provides release time for team planning.</p>
<p>45. Teaching team emphasizing common release time.</p>	<p>All members of a teaching team have release time during the same modules to facilitate effective planning.</p>
<p>46. Teacher and student conference utilizing common release time.</p>	<p>The unscheduled time of teachers, can also be used for individual conferences with students.</p>
<p>47. Teacher aide hired to staff resource center.</p>	<p>To alleviate clerical duties of teachers, teacher aides are utilized in such areas as resource centers. . . . .</p>

FrameNarration

48. Teacher aide hired to staff instructional materials center.

instructional materials centers, and such clerical duties as typing tests, hall duty, and other non-professional chores.

49. Students are occasionally used to relieve teachers of clerical duties.

Occasionally, top students, student teachers, or teacher aides are employed for correcting tests and preliminary reading of English papers.

50. Project coordinator and teacher working on an instructional problem.

In any problem that arises, a teacher can obtain assistance from a professional person who has a full view of the entire program. This person is called a project coordinator.

51. Graphic lettering build.  
Large Group Instruction  
Small Group Instruction  
Independent or Individual Study  
New and Improved Use of Facilities

Flexible scheduling provides for an improved and strengthened guidance program.

FrameNarration

More Efficient Use of  
the Teaching Staff  
Improved and Strengthened  
Guidance Program.

52. Guidance counselors' offices with emphasis on schedules for students use.

Guidance plays a very important role in flexible scheduling and occupies a central area within the building. Guidance counselors are available for every class. These schedules in the counselors' offices readily indicate when they are free for consultation.

53. Guidance counselor and student discussing instructional problem.

The function of guidance in a school of the future is divided. The problems relating to schedule changes and individual courses of study are primarily handled by the teacher conferences. The guidance staff, however, handles specific personal problems of the student in such areas as vocational and scholastic aspirations. . . . .

FrameNarration

54. Guidance counselor and student discussing college placement.

the administering of individual and group testing programs, and individual and group counselling for physical, emotional, social, and specialized academic difficulties.

55. Brockhurst Plan

1. Teachers:

- a) Determine daily master schedule
- b) Determine time needed for each instructional unit
- c) Determine method of instruction
- d) Determine school facilities best suited to lesson

Perhaps the ultimate in flexible scheduling exists at Brockhurst Junior High School, Anaheim, California. In the Brockhurst Plan, teachers meet with teaching team leaders daily to determine material to be covered, groups they wish to meet, the time to be spent on each lesson, and the type of instruction desired. This information is taken to a meeting of other team leaders to formulate a master schedule that is sent to teacher-counselors for student schedules.

2. Students:

- a) Are assigned to teacher
- b) Sign contracts
- c) Make daily schedule changes

The students are placed into groups of approximately 20 per group with a teacher-counselor.



Frame

d) Progress at their  
own rate of speed

Narration

In consultation with the teacher, students sign contracts for a specific amount of work. This work is completed at the students own rate of speed. If a student feels on a particular day a type of instruction would not be beneficial, his schedule may be adjusted accordingly.

The Brockhurst Plan represents an effort to provide quality education.

56. Graphic lettering  
build  
Large Group Instruction  
Small Group Instruction  
Independent or Individual  
Study  
New and Improved Use of  
Facilities  
More Efficient Use of the  
Teaching Staff  
Improved and Strengthened  
Guidance Program

Flexible scheduling, then, provides for each of these areas in our schools of the future.  
Large Group Instruction  
Small Group Instruction  
Independent or Individual Study  
New and Improved Use of Facilities  
More Efficient Use of the Teaching Staff  
Improved and Strengthened Guidance Program

FrameNarration

57. View of  
Marshall High School  
floor plan showing  
three stories.

It is noteworthy that flexible  
scheduling has been adopted in  
varying types of structures.  
Marshall High School is a three  
story building. . . . .

58. Joel Ferris  
High School floor  
plan emphasizing  
campus arrangement.

while Joel Ferris and Bend  
High Schools are organized on  
the campus plan.

59. Graphic of school  
houses showing unique  
quality of each  
program.

There is no set pattern to  
follow in adopting a flexible  
schedule. Each program should  
be unique and designed to fit  
the needs of the individual  
school.

60. Background music

The End

## CHAPTER V

### SUMMARY, FINDINGS, AND RECOMMENDATIONS

#### SUMMARY

It was the purpose of this study to prepare a sound filmstrip showing flexible scheduling programs in the states of Washington and Oregon. This writer felt a more thorough understanding of flexible scheduling could be achieved by observing programs now being used.

Flexible scheduling emerged from the studies of the Commission on the Experimental Study of the Utilization of the Staff in the Secondary School, into many and varied types of programs. These programs ranged from a fairly rigid rotation of periods to the formulation of daily schedules.

Several advantages were noted in the adoption of flexible scheduling. These encompassed the teacher, student, and use of facilities.

Research related to flexible schedules was not extensive. This was due perhaps to the experimental nature of the programs. Possibly, the first step in establishing a basis for research was the development of seven principles underlying flexible scheduling. Further reference is made to these principles in a later paragraph.

A screening of programs in the states of Washington and Oregon, revealed three schools that were used in this study. Marshall High School, Portland, Oregon; Joel Ferris High School, Spokane, Washington; and Bend High School, Bend Oregon; were contacted and the programs filmed by the writer.

For a thorough understanding of flexible scheduling and the existing programs, film of the schools was supplemented with art and copy stand work.

This film was reproduced into a filmstrip sequence correlated with narration finalizing the presentation.

#### FINDINGS

In comparing the various programs with the previously mentioned principles, it appeared they were being utilized with the exception of two areas. These two areas included scheduling of classes and use of facilities.

Scheduling of classes with computers have met with some problems in the existing school systems. The problem seemed to lie in the human programming for the computer. The school system prepared the schedule requests gathered from facilities available, teacher, and student recommendations. These requests were sent outside the school district to be programmed for the computer. It was in this area, probably because of inexperience, where the problems arise.

With more scheduling being handled by computers, presumably the errors in programming will be eliminated.

Facilities pose another problem in establishing flexible schedules. The majority of the schools were designed for the traditional schedule, which had necessitated modification of the existing facilities for the varying types of instruction.

In the future with flexibility as the keynote in school building, it is assumed more efficient use will be made of facilities.

#### RECOMMENDATIONS

This writer recommends the following:

1. A follow-up study be conducted of the educational achievements of students utilizing flexible scheduling as compared to the traditional schedule.
2. Flexible scheduling be considered for the junior high student.
3. The filmstrip be utilized by administrators in introducing flexible scheduling to the lay public.

4. The filmstrip be available at Central  
Washington State College to be used  
in the following areas:

- A) High School Principal,  
Education 581
- B) Senior High Curriculum,  
Education 552
- C) Educational Administration,  
Education 587
- D) Junior High School Principal,  
Education 580
- E) Seminar in Education Problems,  
Education 490
- F) Any other area viewed applicable  
by the instructors

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APPENDIX

## APPENDIX A

404 E. 2nd Ave., Apt. 4  
Ellensburg, Washington  
January 27, 1965

Mr. Alfred McCallum  
Director of Secondary Education  
Office of State Public Instruction  
Old Capitol Building  
Olympia, Washington

Dear Mr. McCallum:

I am writing to ask your cooperation in a study that I am conducting to fulfill requirements for a Master of Education Degree at Central Washington State College.

The study is concerned with schools using a flexible schedule or some phase of the Trump plan. Two schools, Joel Ferris High School in Spokane and Tyhee in Highline District have been brought to my attention as using flexible scheduling.

I am interested in finding out if other schools in the State of Washington are following a similar program. Any information concerning schools using flexible scheduling will be deeply appreciated.

I am enclosing a stamped, self-addressed envelope for your convenience.

Yours truly,

Robert E. Meinhardt

## APPENDIX B

404 E. 2nd Ave., Apt. 4  
Ellensburg, Washington  
March 1, 1965

Dear Sir:

I am writing to ask your cooperation in a study that I am conducting to fulfill requirements for a Master of Education Degree at Central Washington State College.

My study is concerned with flexible scheduling and I would like the opportunity to visit your school for the purpose of filming the program.

On the stamped, self-addressed postcard, would you please indicate the date that would be most convenient for you.

Your cooperation in this matter will be greatly appreciated.

Sincerely,

Robert E. Meinhardt

## APPENDIX C

404 E. 2nd Ave., Apt. 4  
Ellensburg, Washington  
May 3, 1965

Dear Sir:

I wish to thank you for the opportunity to visit and film the program in your school.

The cooperation I received from you and your staff was deeply appreciated.

It is recommended the filmstrip be made available at the Central Washington State College film library.

Thanking you again, I remain.

Sincerely,

Robert E. Meinhardt