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A Proposed Improvement in the Enumclaw Senior High School Instructional Materials Center

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A PROPOSED IMPROVEMENT IN THE ENUMCLAW SENIOR HIGH SCHOOL INSTRUCTIONAL MATERIALS CENTER

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THE PROBLEM AND DEFINITIONS OF TERMS USED

Change in educational philosophy and technology has brought about many changes in today's schools. New concepts such as individual study, programmed learning, and student use of instructional materials formerly used only by the teacher, require facilities that are radically different from what conventional schools have today. The library must become part of the instructional materials center and the instructional materials center must be designed to utilize modern technology to better serve teaching and learning. Use of these new resources requires new roles of teachers and learners.

I. THE PROBLEM

Statement of the problem. The purpose of this study is to develop an instructional materials center for Enumclaw Senior High School which will centralize all instructional materials, serve to improve the learning environment, and be adaptable to trends in education such as individual study.

Importance of the study. Much needs to be done to

develop instructional materials centers in the schools today. Teachers need ready access to all teaching materials in order to provide good instruction. By good, we mean effective in the sense of progress toward desired learning goals and efficient in a sense of materials and human costs. "Instructional materials," says Gene Fusco, "give shape and substance to the school curriculum, control its content, and vitally affect the teaching-learning process" (8:18). This study attempts to develop an instructional materials center that will provide economy, effectiveness, breadth, flexibility, organization, creativity, professional service, and maintenance (19:2-3).

II. DEFINITIONS OF TERMS USED

Audio-visual services. Services provided by audio-visual services include ordering films, filmstrips, and other materials from rental agencies or for purchase; operating the local production laboratory; scheduling equipment for use by students and teachers; and operating the photographic darkroom.

Flexibility. Flexibility as used in this study refers to how components can be moved from one location to another

to serve various purposes, needs, or educational changes. It implies adaptability to different methods and unique situations.

Individual study carrel. The individual study carrel was designed to meet the demand for individual student instruction. The carrel offers the student privacy and reduces dependence on teacher control. The basic carrel offers six square feet of desk top surrounded by visual barriers above the eye level of the student seated, with the side barriers extending behind the edge of the table blocking the student's side view.

Instructional materials center. The library, integrated with audio-visual services and expanded to include small rooms for group study and individual study stations, would describe the instructional materials center. The instructional materials center is described in greater detail later in this study. The center, sometimes called the resource center, could retain the name library if this would reduce the human cost of change.

Local production laboratory. The area including photographic darkroom equipped to produce pictures, layouts,

posters, slides, exhibits, overhead transparencies, and other teaching materials is known as the local production laboratory. This area can be used as space for teaching photography or graphic production work and can also be used by teachers and students for the production of materials for classroom presentation.

Small group rooms. Rooms around the school, usually about eight by ten feet or ten by fifteen feet in size, which will seat six to eight or ten to fifteen students, describes the small group rooms. These rooms contain a small conference table and chairs with shelf space for books. These rooms, designed for small group discussion and planning, could be equipped with previewing and listening devices.

Traditional library. The traditional library is a library which contains only written material.

CHAPTER II

REVIEW OF THE LITERATURE

New concepts in education have been the subject of much writing. The new technology in education such as developments in individual study, programmed learning, and team teaching, is being viewed with enthusiasm by many of today's educators. One result of these studies and their application has been an increased use of audio and visual materials and increased demands for them by students and teachers. This study will survey the integration of the traditional library with audio-visual services.

LITERATURE ON INTEGRATION OF AUDIO-VISUAL SERVICES AND THE LIBRARY

Audio-visual personnel and librarians agree that other instructional materials as well as books should be housed in the library. Librarians say that audio-visual usage would be stimulated if materials and equipment were located in the school library (10:27). Ellsworth and Wagener say evidence is available that audio and visual materials can serve individuals and groups as a valued

addition to books; can and should be considered as legitimate library materials (6:16). Taylor suggests that when the traditional library is combined with the audio-visual department, the instructional materials center begins (22:45). In one survey of trends, Ruark found individuals and small groups using audio-visual materials as " . . . basic resource and reference materials" as well as for direct teaching (18:642).

Library reading, browsing, small group conferences, auditioning of tapes and records, and individual research and study, according to De Bernardis, et al., are logical functions of instructional materials centers (4:11). One Central Washington library has " . . . closely integrated in the new library building: closed-circuit television services, audio-visual materials, the curriculum laboratory and the traditional library" (11:393). Lieberman, in his report, probably states more clearly what is happening when he says:

> Integrated instructional materials service is a recent concept in curriculum development. It is fundamental in modern education and cannot be ignored if our schools are geared to meet (1) the tremendous increases in enrollment, (2) the increased knowledge to be imparted and to take cognizance of individual differences (12:47).

Current teaching practices and learning techniques are being influenced by the technological revolution in education. These influences are expanding in two directions: (1) large group or mass instruction; and (2) individualized instruction (8:23). Since large group instruction is not carried on in the library, this study will instead discuss small group instruction; however, the instructional materials center can be a continuing resource to the lecturer.

Small Group Discussion in the Library

Small group study increasingly becomes a powerful method for members of committees or discussion groups to solve their problems. The newer concept of developing individual inquiry includes the teacher in the discussion, allowing him to measure an individual's growth, use the meeting as group therapy process, allow students to actively discuss rather than passively receive subject matter, and allow the teacher and student to know each other on a personal basis (23:24-25).

About 15 per cent of the library space should be made up of small group study rooms (6:51). The study rooms should be about ten by fifteen feet or twelve by fifteen feet in size, and should be able to seat six or eight or twelve to

fifteen students and their teacher (6:70; 21:59; 4:15; 23:39). De Bernardis, et al., (4:15) and Galvin (10:29) agree that small group rooms should serve as listening rooms and as audio-visual rooms for previewing or learning. Ellsworth and Wagener believe that the rooms should have a window in the door or have a glass wall and be ventilated (6:70). De Bernardis, et al., adds the caution that noise-producing rooms, such as listening and previewing rooms be located away from classrooms and reading rooms (4:13).

Individual Study

Everyone has individual differences and abilities. The method developed recently is independent study, which allows students to progress at their own rate in their main interest areas. For students to do this in today's schools, curriculum changes must take place and facilities for independent study must be provided and used. There is evidence that individuals can and will make good use of such space and tools.

The starting point for developing individual study is the library which is by tradition a place planned for individuals (6:13).

Space and materials for independent study are

essential for an up-to-date program, says Beynon, who goes on to add " . . . that over the long haul independent study will increase" (1:3). The need for space for individual study has brought about many designs in the form of study carrels. The basic unit elements consist of a desk top, visual barrier, and a 110 volt AC outlet. Carrels can be designed with optional features such as an open bookshelf, a coat hook, a desk light, a control panel, lockable book storage, a coat locker, and under the desk storage (2:3). Individual study carrels can also be designed for specific subject uses such as biology studies, as well as with provisions for audio and visual equipment. Ellsworth and Wagener state that study carrels should occupy 60 per cent of the library space with a maximum of fifteen to twenty carrels among the collections (6:53). There is agreement among authorities that the work space should be two feet by three feet per reader with more if learning machines are used (6:53; 2:2).

What is being done in the library? This question can best be answered by Vainstein and Magg who say more attention is now given to " . . . the educational functions of public libraries, to the quality of library performance,

and to the organization of library service" (24:21). O'Connor cites " . . . economy of teacher time and effort . . . " and encouragement of " . . . simultaneous use of all types of materials" as reasons for centralizing library and audio-visual services (17:488). In school building improvements, the teacher and the learner must be kept in mind. Rufsvold puts emphasis on the learner when she says:

> The successful school building is one that provides a healthy and inspiring environment which stimulates children and young people to learn and instills in them a desire to grow into honest, responsible, intelligent citizens (20:7).

The successful school building also instills in the individual the desire to accept individual responsibility for self-direction in their growth.

LITERATURE ON THE INSTRUCTIONAL MATERIALS CENTER

The Instructional Materials Center

There are many ideas about what should go into the instructional materials center and how it should operate; but for the most part the basic concept is the same. The purpose of the instructional materials center, as described here, is to improve and strengthen teaching and learning.

De Bernardis, et al., (4:14-17) include in their instructional materials center much more than just books. They include every aspect of learning:

1. Circulation area
2. Materials and equipment storage
3. Materials production area
4. Office area
5. Maintenance and service area
6. Individual study area
7. Small group conference area with space for previewing films, viewing microfilm, and listening.

Ruark, on the other hand, states that the instructional materials center is an idea bank " . . . a storehouse of materials--books, models, charts, textbooks, pamphlets, films, slides, records, tapes, programmed learning materials, photographs," as well as, "display materials, exhibits, and completed special projects of various types" (19:1-2). The center offers for the teacher " . . . field trip suggestions, community resource files, dramatization suggestions and working scripts, sample teaching units and professional research," and, adds Ruark, "reference and curriculum materials of all kinds and types (19:2).

Ford suggests that the instructional resources center is a place of friendliness, informality, and invitation. The area he calls "browsing and general reading," includes the

space used for recreational reading, small groups, periodicals, circulation desk, card catalog, and display (7:524-526). In the resource center, the reference and research area houses the complete reference collection; whereas the instructional materials laboratory houses all graphic and photo reproduction equipment. Ford includes an electronic distribution center in his resource center, where signals for language laboratory, television and data processing originate. Also included in the resource center is the instructional materials library, where all non-book type learning materials are kept. Office space is provided for both the librarian and the media specialist, as is storage and workroom space for the library and audio-visual areas of the center (7:524-526). Ellsworth and Wagener (6:45-51), preferring to call the instructional materials center the school library, state that it should contain:

1. The card catalog
2. Reference collection
3. Circulation desk
4. Reference consultation room and/or librarian's office
5. Media specialist's office
6. An office for each additional professional staff member
7. Storage room for audio-visual equipment and materials
8. Technical process room where graphics and teaching materials are produced, including darkroom facilities
9. Teacher preparation room

10. Studio control room
11. Faculty studies room where faculty research projects can be carried out.

Local production laboratory. Materials produced locally are up-to-date, flexible, and allow teachers to try new teaching methods, according to Moldstad and Frye (14:48).

Equipment necessary in the local production laboratory will vary depending on the school's needs. Moldstad and Frye (14:49) list this equipment needed to produce materials:

1. Air brush
2. Copy camera
3. Diazo duplicator
4. Lettering equipment
5. Dry mount press
6. Materials storage
7. Light table
8. Paper cutter
9. Sink
10. Spirit duplicator
11. Mimeograph duplicator
12. 35mm copy stand
13. Worktable.

The darkroom, besides serving the needs of school publications such as the annual and school paper, will also serve the instructional materials center. In the darkroom, essential equipment required will include an enlarger, trays, sink, and print washer (14:48). Ellsworth and Wagener list similar equipment but emphasize the fact that, " . . . facilities will depend on the variety of materials that will

be produced (6:48).

The following criteria should be considered when planning the darkroom: "1. anticipated work output; 2. number of people who will be working in the space; 3. major equipment to be installed; 4. the space available; 5. physical flow of work through area" (3:2). A room six feet by eight feet is usually considered minimum size for any professional darkroom. This size would increase if other operations such as teaching photography were carried out (3:4). A film loading room helps " . . . to reduce darkroom traffic and keep unused films apart from those ready to be developed" (3:3).

Evening and weekend library hours. According to Ellsworth and Wagener, the library, as the instructional materials center, is seen as a place which should be open during evenings as well as weekends (6:20). He later states that "the library should be in the geographic center of the building . . . " and " . . . also located where it can be open while the rest of the building is closed, such as in the evening or weekends" (6:84). Mitchell is in agreement with Ellsworth and Wagener on opening the school library for students on evenings and weekends. He states that this has

been requested by many public libraries (13:45).

Mitchell also states that teachers requiring more individual assignments from students tax already limited materials in our libraries. He goes on to say that this is causing an increase in theft and mutilation of library materials (13:46). "A change of attitude will take place in the library," say Ellsworth and Wagener, "if the right conditions exist" (6:74). If access to the library is easy and convenient, can satisfy the students' needs, and is administered so as to win his pride and respect " . . . behavior problems as such will fade" (6:74).

Flexibility. Flexible arrangement in the instructional materials center is necessary, according to De Bernardis " . . . so space may be rearranged to meet the changing functions of the center and make multiple uses of space" (4:12) Doms and Rovelstad say that, "No building, however wisely laid out today, will remain unchanged twenty-five years hence" (5:34). Increased reliance on audio-visual equipment has helped to provide flexibility of time and space in the high school (15:9). If space components are movable, only then do we have flexibility (16:36).

CHAPTER III

DEVELOPMENT OF THE INSTRUCTIONAL MATERIALS CENTER FOR ENUMCLAW SENIOR HIGH SCHOOL

Enumclaw Senior High School is located in Enumclaw, Washington and was built in two stages; the first in 1961 and the second in 1963.

BACKGROUND INFORMATION ON ENUMCLAW SENIOR HIGH SCHOOL

The school, now serving 650 students in grades ten through twelve, has averaged a growth of about fifty students per year over the past three years.

The library, located in the administrative unit of the high school, uses 2,430 square feet of floor space, including the librarian's office and workroom, and the periodical and textbook storage.

With the exception of eight individual study carrels within it, the library is traditional in nature.

As can be seen in Figure 1, the administrative area, including the counselors' offices and nurse's room, located on the northwest side of the building, uses 2,362.5 square feet of floor space. The library is located on the southeast

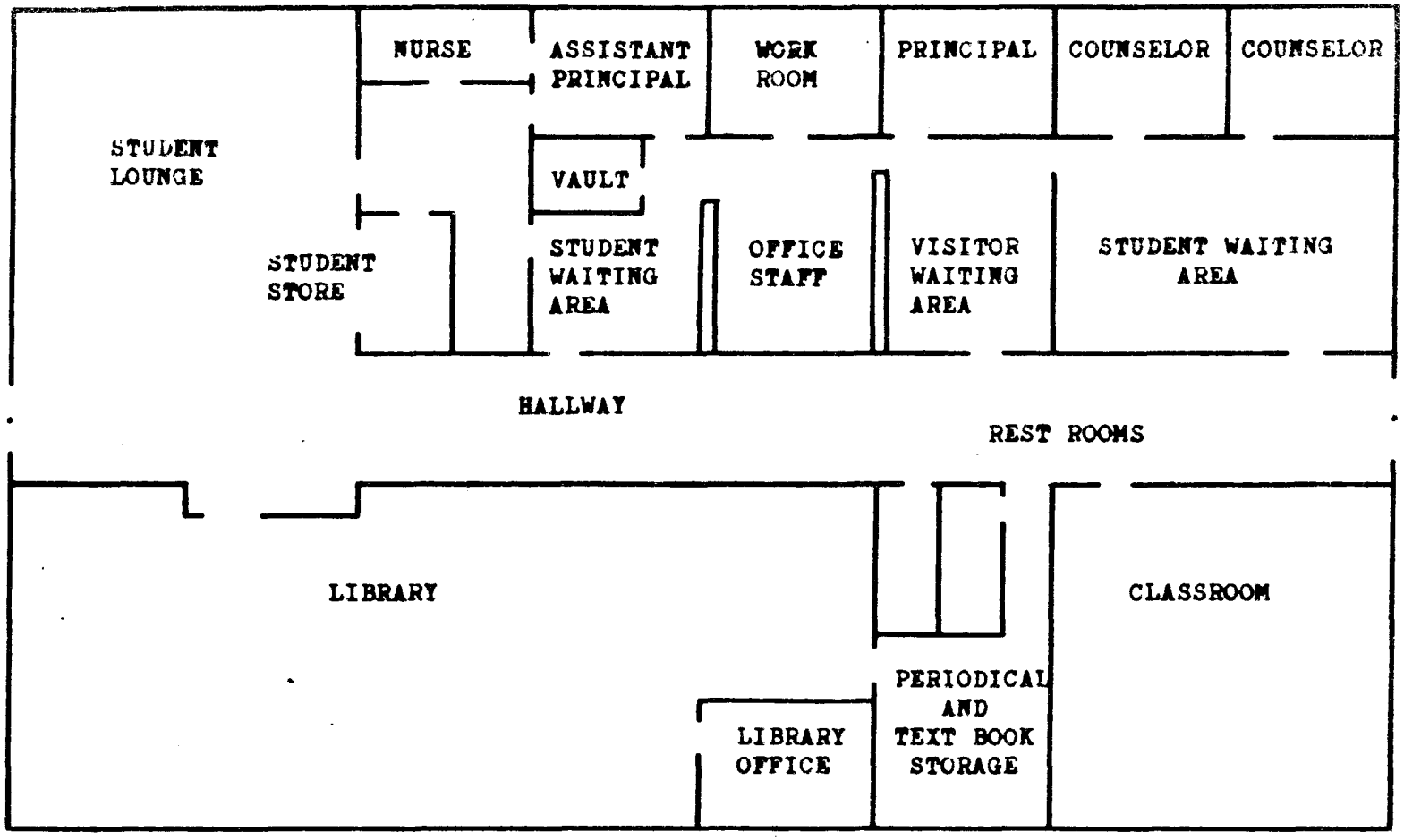

FIGURE 1

ENUMCLAW SENIOR HIGH SCHOOL ADMINISTRATION
BUILDING SHOWING SPACE UTILIZATION
AS OF JUNE 1964

side of the building, leaving a 900 square foot area to the north and a 1,350 square foot area on the southwest corner.

The area which can be used for expansion of the library into an instructional materials center involves 2,250 square feet of floor space. The total area used by the instructional materials center would be 4,770 square feet, a total which is below that recommended.

Ellsworth and Wagener state that the school library should seat 30 per cent of its enrollment and that each reader needs twenty-five square feet of space (6:50). Using this guideline with the school's 650 students, the findings are that 195 students should be able to use the library at any one time. The space requirements for 195 students are 4,875 square feet exclusive of storage space. Taking into consideration the expanding student body of fifty students each year, the instructional materials center must expand 375 square feet each year.

The Improved Instructional Materials Center

The expansion of the library into the instructional materials center will involve both students and teachers. The students will have access to not only books, but a host of other materials. They will be able to listen to tapes and

records, record tapes, view films and filmstrips, prepare graphics for class presentation, become involved in small group discussion, and study individually without danger of interference. The teachers will also have access to the complete instructional materials center. Here they will preview and prepare teaching materials and use the small group rooms for group planning and teaching.

In Figure 2, the administration area of the building remains unchanged except for the nurse's area and the student store. The nurse's room has been moved to the former office of the assistant principal and the assistant principal has been moved to the former workroom. The student store has been absorbed into the student waiting area of the office. The student lounge has incorporated into it individual study carrels and small group rooms. The rooms, eight feet by ten feet and ten feet by fifteen feet, can be used for listening, recording, or viewing, as well as for small group discussion. The remainder of the area has individual study carrels and a few pieces of lounge furniture for relaxed reading. The classroom on the northeast end of the building is now the local production laboratory where all graphic work is done. The darkroom is located in a room adjoining the local

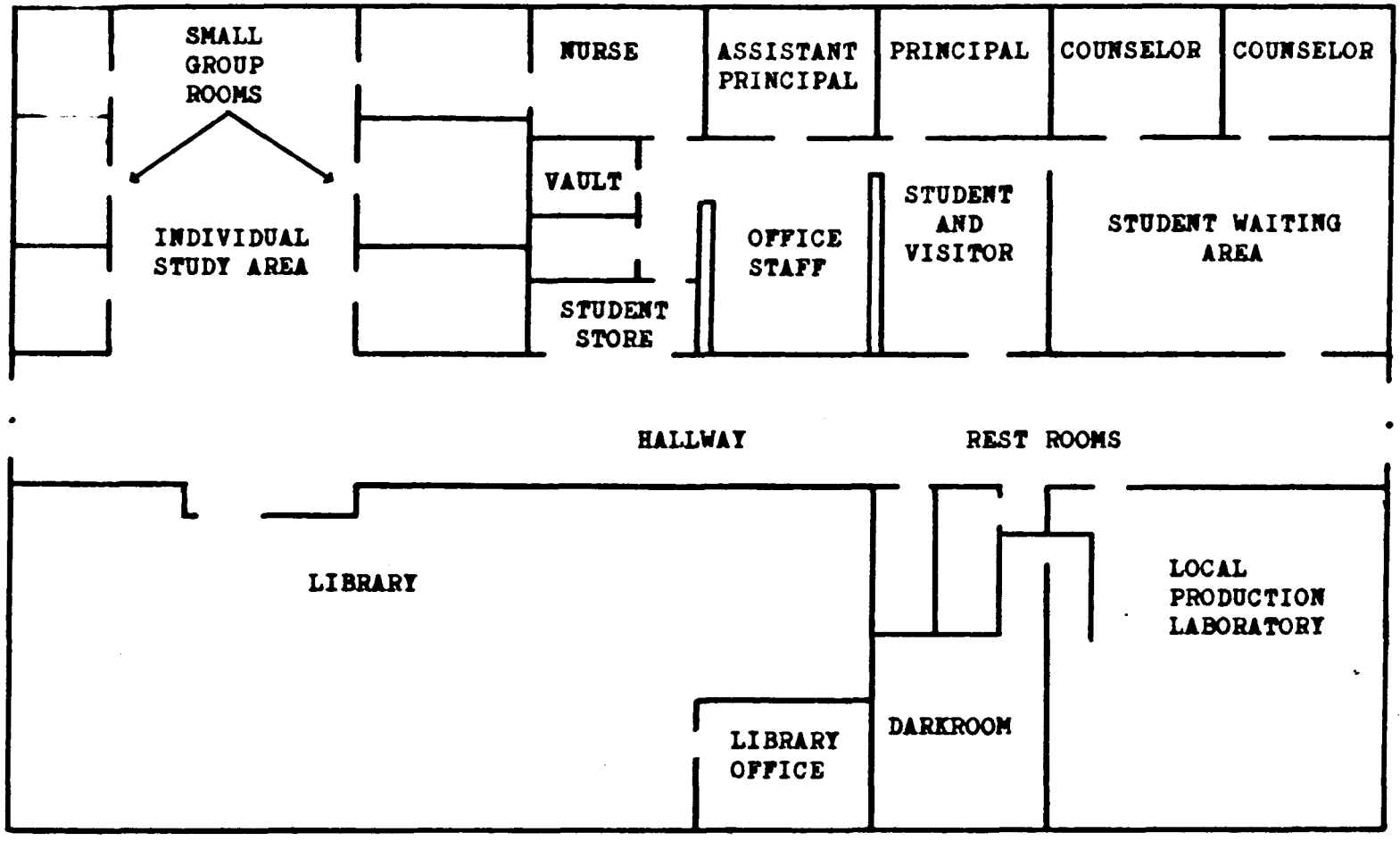

FIGURE 2

ENUMCLAW SENIOR HIGH SCHOOL ADMINISTRATION
BUILDING SHOWING THE COMPLETE
INSTRUCTIONAL MATERIALS
CENTER

production laboratory where periodicals and textbooks were formerly stored. The textbooks have been moved to another building and the periodicals have been moved into the main part of the library. The darkroom, fifteen feet by eighteen feet, is large enough to be used for teaching photography as well as for producing teaching materials and serving the needs of school publications. The library has within it an area large enough to seat a class for instruction on the use of the library. It also contains a number of individual study carrels.

The center could be expanded by adding a thirty foot by twenty foot extension to the west of the area used for small group rooms and individual study carrels. Similarly, the local production laboratory can be expanded by adding a twenty foot by thirty foot extension to the north.

Operation of the Plan

The new instructional materials center can be developed over a period of time, thus allowing teachers and students to adjust to the use of these facilities. A program of in-service training will need to be set up to acquaint teachers of their role in the use of individual and group study in their programs. Trump and Baynham, in their studies,

indicated a need for in-service training for teachers when they commented that teachers and students tended to act the same as they did in large classes when they were in fact in small group classes (23:25).

Phase I. During the first year the local production laboratory, Figure 2, page 20, would be developed with the exception of the darkroom. The existing individual study carrels would continue to be used and the small room near the student store, Figure 1, page 17, would be used for small group study. Equipment for the local production laboratory during the first year would include an infrared copy machine capable of making spirit duplicator masters, one spirit duplicator, one mimeograph duplicator, one dry mount press, one lettering set, one filmstrip previewer, one paper cutter, and material necessary to operate the equipment. A program of in-service training would introduce the teachers to the concept of small group and individual study.

Phase II. The small group rooms, eight by ten feet, Figure 2, page 20, located in the southwest corner, would be added during the second year along with individual study carrels for the adjoining area. The darkroom, Figure 2,

page 20, would be developed at this time. The small group rooms would be equipped with a conference table and chairs as well as a shelf or compartment for books. Some of the individual study carrels would be equipped with facilities for listening. The darkroom, for the present, would use existing equipment from the smaller darkroom located in another building. This equipment would include one enlarger, one print dryer, one print washer, assorted trays, one paper cutter, two 4"x5" press cameras, two 2¼"x2¼" twin lens reflex cameras, three electronic flash units, and various accessories. The in-service program for teachers would continue.

Phase III. By the beginning of the third year, the three larger small group rooms, Figure 2, page 20, would be completed on the southwest side of the building. These rooms, ten by fifteen feet in size, would be equipped with a conference table and chairs with shelf or compartment space for books. The student store, moved from its former location, Figure 1, page 17, to the new location, Figure 2, page 20, would continue in operation. The nurse would move to an office with a sink, formerly used by the vice principal. The vice principal would be located in the former workroom,

Figure 2, page 20. The local production center would add diazo printing equipment, a light table, and lettering equipment. The darkroom would add an enlarger with variable condensors for use with all sizes of film. The library would add individual study carrels.

Phase IV. Plans for expansion developed over the past three years according to projected growth can be put into effect. The area twenty by thirty feet to the west of the small group rooms, Figure 2, page 20, and the same size area to the north of the local production laboratory could be planned into useful facilities.

Consideration of the cost. In the development of the instructional materials center cost was not considered as a factor. Reliable estimates can be obtained through building consultants or architectural services. The plan, when fully developed, would be functional for the next twenty to twenty-five years or more with complete flexibility. If costs are spread out over this period of time the expense is relatively low for educational improvement for the teacher and learner.

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