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## A Study of the Benefits Received and the Problems Encountered by Students Using the Student Audiovisual Production Laboratory at Central Washington State College

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A STUDY OF THE BENEFITS RECEIVED  
AND THE PROBLEMS ENCOUNTERED  
BY STUDENTS USING  
THE STUDENT AUDIOVISUAL PRODUCTION LABORATORY  
AT CENTRAL WASHINGTON STATE COLLEGE



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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  
Otis R. Hollar  
May, 1968

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OF THE BUREAU OF LAND MANAGEMENT  
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## CHAPTER I

### STATEMENT OF PROBLEM AND JUSTIFICATION

The problem for this thesis was conceived while working in the production services laboratory located in the Bouillon Library at Central Washington State College. It became evident that there was needed a record of student use of the facility and of the benefits and problems encountered by the student in the production of materials in the Student Production Laboratory.

Although the facility is well managed and operated, there has never been a study of the utilization of the facility and student opinions as to the benefits and problems encountered in the use of the production laboratory.

#### I. JUSTIFICATION

The student production laboratory is located in the southeast corner of the college library on the second floor. According to William D. Schmidt, Director of the Central Washington State College Production Facilities:

The purpose of this facility is to provide students with the necessary materials and equipment to produce instructional materials for class projects, demonstrations, or reports. Here they can produce transparencies for the overhead projector; make charts, posters, and bulletin board materials; do lettering; reproduce materials on a spirit duplicator; and perform numerous other production tasks (25:806).

The Student Production Laboratory contains 462 square feet (25:805) of floor space, and has been observed to be extremely crowded at times. During rush periods, students have been observed waiting to use a particular piece of equipment. This raises the question, "Is the Student Production Laboratory fulfilling the established purposes and meeting the needs of the students?"

The development of a systematic program to facilitate the local production of instructional media is a relatively recent innovation (14:3). However, according to Schmidt (25:805), Central Washington State College has had an instructional materials center with a production facility for more than six years. During this period the size of the student production facilities expanded twice. It moved to its present location from a small room of approximately 100 square feet after originating as a counter-top operation. Prior to this investigation no study has been made of the utilization of the student laboratory. It is impossible to determine if the utilization of the facility has increased in proportion to the college enrollment.

## II. THE PROBLEM

The purpose of this study is to investigate the Student Production Services provided by the Audiovisual Library to the students of Central Washington State College, with a view toward determining the benefits received and the problems

encountered by the students in producing instructional media required for their college activities. The hypothesis of the study is as follows: Students using the Student Audio-visual Production Laboratory at Central Washington State College are not experiencing any major difficulties in producing the materials to meet their needs.

### III. SCOPE

The study will investigate the service provided by the student production facility located in Bouillon Library. The scope of the study will be limited to identifying the benefits to the student and the areas of difficulty encountered.

### IV. DEFINITION OF TERMS

Hardware. The term "hardware" was interpreted as meaning the electronic and mechanical equipment used with the production, projection or presentation of audiovisual materials.

Software. The term "software" shall be interpreted as, the programs, materials or routines prepared for use in the audiovisual electronic or mechanical equipment supplied either by manufacturers or made locally.

Student Production. Throughout the report of this investigation, the term "student production" shall be interpreted as meaning, the composing of audiovisual materials by students for class projects to include transparencies,

charts, bulletin board materials, lettering and spirit duplicator reproduction. For the purposes of this study it does not include television or movie production.

Transparency. The term "Transparency" shall be interpreted as, "Transparent materials for projection, generally of a size larger than 2- by 2-inch or 3 1/4- by 4-inch slides. Transparencies today are usually 7 by 7 inches or 10 by 10 inches in working-area dimensions (5:570)."

## CHAPTER II

### REVIEW OF RELATED LITERATURE

Since the number of books and publications available on student production is limited, the primary emphasis has been placed on local production. The review of related literature consists of examining literature in three areas-- Audiovisual Materials, Local Audiovisual Production, and Student Audiovisual Production.

#### I. AUDIOVISUAL MATERIALS

The abundance and increased use of audiovisual instructional materials by educators has been brought about for many reasons. Problems created by increased enrollments at every educational level, mounting shortages of qualified teachers, insufficient and inadequate school plants are but a few of the problem areas.

In 1959 President Eisenhower's National Science Advisory Committee stressed the need for all types of instructional materials in its report, Education for the Age of Science. They expressed it this way: "Finally, and perhaps most urgently, we must devote very substantial resources to developing and supplying teachers with far more adequate and up-to-date teaching and learning aids of all kinds (13:1)."

Caroline J. Locke placed the reasons for the increased emphasis on instructional materials into three categories:

Three powerful motivations have caused the spurt of new educational products. Most important are changes in curriculum and methods. New schemes of learning and

new stress on enriched, precise content have caused a demand for new books, films and filmstrips. Secondly, mechanical improvements and electronic equipment have simplified existing hardware and made possible new pieces. Many publishing companies and equipment producers have been acquired by larger corporations, giving them new working capital. Finally, large increases in federal funds have multiplied the purchasing power of school districts (21:58).

The federal government has continued to increase its support of instructional media programs and innovations. The government has introduced faculty members to newer media, assisted instruction in computer sciences, aided schools in leadership development, experimented with systems approach to instruction, and developed language laboratories by Legislative Authority of the Higher Education Act of 1965 (Public Law 89-329) (1:1044).

Now that educational institutions are receiving greater quantities of improved instructional materials, questions that might be considered are "How effective are the instructional materials and will they be used properly?" In answer to the effectiveness problem, several studies have been made.

Chance (1961) used 200 transparencies and 800 overlays in teaching engineering descriptive geometry to freshmen engineering students, 104 of whom were divided between this method and the usual instruction with the chalkboard. The transparency group did significantly better at the end of the course than the chalkboard group. Moreover, it was determined that approximately 15 minutes of each 60 minute class lecture could be saved by the transparency medium. As indicated by the total number of questions, attentiveness was greater in the experimental group. Both instructors and students preferred this method (30:145).

In answer to the question of proper use of instructional media, A. R. Ayers in 1967 pointed out this is truly a problem.

Congressional recognition of the need for persons expert in the theory and practice of using this equipment in undergraduate instruction is in Title VI--B of the Act, (Higher Education Act of 1965) which provided \$2.5 million last year to strengthen faculty personnel in the use of educational media. In spite of this help, educators are still having trouble finding enough faculty members with the necessary skill to use this equipment in undergraduate instruction (1:1045).

C. J. Locke discussed today's materials and equipment in view of the advantages of local production over commercially prepared instructional materials and established a basis for proper utilization of materials in his following statement:

If your school develops sound curriculum goals and the guides to implement them, and if teachers adapt materials to their own program instead of letting the materials dictate their procedure, you have nothing to fear about materials in the future (21:58).

Leonard W. Ingraham (29:30) talked about the need for good materials and said 70 percent of our population now lives in urban areas. By 1980 this figure will increase another 10 percent. Therefore, our educators need to show realistic audiovisual materials based on various ethnic and cultural groups which make up the American social structure. He goes further saying, "Many gaps exist in the available instructional materials ... role of the negro, the Puerto Rican, the Mexican, and American Indian."

Kemp (17:ix) felt as increased recognition is given to audiovisual materials and as more suitable facilities are provided for their use, we will see increased dependence on various media to serve many instructional purposes--not as enrichment devices to be used if time permits, but rather as carefully planned and integrated parts of the teaching-learning environment.

## II. LOCAL AUDIOVISUAL PRODUCTION

To enhance this teaching-learning environment to the fullest, Gehrke (15:360) stated audiovisual materials must be available at the teaching time or they will not be used. The need is for resources that are readily available. This applies both for the teacher and for the student. The materials must be available for the teacher to use at the time when the students are ready for that particular concept to be depicted through a selected media. The materials must be ready on-the-spot, even if the teacher must develop and produce the item personally in a local production laboratory or through a systematic program of professional help in a local production facility.

Local production of instructional materials as we think of them today, stated Faris and Moldstad (14:3), is a relatively recent innovation. There are certain in-

herent values in the materials produced that make for more effective communication, as well as values that accrue for the person producing the materials. Faris and Moldstad, of Indiana University, discussed some of the values inherent in the materials produced locally. They wrote:

First, the material produced can be up-to-the minute. There is always a considerable time lag between the time when an event happens or a new instructional method is introduced and when related commercial instructional materials become available to teachers. ...

Second, such materials provide functional flexibility for the teacher and the students. For example, a diagram of the human digestive system might be photographed from a reference book. A large photographic print might be made from the photographic negative for use by a general science teacher appearing on television. A number of smaller photographic prints might be made to be included with the lesson outline sent to other classroom teachers who would be conducting the follow-up discussion related to the instruction received via television.

Third, local production makes it possible to put the visual content in a form or medium which best suits existing physical and environmental conditions.

Fourth, and perhaps most important, materials can be produced which meet the specific local needs of both teachers and students (14:3).

Faris and Moldstad continued the discussion of values of personally prepared instructional materials. The teacher often attains a new high in efficient teaching by personally producing needed materials. As one creates a teaching device, he is forced to evaluate the content of his presentation.

Since the creator is using his own time and energy he has no one to blame but himself if his message is not communicated. He quickly begins to evaluate the points in his message. He decides which points need cues other than those normally given orally, investigates the advantages and limitations of each of the many audiovisual media, and proceeds to consider carefully the characteristics and needs of his intended audience. Those teachers who have experienced the satisfaction of creating a worthwhile instructional aid tend to take pride in using it well. Where locally prepared visuals have been used as part of the presentation, there seems to be greater inclination on the part of instructors for self-evaluation and the solicitation of student evaluations (14:3).

In interviewing 56 classroom teachers and 13 television teachers at 20 different schools, Faris and Moldstad found both formal courses and personal assistance by an audiovisual specialist seem to be important elements in motivating teachers to produce and use locally produced visual instructional materials (14:9). Similarly, Dr. W. L. Colville (23:28), from the University of Nebraska, felt teachers must be able to develop their own teaching materials in order to surmount "the problems of limited time and mobility in college classes by using locally produced AV materials."

Teachers must be able to develop their own creative ideas dependent upon their particular teaching approaches, talents, students and subject areas. To do this completely they must have a production service that can design visuals to meet their lesson planning needs. Too often a classroom teacher attempts to tailor his teaching methods, his lesson plans, and his subject matter to existent materials (26:356).

According to Shea (26:356), many companies are making good visuals; however, they will never be able to keep up with the unique visuals that teachers require in their classrooms. Teachers should use their time for planning, teaching and evaluating, but should not be required to spend their preparation time laboriously sketching out their ideas and attempting to produce professional visuals for their classroom presentation. Some teachers will have some artistic ability to produce quality visuals, however many teachers are limited to stencils and felt markers. Few teachers have access to good cameras or equipment to make overhead transparencies unless they happen to be in a school system that has a systematic local production program which has a service geared to the needs of the classroom and the student.

An example of a systematic local production facility is available at Napa Valley Unified District in Napa, California. The district has had 75 in-service meetings

since 1963, including workshops and demonstrations dealing with the basic skills of production as they relate to the overhead projector, the tape recorder, the opaque projector, and 35mm slides (9:345). John G. Whipple developed a follow-up service idea by publishing an audiovisual news sheet designed to give teachers more practical and useful suggestions about utilization, equipment, techniques, new materials, new ideas and available services in the school system. This bulletin is produced primarily for faculty use but is beneficial for student assistants in the production facility (9:345).

### III. STUDENT AUDIOVISUAL PRODUCTION

The literature available on student audiovisual production deals mainly with the use of student assistants in the high school. Whether at high school or college level, with today's emphasis on the development of individual creativity and initiative, it seems imperative that a local production program provide students with the possibilities for designing and producing the visual instructional materials they need in solving many communication problems. In discussing the benefits of local production to students, Faris and Moldstad stated:

Obviously, many of the benefits of local production claimed for teachers would be equally valuable for those student assistants who might produce these ma-

terials for the teacher with the teacher and audiovisual communicator serving as the educational consultants (13:11).

Faris and Moldstad discussed several different studies in which students created their own visual materials-- mathematics students making more than one hundred transparencies for use in class presentations of problem solutions, for specific individual class assignments and for extra credit projects. A high school student in Powell, Wyoming, utilized the photographic knowledge she learned while in the audiovisual student assistant program to make a visual record of the progressive stages of her biology experiment. This visual documentation helped explain her experiment to classmates more clearly (14:7).

In the article, "Students Make Motion Pictures," Brooker and Herrington reported on film production in the Denver schools. This article is an account of production of motion pictures on community problems and activities by teachers and students and of the values of these activities to the students, the schools, and the community. They reported that:

... the students participating in production consistently ranked higher on the scores indicating sympathy for human welfare and concern for civil liberties than did the students not participating in motion picture production. At the same time they evidenced a greater degree of consistency in their opinions (3:23).

The students also expressed the opinion that units

in which they produced motion pictures differed from other units most in such things as: the spirit of cooperation, the opportunity for self expression, the opportunities for initiative and the freedom from teacher domination (3:24).

During the course of this study, the students were asked to note any changes they were aware of in their own personal habits as a result of motion picture production. Eighty-eight out of 135 students that answered listed such things as "changes of work and health habits," "attempting to buy more intelligently," "assumption of more responsibility," and "more critical analytical attitude toward movies." Other students that answered this question listed such values as "I am more particular in getting authority for my information," and "I work more independently and rely upon myself more than I did." These indications of behavioral changes fulfill the educational objectives that are the most difficult to achieve and even more difficult to measure (3:24).

The activity involved in such production is educationally worthwhile for the students, for the instructors and for the community, since it leads students and townsfolk to a better understanding of each other and of their community. In the case of Denver the production program definitely advanced the objectives of the school in terms of leading to acquisition of useful information; development of desirable attitudes; enhanced skill in critical thinking, cooperative working, and self-expression; and provision of enriched opportunities for the development of initiative and the acceptance of responsibility (3:28).

In his article "Who Will Do the Production?," Coleman (10:18) discussed how the students do the audiovisual pro-

duction in the Napa Valley Unified School District. The students created original transparencies and through these originals another valuable contribution of the students' needs was realized. "They were able to interpret and make valuable suggestions about the clarity of materials being prepared." In the Napa Valley program, selected students were given elective credit for the audiovisual training course which was offered during the summer. The areas of training included mechanical and hand lettering, dry mounting, production unit operation and capabilities, and basic layout and development of transparency originals. The student assistants gained valuable experience which contributed directly toward their general educational development. The students were given the opportunity to gain experience in meeting instructional media center problems and design-making at their level of authority. The students worked together to solve production problems. They were given ample experiences in working directly with the teachers. Because of the vocational nature of audiovisual production many students either directly or indirectly found direction for their futures (10:18-19).

Many problems may arise during the operation of an audiovisual facility. Wilde (31:425) explored some of these problems at the high school level and advised: "Do not select students to work in AVA simply because they express

a desire to do so because they are mechanically inclined. There is only one way to pick a person to help you in your program. You must pick on the basis of the student's past record of behavior and conduct. Do not leave anything to chance. Never let equipment be used on the honor system." Regardless of how well organized the production laboratory or how innovative the materials produced, the program will fall short of its educational objectives if the instructional personnel are not familiar with the use of the media provided for them.

The most crucial problem at the present time is to acquaint instructional personnel with the potential of the system and to assist them in creating "software" compatible with the facility. To encourage instructors to experiment, the Audio-Visual Center of Indiana State University prepares visuals, tapes, overhead transparencies, filmclips, and other forms of materials free of charge for the professors who use the multimedia classroom. ... At present time the work is handled by the production staff of the Audio-Visual Center (22:829)

#### IV. SUMMARY

The review of literature deals with Audiovisual Materials, Local Audiovisual Production, and Student Audiovisual Production. Audiovisual Materials are becoming more and more abundant for many reasons--curriculum and methods changes, mechanical improvements in electronic equipment, and increases in federal funds. Studies show these materials are more effective in meeting educational objectives than

the more conventional "chalkboard and lecture" method. However, the materials must be properly utilized after careful planning and integration into the teaching-learning environment. Local production of audiovisual materials has many advantages. The materials produced are up-to-the-minute, they provide functional flexibility, they are suited better to the physical and environmental conditions, and they meet the specific local needs of both the teacher and students. The teacher often attains a new high in efficient teaching as a result of the evaluation of the content of his presentation and the characteristics of his intended audience. Through local production the teacher does not have to adapt his lesson plans to the existent materials. Many of the benefits of local production apply for students as well as for teachers. Studies have shown that the student assistants in the audiovisual production facility reflected a greater behavioral change than those students who did not work in the facility.

## CHAPTER III

### THE PROCEDURE OF THE STUDY

The technique used to collect data for the study was a survey of students who used the Student Production Laboratory during a four-week period starting noon, Wednesday, April 17, 1968, through noon, Wednesday, May 15, 1968. The survey was conducted in the middle of the academic quarter to ensure a realistic utilization period. This avoided both the low utilization period at the beginning of the quarter when the number of student assignments are low and the high utilization period at the end of the quarter when students are meeting end-of-quarter deadlines.

A table, three boxes, and a clipboard were placed just inside the entrance to the Student Production Laboratory. The left box contained the two page questionnaires (Appendix A) with a cover letter (Appendix B) signed by William D. Schmidt, Acting Audiovisual Director. Each student was asked to place his name on the bottom of the cover letter (Appendix B), tear the letter from the questionnaire, place the letter in the middle box, fill out the questionnaire and place it in the box on the right. As a matter of control or system of checks, all cover letters with the students' names were placed in alphabetical order by last name and left in the middle box where student assistants could

check the name of any individual who came in and said he had filled out a questionnaire earlier in the survey period. By requiring the student to place his name on the cover letter and then remove the letter from the questionnaire his name could not be associated with his questionnaire, thereby allowing him to feel free to answer the questionnaire truthfully without any apprehension.

Each time a student entered the Student Production Laboratory to work he was asked to sign-in and sign-out. Only upon the first entrance during the survey period was each student asked to complete the survey questionnaire. After that initial entry, he was only to sign-in, perform his task, and sign-out. The sign-in board reflected the name of the student, time-in, time-out, and work performed.

Prior to starting the survey, the questionnaire was discussed with Joseph M. Barre, Acting Coordinator of Instructional Materials and Mae Morey, Library Subject Specialist. The questionnaire was explained in detail to five student assistants working in the Student Production Laboratory to ensure each understood the intent of the questionnaire and the procedures to be used during the four-week survey period. During this period, daily visits were made to the student production facility to ensure procedures were satisfactory and to pick up the completed questionnaires.

## I. QUESTIONNAIRE

Since the questionnaire (Appendix A) was intended to study the student benefits of the production laboratory and to detect any problems encountered by the students in producing instructional media for their college activities, it was constructed to reflect the reason for working in the laboratory, how the user learned of the laboratory, the frequency of use, the college class or activity that required work in the facility, the equipment used, the rating of the student assistants, areas of difficulty, rating of the overall benefits and possible improvement. The questionnaire (Appendix A) was developed and a test copy produced and tested for readability with a class of seven audiovisual students who previously had used the laboratory. The questionnaire was published in final form after making minor changes based on the comments by the test group.

## II. ANALYSIS

The analysis of data was done primarily through a count of the number of times each response to a question was selected and percentages calculated. Only three items, numbers 3, 10, and 14, lend themselves to any degree of statistical analysis. Each student was to indicate his

class membership on the questionnaire thereby allowing for tabulation and analysis by classes on these three items.

## CHAPTER IV

### REPORT OF DATA

This chapter consists of the hours of operation of the Student Production Laboratory, the utilization, the number of students by class filling out the questionnaire and the results of the questionnaire. The results of the questionnaire are reported for each item with the percentage of responses of those students answering the particular item.

During the period of the survey the Student Production Laboratory hours of operation were:

Sunday		2:00-5:00	
Monday			
Wednesday	8:00-12:00	1:00-3:00	
Friday			
Tuesday	8:00-12:00	1:00-5:00	7:00-9:00
Thursday			

There were 41 hours of operation per week, a total of 164 hours, during the four week survey. Two hundred and twenty questionnaires were turned in and 288 students signed in on the sign-in sign-out roster. Therefore, on the average, approximately two students used the facility per hour. The following is a listing by class of the number of students filling out questionnaires:

Freshman Class	17
Sophomore Class	14
Junior Class	78
Senior Class	83
Graduate Students	6
Unknown	<u>22</u>
Total	220

Following is a tabulation of student responses for each question by percentage with the percentages listed in a descending order for each item.

1. Why did you come to the Student Audiovisual Production Laboratory?

- 31% teacher required work in the facility
- 28% project required by teacher but my decision to work in the facility
- 25% student originated project for a college course
- 8% student originated project for an extra-curricular activity
- 8% other

The eight percent listed under "other" were largely personal projects, some of which related to college activities.

2. How did you learn of the Student Production facility?

- 53% through a college class (no. and name)
- 26% through talking with other students
- 8% just found it in the library
- 6% through talking with teachers out of class
- 7% other (explain)

Forty-two percent of the students who learned of the facility through a college class learned of it in

either:

Art 290 Photography  
 Ed 314 Curriculum; Methods and Materials  
 Ed 307 Introduction to Education

Of the seven percent that marked "other," the students learned of the facility through student wives, student assistants in the Production Laboratory, "Frosh Week," or working for the college administrative staff.

3. How often do you use the Student Audiovisual facility?

52% approximately once per quarter  
 18% approximately once per month  
 13% approximately twice per month  
 13% approximately once per week  
 4% approximately twice per week  
 .5% approximately once per day.

A detailed listing of responses by class for this item is shown in Appendix C.

4. How many times have you used the facility?

There were 206 responses to this question and 775 total requests for service indicated, averaging 3.76 times per person. Therefore, on the average each student responding to the question had used the laboratory approximately four times.

5. How many times have you used the facility this quarter?

Two hundred and four students responded to this question indicating a total of 324 requests for service, averaging 1.6%. Therefore, on the average each student

had used the facility approximately twice this quarter.

6. Was the work that you did today in the audiovisual laboratory for a college class?

84% Yes  
16% No

If yes, what was the course number and name of the class?

Of all the classes listed, 43 percent of the students listed Ed 314, Curriculum, Methods and Materials, 38 percent listed Art 290, Photography, and 4 percent listed Ed 322, Teaching Reading.

7. What piece of equipment have you used most in the facility?

49% ditto machine  
20% dry mount press  
9% typewriter  
9% Thermo-Fax  
3% lettering devices  
3% opaque projector  
1% over-head projector  
5% other (list)

Listed under "other" were such items as the paper cutter, paper punch, and stapler.

8. How will the material produced today be used?

35% hand-in assignment  
27% oral presentation  
11% exhibit  
27% other (explain)

Uses of the materials listed under "other" were:

Class hand-out 41% of the 27% making this selection  
Personal business letter  
Campus activity

9. How did you learn to perform the operation or produce the material that you produced?

48% supervisory help in the Student Audiovisual Production facility  
 14% college class (no. and name)  
 12% self-instruction  
 6% friend  
 20% other (explain)

College classes where students learned to perform the operation were:

Art 290 Photography  
 Ed 316 Instructional Aids: Utilization  
 Ed 314 Curriculum, Methods and Materials  
 Ed 450 Instructional Aids: Production

Listed under "other" most frequently were Student Teaching, high school office machines, then campus work, military, and art major.

10. Were the student assistants helpful in giving technical advice and assistance?

In a rating from 1 through 4, with 1 being the poor rating and 4 the good rating, the following were the results:

76.0% 4  
 22.0% 3  
 1.5% 2  
 0.0% 1

Only 1.5 percent rated the student assistants below average, while 76 percent gave them the highest possible rating. For a detailed listing of responses by class, for this item refer to Appendix D.

11. Has there been enough table top working space for you to complete your projects without waiting for someone else?

79% Yes  
21% No

12. Have you found the facility to be large enough for you to readily move around, produce the needed materials and project them or test them if needed?

73% Yes  
27% No

13. What difficulties have you encountered in producing the items you needed?

25% unanswered (did not answer the question)  
18% other (wrote in "none")  
15% the number of operating hours is insufficient  
13% not enough equipment for the number of people in the laboratory  
12% other (most of these dealt with "longer hours in the evening")  
8% equipment malfunction (list equipment)  
3% not the right kind of equipment (list equipment needed)  
2% inadequate supply of materials for the project  
1% not the right kinds of materials available (list needed materials)

The malfunctioning pieces of equipment listed in descending order of frequency were:

Ditto  
Primary typewriter  
Typewriter  
Paper cutter needs sharpening

Items of equipment needed were:

Mimeograph  
More presses  
Copying wall to use with the opaque projector

Materials needed were:

Black paper  
Plastic Spray Coating

If the percentage for the unanswered group and the percentage for those answering "other" (wrote in "none") are added together, it is possible that 43 percent of the students were indicating "no difficulties."

14. In considering the over-all benefits or value of the Student Production facilities, how would you rate the services rendered?

In rating from 1 through 4 with 4 being the good rating, the following is the percentage of responses for each rating.

55%	4
40%	3
5%	2
0%	1

Of all the responses to this question, 95 percent rated the over-all benefits of the facility above average. Appendix D contains a detailed listing of responses by class for this item.

15. The Student Production facilities:

39%	should be increased
25%	space should be expanded
25%	hours of operation should be expanded
11%	should remain as they are
0%	should be decreased

If the first two responses were added together,

almost two-thirds, or 64 percent of the students agreed that the facilities should be increased and space expanded.

16. Have you used the Curriculum Laboratory?

75% Yes  
25% No

If yes, do you think it would be better to have an integrated Student Audiovisual and Curriculum Laboratory?

52% No  
48% Yes

## CHAPTER V

### DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This chapter consists of a discussion of the findings, conclusions and recommendations. The key findings of the questionnaire and their impact on the study are discussed first.

#### I. DISCUSSION

The results of the questionnaire indicated most of the work done in the production laboratory was done to meet requirements of a college class. More than one-half of the work done was required by a teacher, and over three-quarters of the work was for academic purposes. The students learned of the production laboratory primarily through college classes.

According to item three of the questionnaire, 96 percent of all visitations were made either once per quarter or the mid-measure of the next three categories--twice per month. There were approximately three times more responses for "once per quarter" than the next higher usage response--once per month. This perhaps reflected that most teachers give quarterly assignments. However, according to item five of the questionnaire, each student on the average had used the facility twice this quarter.

According to item seven of the questionnaire, almost 50 percent of the requests for service were for ditto work. This probably explains why the ditto machine was listed most frequently for equipment malfunction in item number thirteen.

In questionnaire item ten the students were asked to rate the human element of the laboratory, the student assistants, as opposed to item fourteen where the students' rating was aimed at the Student Production Laboratory. Both ratings were outstanding with 98 percent of the students rating the student assistants above average and more than half of the students giving the highest possible rating for the over-all benefits.

Due to the make up of the questionnaire, the response "none" was not a possible answer for item thirteen, which dealt with difficulties encountered. This possibly explains the high percentage of unanswered responses to this item. If it is assumed that all students who did not answer this item had no difficulties and add the responses of students who marked "none," almost one-half of the students using the laboratory had no difficulties in producing the needed materials.

The questionnaire responses, in two places, indicated a need for additional space. Students responding to item thirteen expressed a desire for a mimeograph machine, more

presses and a blank wall for copying pictures with the opaque projector. Almost two-thirds of the students responding to item fifteen agreed the facilities should be increased and expanded

## II. CONCLUSIONS

Only a few students who used the Student Production Laboratory during the survey period experienced any difficulties. Most students experienced little difficulty in the actual production of materials. The hypothesis of the study is true: Students using the Student Audio-visual Production Laboratory at Central Washington State College are not experiencing any major difficulties in producing the materials to meet their needs.

## III. RECOMMENDATIONS

As a result of this study two recommendations are made:

1. The space for the Student Production Laboratory should be expanded.
2. The Student Production Laboratory should maintain its present high standards, in view of the statement:

Our attention and efforts must be focused on the improvement of college teaching in the teacher's college especially, for it must be a showplace. It must have the latest equipment,

the best of all possible materials, the best instructors in all areas, well-grounded in subject matter as well as in method; for here is where we mold the future of the teachers of the United States (28:18).

BIBLIOGRAPHY

## BIBLIOGRAPHY

1. Ayers, A. R. "Educational Media in Colleges and Universities: Title VII-B, The Higher Education Act of 1965," Audiovisual Instruction, 12:1044-5, December, 1967.
2. Berlo, David K. "You Are In The People Business," Audiovisual Instruction, 8:372-81, June, 1963.
3. Brooker, Floyd E. and Eugene H. Herrington. Students Make Motion Pictures, A Report on Film Production in the Denver Schools. American Council on Education Studies Series II-Motion Picture in Education-No. 7, Vol. V, Washington, D.C., May, 1941.
4. Brown, James W. and Kenneth D. Norberg. Administering Educational Media. New York: McGraw-Hill Book Company, 1965.
5. Brown, James W., Richard B. Lewis, and Fred F. Harclerod. A-V Instruction: Materials and Methods. Second Edition. New York: McGraw-Hill Book Company, 1964.
6. Chance, Clayton W. "Experimentation in the Adaptation of the Overhead Projector Utilizing 200 Transparencies and 800 Overlays in Teaching Engineering Descriptive Geometry Curricula," (Abstract). Audiovisual Communication Review, 9:A17-A18, July-August, 1961.
7. Clark, Ella C. "Put Educational Media to Work In Your School," American School Board Journal, 151:32-3, October, 1965.
8. Cobun, Tee C. "How to Train Students to Operate A.V. Equipment," Nations Schools, 75:84, March, 1965.
9. Coleman, Larry. "Local Production In-Service Training: One Approach," Audiovisual Instruction, 13:345-7, April, 1968.
10. Coleman, Larry. "Who Will Do the Production?" Napa Valley Unified School District, Napa, California. Educational Screen and Audiovisual Guide, 46:18-19, March, 1967.

11. Erickson, Carlton W. Administering Audio-Visual Service. New York: Macmillan, 1959.
12. Erickson, Carlton W. Fundamentals of Teaching with Audiovisual Technology. New York: Macmillan, 1965.
13. Faris, Gene, and John Moldstad assisted by Harvey Frye. Improving the Learning Environment. United States Department of Health, Education, and Welfare. Office of Education. Washington, D.C.: United States Government Printing Office, 1963.
14. Faris, K. G. and J. A. Moldstad. "Organizing a Program for Creating Instructional Materials," Bulletin of School of Education-Indiana University, 42:1-49, May, 1966.
15. Gehrke, Maurice N. "Starting a Graphic Service in an Instructional Materials Center," Audiovisual Instruction, 13:360-3, April, 1968.
16. Guimarin, Spencer and Ernest F. Tieman. Local Production Techniques. Visual Instruction Bureau, Division of Extension, The University of Texas.
17. Kemp, Jerrold E. Planning and Producing Audiovisual Materials. San Francisco: Chandler Publishing Company, 1963.
18. Kemp, Jerrold E. "Where Do You Begin?" Educational Screen and Audiovisual Guide, 47:27-9, January 1968.
19. Kinder, James S. Audio-Visual Materials and Techniques. Second Edition. New York: American Book Company, 1959.
20. Knight Robert. "Training Students In A-V Operations," Educational Screen and Audiovisual Guide, 36:422-4, September, 1957.
21. Locke, C. J. "Today's Materials and Equipment," Instructor, 76:58, October, 1966.
22. McDougal, Russell and James J. Thompson. "The Multi-media Classroom: Planning and Operation," Audiovisual Instruction, 12:827-9, October, 1967.

23. McGill, David P. "Nebraska's Grow Your Own AV Pattern," Educational Screen and Audiovisual Guide, 46:28-9, November, 1967.
24. Palmer, R. J. "Problem in Search of a Solution; Why AV Programs Get Started," Educational Screen and Audiovisual Guide, 46:15, December, 1967.
25. Schmidt, William D. "IMS Production Facilities-- Central Washington State College," Audiovisual Instruction, 12:805-7, October, 1967.
26. Shea, Elizabeth A. "The Graphic Arts Center in a Public School System," Audiovisual Instructor, 13:356-9, April, 1968.
27. Smith, Richard E. The Overhead System Production Implementation and Utilization. Visual Instruction Bureau, Division of Extension, The University of Texas.
28. Solomon. A. E. "Teachers Need to Know How," Educational Screen and Audiovisual Guide, 45:18-19, July, 1966.
29. VanHorn, H. A. "Educators Talk About Materials," Audiovisual Instruction, 12:44, January, 1967.
30. Wendt, Paul R. and Gordon K. Butts. "Audiovisual Materials," Review of Educational Research, 32:141-55, April, 1962.
31. Wilde, Sim. "A-V Aches, or Seven Ways Not to Run an A-V Program," Educational Screen and Audiovisual Guide, 36:425, 441, September, 1957.
32. Wyman, Ray. "Planning a Production Center," Instructor, 76:128-9, January, 1967.

APPENDIX A  
QUESTIONNAIRE

## APPENDIX A

## QUESTIONNAIRE

Circle the letter in front of your choices or fill in the needed information.

You may select more than one answer for each question if necessary.

Please indicate your year in college. Fr Soph Jr Sr Grad

1. Why did you come to the Student Audiovisual Production Laboratory?
  - A. teacher required work in the facility
  - B. project required by teacher but my decision to work in the facility
  - C. student originated project for a college course
  - D. student originated project for an extra-curricular activity
  - E. other (explain) \_\_\_\_\_
  
2. How did you learn of the Student Production facility?
  - A. through a college class (no. and name) \_\_\_\_\_
  - B. through talking with other students
  - C. through talking with teachers out of class
  - D. just found it in the library
  - E. other (explain) \_\_\_\_\_
  
3. How often do you use the Student Audiovisual facility?
  - A. approximately once per day
  - B. approximately twice per week
  - C. approximately once per week
  - D. approximately twice per month
  - E. approximately once per month
  - F. approximately once per quarter
  
4. How many times have you used the facility? \_\_\_\_\_
  
5. How many times have you used the facility this quarter?  
\_\_\_\_\_

6. Was the work that you did today in the audiovisual laboratory, for a college class?

- A. Yes
- B. No

If yes, what was the course number and name of the class?

(no. and name) \_\_\_\_\_

7. What piece of equipment have you used most in the facility?

- A. ditto machine
- B. dry mount press
- C. lettering devices
- D. typewriter
- E. Thermo-Fax
- F. opaque projector
- G. over-head projector
- H. other (list) \_\_\_\_\_

8. How will the material produced today, be used?

- A. exhibit
- B. oral presentation
- C. hand-in assignment
- D. other (explain) \_\_\_\_\_

9. How did you learn to perform the operation or produce the material that you produced?

- A. college class (no. and name) \_\_\_\_\_
- B. self instruction
- C. supervisory help in the Student Audiovisual Production facility
- D. friend
- E. other (explain) \_\_\_\_\_

10. The student assistants are to advise only--not do the work. Were the student assistants helpful in giving technical advice and assistance? Circle the number from 1 to 4 that best indicates your rating of the student workers' assistance on your project.

(poor) 1 2 3 4 (good)

11. Has there been enough table top working space for you to complete your projects without waiting for someone else?
- A. Yes  
B. No
12. Have you found the facility to be large enough for you to readily move around, produce the needed materials and project them or test them if needed?
- A. Yes  
B. No
13. What difficulties have you encountered in producing the items you needed?
- A. equipment malfunction (list equipment) \_\_\_\_\_  
B. not enough equipment for the number of people in the laboratory  
C. not the right kind of equipment (list equipment needed) \_\_\_\_\_  
D. inadequate supply of materials for the project  
E. not the right kinds of materials available (list needed materials) \_\_\_\_\_  
F. method of paying for materials is a problem  
G. the number of operating hours is insufficient  
H. other (explain) \_\_\_\_\_
14. In considering the overall benefits or value of the Student Production facilities, how would you rate the services rendered? Circle the number from 1 to 4 that best indicates your rating of the Production Services.
- (poor) 1 2 3 4 (good)
15. The Student Production facilities
- A. should be decreased  
B. should be increased  
C. space should be expanded  
D. hours of operation should be expanded  
E. should remain as they are
16. Have you used the Curriculum Laboratory?
- A. Yes  
B. No
- If yes, do you think it would be better to have an integrated Student Audiovisual and Curriculum Laboratory?
- A. Yes  
B. No

APPENDIX B  
COVER LETTER

APPENDIX B  
COVER LETTER

Dear Student,

In an effort to determine the value and to improve the Student Audiovisual Production Laboratory, we are making a survey of the students who use the facility during a one month period. Your cooperation is solicited. Please sign in and sign out each time you use the laboratory, but you are asked to fill out a questionnaire only the first time you use the facility during this period. Please complete this questionnaire before you leave the Student Production Area.

Please fill in the information on the bottom of this page, remove it from the questionnaire and then answer the questionnaire. Place this page and the questionnaire in their respective boxes.

Thank you for your assistance in helping us improve your facility.

/s/ William D. Schmidt  
William D. Schmidt  
Acting Audiovisual Director

---

(Last Name) (First Name)

Fr Soph Jr Sr Grad

APPENDIX C  
RESPONSES TO ITEM NO. 3 BY CLASS

## APPENDIX C

## RESPONSES TO ITEM NO. 3 BY CLASS

<u>RESPONSE</u>	<u>TOTAL RESPONSES</u>	<u>PERCENT</u>	<u>FR.</u>	<u>SOPH.</u>	<u>JR.</u>	<u>SR.</u>	<u>GRAD.</u>	<u>UNKNOWN</u>
A	1	.5%	0	0	0	1	0	0
B	7	4%	1	0	1	3	0	2
C	25	13%	0	3	10	9	0	3
D	26	13%	1	2	7	13	0	3
E	35	18%	3	1	8	17	3	3
F	<u>105</u>	52%	10	5	47	29	2	9
	196							

## KEY TO RESPONSES:

- A approximately once per day
- B approximately twice per week
- C approximately once per week
- D approximately twice per month
- E approximately once per month
- F approximately once per quarter

APPENDIX D

RESPONSES TO ITEM NO. 10 AND 14 BY CLASS

## APPENDIX D

## RESPONSES TO ITEM NO. 10 BY CLASS

<u>RESPONSE</u>	<u>PERCENT</u>	<u>FR.</u>	<u>SOPH.</u>	<u>JR.</u>	<u>SR.</u>	<u>GRAD.</u>	<u>UNKNOWN</u>
(Poor)							
1	0%	0	0	0	0	0	0
2	1.5%	0	1	1	1	0	0
3	22%	4	3	19	12	1	5
4	76%	12	8	51	61	4	16
(Good)							

## RESPONSES TO ITEM NO. 14 BY CLASS

<u>RESPONSE</u>	<u>PERCENT</u>	<u>FR.</u>	<u>SOPH.</u>	<u>JR.</u>	<u>SR.</u>	<u>GRAD.</u>	<u>UNKNOWN</u>
(Poor)							
1	0%	0	0	0	0	0	0
2	5%	0	1	1	7	1	0
3	40%	9	5	31	27	1	7
4	55%	8	5	40	42	3	14
(Good)							