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Basic Characteristics of Photography Courses in Washington State High Schools

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BASIC CHARACTERISTICS OF PHOTOGRAPHY COURSES IN WASHINGTON STATE HIGH SCHOOLS

A Thesis

Presented to

the Graduate Faculty

Central Washington College of Education

In Partial Fulfillment

of the Requirements for the Degree

Master of Education

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CHAPTER I

THE PROBLEM

Photography has been taught in some of the schools of Washington for many years. During this time the course has been taught if there was an instructor available and if the superintendent was in favor of the course. By some, photography has been considered a fad, by others a frill. Little is actually known about the role photography has played in the schools of the state.

I. STATEMENT OF THE PROBLEM

The purposes of this study were (1) to determine whether photography is being taught as a high school class; (2) to determine the factors which influence the offering of such a class; and (3) to discover the characteristics of such a class when offered.

II. IMPORTANCE OF THE STUDY

To teach a class well, much thought must go into selecting the information to be presented. Since there is no printed guide or commonly accepted photography text, the materials presented in photography classes are determined to a large extent by what the instructors consider important. This study helped determine what the photography

instructors of the state consider important; it is hoped that an improved course may be developed as a result of these findings.

III. DEFINITION OF KEY CONCEPTS

Photography course. To avoid misunderstanding, the term "photography course" was defined as a course meeting daily for at least one semester to study photography.

Laboratory work. For the purposes of this study the term "laboratory work" refers to directed class experiences taking place in a photography darkroom.

Textbook. A printed book used as the basis of school instruction.

Yearbook. The school publication describing the year's activities with text and pictures is referred to as the "yearbook." This publication is edited by the students and issued once a year; hence, it is sometimes referred to as the "annual."

IV. QUESTIONS WHICH HELPED GUIDE THE STUDY

To help determine the basic characteristics of photography classes in the state, several questions were phrased to serve as guides:

1. Why isn't a photography course offered?

2. What is the role of the photography club?

3. What is the role of the photography class in the curriculum?

4. What is the composition of the photography classes?

5. What training has the instructor received?

6. What topics are studied in a photography course?

7. What equipment is available for class use?

8. What methods are employed in the teaching?

9. What books are used as texts?

With these questions as a guide, a systematic study of the problem was undertaken, culminating in the report that follows.

CHAPTER II

A REVIEW OF THE LITERATURE

". . . photography ranks second as a hobby indulged in by the people in the United States according to a survey by the Saturday Evening Post" (1:150).

But photography is more than a hobby; it is an industry of major proportions. Photography is in use all about us, in our newspapers and in our books. Photography also plays a leading role in the advertising and entertainment industries. The importance of photography to the Armed Forces is evidenced by the availability of texts for the training of military personnel.[1]

As early as the time of Aristotle a device similar to the camera, the camera obscura, was used to make art sketches. Since that time photography has passed through many stages of development and refinement. Although early photographers such as Louis Jacques Munde Daguerre and Mathew Brady did make permanent photographs, it remained for George Eastman to introduce the daylight loading roll film (1891) and bring photography within the reach of all. Further developments led to the introduction of color positives,

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[1]The manuals Photography, Vol. 1, and Vol. 2, U. S. Navy, and Photography, Vol. 1, U. S. Air Force, are typical of military training manuals.

or "slides," by the Eastman Kodak Company in 1935 (10:315). Today a camera can be purchased which will automatically (by means of a built-in photoelectric cell) adjust the camera for the correct exposure. Photography has passed from art to science, and possibly back to art, for today no special training is required to operate a camera.

> To many, photography is merely the pointing of a camera at something, pressing the shutter, and then taking the film to a professional photo finisher for processing. On the other hand, there are those to whom photography is a scientific art, the means not only of recording passing events but of making pictures of artistic merit sufficient to afford boundless pleasure both to those who made them and to those who view them (10:1).

The joys of <u>making</u> pictures perhaps exceed those of taking pictures, but this field requires training. Here lies the role of the photography club or class.

I. THE PHOTOGRAPHY CLUB

> We are told that a worthwhile hobby is necessary for the full enjoyment of adult life. Photography, one of the leading hobbies today, can be lavish or inexpensive, simple or complicated, and through camera clubs lead to lasting friendships. Possibly this is the most important of all the objectives that can be developed in the teenager. In what better place can he start, then, than in his high school photographic workshop? (11:30)

To be a worthwhile organization, every club must have a reason to exist. And behind this reason, there must be activities to gain and maintain the interest. The club will become unified only when demands are made upon it as a

whole. The goals of the club should emphasize service to the school. The club can assist various departments of the school such as the journalism group, the athletic department, or the yearbook staff (9:103).

To be of assistance to its members, a camera club should devote some of its meetings to instruction. Toning, spotting, mounting, and simple portraiture may be taught (12:39). A picture-taking field trip can be of great value to the beginner. If the club advisor does not feel qualified to teach these topics, professional photographers, dealers, and newspapermen will all help the club if they are properly approached (13:262-263).

Recognition, a motivating factor, can be used quite effectively in photography. "Credit lines mean a great deal in this connection and form one of the simplest and most effective forms of public recognition" (13:262-263). The quality of the students' work will improve when the photograph is for some one else. For this reason as well as for recognition, photo displays are important. Many photographic contests, such as those sponsored by Eastman Kodak Company or jointly by Scholastic Magazine and Ansco, Incorporated, are exclusively for school students. Cash prizes, in addition to the recognition, are often an incentive for original and quality work. Exhibits of award-winning photographs are available upon request from contest

sponsors.[2]

With over six thousand high school camera clubs in the United States, photography is playing an important role in the life and activities of the high school student (1:150).

II. THE PHOTOGRAPHY CLASS

To enjoy an activity, one must be able to pursue that activity with a certain degree of proficiency. This holds true in photography, where training is required before one can undertake the varied operations with reasonable success.

Is the task of the high school photography class to teach students to take quality pictures for their personal enjoyment or to become professional photographers? Photography courses for personal enjoyment alone are justified by the fact that photography is the second rated national hobby (1:150).

Because the high school program comprises terminal education for many students, it is a logical place to teach vocational subjects. Fifty per cent of the photography

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[2]These exhibits may be requested from the following organizations: (1) Scholastic Magazine, 33 West 42nd Street, New York, New York, and (2) Educational Department, Eastman Kodak Company, Rochester, New York.

workers in Tucson, Arizona, (175,000) are graduates of the photography classes at Tucson High School (2:176-177). There, where training exists, the students seem to find photographic employment.

Who should teach the photography class, the art teacher, the science teacher, or the industrial arts teacher? Barnard (1:150) found that the science teachers seemed to be taking the initiative in teaching photography, although there are notable exceptions in which the industrial arts departments are teaching the course (2:176-177; 8:177-180). An art teacher with interest has the essential training to teach photography successfully (7:31-32). The logical conclusion would seem to be that the teacher with the most interest and training should teach the class regardless of his academic field.

One of the most difficult problems when starting a photography class is that of selecting a suitable text.

> The available books are too brief and incomplete or are written for college students and are too difficult for high school use. Furthermore, some of the elementary books are written by employees of a single manufacturer of photographic supplies and are definitely pointed toward the use of that manufacturer's products (3:144).

Many instructors do not use a text (1:150), while some use several texts and supplement these with the many periodicals available on the newstand (3:144).

To determine how much equipment is needed, the class

size must first be determined. This in turn will depend greatly on the size of the darkroom and the method of scheduling it for use. The classes will normally run from twelve to thirty students, with an average size of about twenty (1:150).

Quality equipment is necessary to do professional work, but good quality work can be produced with inexpensive equipment. One instructor taught a photography unit with less than thirty dollars worth of equipment (6:239).

A list of essential darkroom equipment would include:

1 contact printer
1 enlarger
1 timer
1 film developing tank
1 set of 3 trays
1 ferrotype tin and heated dryer
1 print roller
1 book of photo blotters
1 paper cutter
1 graduated cylinder
miscellaneous mixing and storage bottles

Student owned cameras will suffice for a start, but it is desirable that the school possess cameras, photoflood lights, tripods, and exposure meters (3:144). "For instruction purposes and advanced work, a camera with

ground-glass focusing is important" (13:262-263). However, such a camera may be purchased second-hand, often at a cost of less than one hundred dollars.

Additional equipment may be purchased through the school budget (1:150), or by the class undertaking a project of the production and sale of photographs of school groups such as athletic teams (3:144). Under no circumstances, though, should the class undersell the local photographer (12:39).

Without a suitable textbook, selecting material to include in the photography course may become a problem. Since most teachers do not use a course outline or syllabus (1:150), it would seem that an outline of the course taught by a successful instructor would be helpful to many instructors.

For his "superlative teaching job" at Tucson High School, H. A. Goldstein became the only high school teacher in the United States to be elected to the Photographic Society of America.

The photography courses at Tucson High School are taught on three levels: (1) for those who want it as a future vocation; (2) for those who take it as a trade subject; and (3) for those who learn it as a hobby (2:176-177). The objectives of the Photographic Laboratory Course of the Tucson Graphic-Arts program as listed by Goldstein (4:320)

are as follows:

Graphic-Arts, One Year Photographic Laboratory Course- 60 hours.

Objectives of Instructional Units, Photography I

1. To determine the students' skill and judgement in criticizing photographs as to interest, composition, and tone quality.
2. To become acquainted with photographic paper, its uses, how it is used, and how to obtain good prints.
3. To acquaint the students with developing photographic pictures. Here the student really begins to learn the foundations of photography, the latent image and the effect of each chemical upon the image. The importance of proper exposure and the correct grades of paper for the different contrasts of negatives.
4. To acquaint the student with simple camera technique, proper exposure, composition and roll-film developing.
5. To learn how to make an enlargement, how to manipulate the enlarger, and use the proper technique in producing an enlargement.
6. To learn how to tint a photograph, to produce a picture in color using oil tints.
7. To make a simple photo Christmas card, using a mask and a photo taken by the student.

Objectives of Instructional Units, Photography II

8. To learn how to mix the various solutions used in photography.
9. To learn the parts of the more advanced camera, how these parts function, and their relationship to each other. Plus, how to properly use exposure guides and the exposure meter.
10. To learn how to take a simple photograph using light from one source. This may be done with a single photo floodlight or sunlight.
11. To learn how to use depth of field effectively in taking a photograph, and how to figure depth of field.
12. To study the effect of different filters on various colors using daylight as a source of light and panchromatic film.
13. To make a landscape picture using a filter to darken the sky.

14. To make a simple portrait using triangle lighting.
15. To make a photo Christmas card.
16. To use artificial lighting in producing pictures that are interesting and forceful.
17. To make a still-life picture using inanimate material showing texture, composition, light and shadow.
18. To acquaint the photographer with the technique of combining parts of two negatives to produce a single print called a montage.
19. To make a copy of a map or chart using panchromatic film and proper light.
20. To make a portrait using sunlight and a reflector.
21. To learn how to reduce negatives that are over-exposed or over-developed.
22. To learn how to intensify negatives that are under-exposed or under-developed.
23. To make an action photograph using the proper exposure and developing for best results.
24. To make a picture involving the problems of close-up photography.
25. To learn the technique of fine grain developing.
26. To learn how to use high speed film and take pictures under weak light conditions.
27. To learn simple retouching techniques using new coccine red dye on the negative.
28. To learn how to opaque part of a negative.
29. To learn how to tone a print.
30. To learn how to solve simple optical problems involving the major and minor conjugate.
31. To learn how to use supplementary minus and plus lenses.
32. To learn how to develop color film using the Ektachrome process (4:320).

The above two sixty hour courses could be combined into a full one-year (two semester) photography course.

Many teachers like to screen the incoming class to eliminate those who would fail or those who in the laboratory might not respect their fellow students and might create an undesirable situation (4:320). Because the Armed Forces train many photographers annually, it is necessary for them to be able to predict the success of their students

(5:PRB #85), but their testing methods are not practical in the high school. Academic success should not be the admitting rule because the successful student photographer often dislikes to read and is a poor reader (2:176-177). The integrity of the student is perhaps the best guide as to who will succeed.

III. LIMITATIONS OF PREVIOUS STUDIES

Although there have been numerous articles written about photography (in fact several periodicals are devoted exclusively to photography) the articles concerning photography in the high school are relatively few in number. This investigator could find but one study which attempted to determine what was being taught in the high school photography classes (1:150). That study concerned practices in small towns (four to six thousand population) in thirty states. On the basis of seventy-six returns, Barnard and Binstock concluded that photography should be taught as an academic subject. They also found that most schools teaching photography did not have sufficient space or equipment to carry out a successful program.

The following recommendations were made as a result of their study:

1. That photography should have academic status and become an integral part of the secondary school curriculum.

2. That the average class enrollment in photography be limited to twenty students per period and that the duration of the period be at least fifty minutes.

3. That photography continue to be offered on an elective basis.

4. That photography, if the specific circumstances permit, be conducted on the activity basis in the industrial arts department.

5. That photography be offered in the ninth, tenth, eleventh and twelfth grades.

6. That photography instructors use a course of study, syllabus, or course outline.

7. That more instructors use a textbook in conducting the photography class.

8. That students furnish their own cameras in photography courses and clubs.

9. That schools teaching photography should have at least three contact printers and enlargers for every ten students.

10. That students receive their materials and supplies free of charge from the school.

11. That a budget be established for the replacement of obsolete equipment.

12. That teacher training colleges offer training in photography (1:150).

This review of the function of photography in our lives, with its emphasis on photography's role in the school, will lend understanding to the findings of this investigation. Chapter III will explain the methods used in obtaining the facts for this study.

CHAPTER III

PROCEDURES OF THE STUDY

The procedure of this study involved three steps: (1) selecting the group to be studied, (2) constructing a suitable questionnaire, and (3) analyzing the returns.

I. THE GROUP

One hundred sixty-two questionnaires were mailed to high schools of Washington State that had an enrollment of approximately 180 students or more. It was assumed by the writer that few high schools with an enrollment of less than 180 students would be teaching photography. The intended respondents were the photography instructors and photography club advisors, although the principals usually answered when the school did not have a class or club.

From the 162 schools queried, 134 replies, 82.7 per cent, were received. The writer felt that this was a good return and that the sampling was representative.

II. THE QUESTIONNAIRE

During the summer of 1958 the writer constructed a five page questionnaire to be sent out during the school year. The original questionnaire was refined and streamlined under the direction of Dr. A. H. Howard. Several

sketches were incorporated into the questionnaire to make it more appealing to the recipient.

The first page of the questionnaire was divided into three parts: Part I, Part II, and a section requesting the respondent's name, school, and city, and the school enrollment. Part I was to be answered if the school did not have a class. Part II was to be answered by all respondents, indicating whether or not a photography club existed.

The principal in a school which had no class or club needed only to make two check marks and fill out the section indicating the school's size and location. Only those schools which had classes filled out more than one page of the questionnaire.

The entire questionnaire was designed for a check-type answer to facilitate answering.

To determine the basic characteristics of photography courses, it was necessary to investigate several areas. The questionnaire proper, therefore, was divided into three parts.[1]

Part I Why Isn't A Photography Course Offered?

Part II What Does Your Photography Club Do?

Part III The Characteristics of the Course

Part III of the questionnaire thus attempted to

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[1]See copy of the questionnaire in Appendix.

ascertain the characteristics of the photography class. Questions were asked relating to the type of students, the instructor's experience, topics studied in the course, and the texts available.

The questionnaire was reproduced by lithography at Craftsman Printing Company, Wenatchee, Washington.

III. METHODS OF ANALYZING THE RETURNS

The returns were grouped initially into three broad areas: (A) neither class nor club, (B) class, and (C) club (B and C were processed separately even for schools having both class and club). The returns were later grouped to determine (1) Why photography classes were not offered in the schools, (2) What was being done in photography clubs, and (3) What characterized the photography classes. The schools were also grouped as to size and geographic location.

The replies were reported by percentage in an attempt to facilitate reading. Some sections of the questionnaire are marked "multiple answers" to indicate that the respondents checked more than one block in this section. The percentage in the "multiple answers" sections will necessarily total more than 100 per cent.

CHAPTER IV

PRESENTATION OF THE DATA

To present clearly the findings of this study it was necessary to classify the replies into four groups. These groups and the percentage of replies in each are as follows:

I.	no class--no club	58.1%
II.	no class--club	19.4%
III.	class--no club	11.9%
IV.	class--club	10.4%

Twenty-four and four tenths per cent of the questionnaires in group I (no class--no club) carried comments indicating that equipment was available. Nineteen and two-tenths per cent of group I indicated that some students were doing photography for the yearbook. With this known photography in group I, plus that in groups II, III, and IV, at least 53 per cent of the respondents have student photography of some sort in their school.

I. WHY ISN'T A PHOTOGRAPHY CLASS OFFERED?

Answers from group I and II were totaled, as neither of these groups offered a class in photography. The seventy-eight returns from group I and twenty-six returns from group II yielded the following (multiple answer) answers, expressed in percentage form, as to why a class was not offered.

no qualified instructor	32.6%
no equipment	27.8%
no student interest	17.3%
school financial reasons	29.8%
no "frills" in the curriculum	21.1%
other	35.5%

Comments under "other" included "no space," "taught alternate years," "past problems," and several answers that "scheduling" was a major problem. An explanation of the scheduling problem may be that of the returns in group I and II, 69.2 per cent are from schools of less than five hundred enrollment, and actually 51 per cent from schools of less than three hundred enrollment. Thus, the above statistics suggest difficulties peculiar to the smaller school.

II. WHAT DOES THE PHOTOGRAPHY CLUB DO?

Investigation of photography clubs was limited to two questions: (1) Is a club in existence? and (2) What does the club do? The writer was interested in the correlation between the existence within a school of both a photography club and class, hence question 1. Only 10.4 per cent of the schools answering had both club and class; these were predominantly the larger schools (enrollments in excess of one thousand) generally located in the major cities of the

state. Appendix B shows the respondents in this group.

Forty replies, or 30 per cent of the responding schools indicated that active photography clubs existed. The activities of the club and information as to advisor are listed in the following table.

The club takes pictures for the yearbook	64.1%
The club holds a photography exhibit	38.5%
The club trains its members	85 %
The advisor has had training	71.8%
The advisor is a photography fan	87.2%

Figure I (multiple answers) shows the general teaching areas of the advisors by per cent.

Since the study of photography involves both physics and chemistry, it is understandable that the science teachers should lead the field as advisors. But it is surprising to find more mathematics teachers as advisors than journalism teachers.

Appendix C shows which of the replying schools have photography clubs. Photography club sizes are shown in the following chart.

less than 10 members	38.5%
10 to 20 members	17.9%
20 to 30 members	15.3%
over 30 members	12.8%

The club sizes would seem to be small, considering

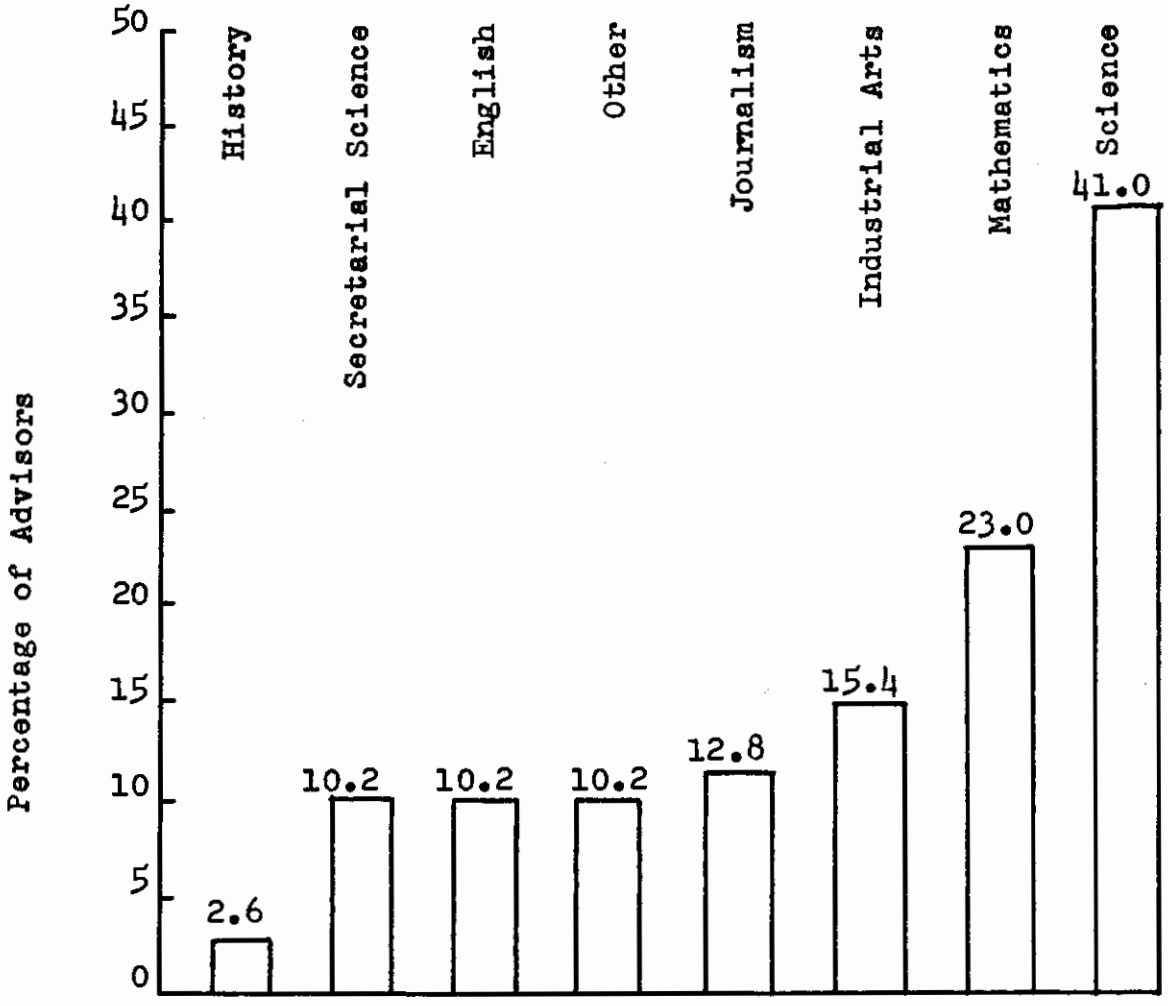

FIGURE I

GENERAL TEACHING AREAS OF THE PHOTOGRAPHY CLUB ADVISORS
(MULTIPLE ANSWERS TABULATED BY PER CENT)

that some of the schools with clubs have enrollments of over one-thousand students.

III. CHARACTERISTICS OF THE PHOTOGRAPHY COURSE

Is the class a typical one? Twenty-five schools offer regular photography classes and four more schools offer a part time class integrated as part of some other subject, e. g., art. Only the returns from the twenty-five regular classes were analyzed. These represent 18.6 per cent of the total replies.

Sixty-five per cent of the schools with photography classes have an enrollment in excess of a thousand students. Appendix D shows that many of these schools are in the greater Seattle area. The writer's school, Cashmere High School, is shown but is not included in the findings.

A full-year course is offered by 72 per cent of the schools teaching photography while the remainder offer a one-semester course.

The students are required to use a personal camera in 62.5 per cent of the schools.

Photography classes have an enrollment from less than ten to about thirty students as shown by the chart below.

Less than 10 students	16.6%
10 to 20 students	54.2%
20 to 30 students	29.2%

The number of times the class is taught daily is shown below.

Once daily	62.5%
Twice daily	16.6%
Three times daily	12.5%
Four times daily	4.2%
Five times daily	8.2%

Sixty-two and five-tenths of the schools teach photography only once daily. The larger schools have sufficient demand for the class to offer it more than once daily.

The number of years that credit can be received for the class is shown below:

Once semester (one-half year)	25.0%
One year	49.9%
Two years	16.6%
Three years	12.5%

A one-year course would appear to be the most popular.

Respondents considered photography a part of various subject fields, as shown below (multiple answers).

Journalism	8.2%
Science	50.0%
Art	8.3%
Industrial Art	4.2%

Elective	4.2%
Unknown	29.1%

Twenty-five per cent of the schools had students working on yearbook pictures by assignment.

There seemed to be little distinction between classification of the photography class as prevocational or as a hobby. The following chart lists the replies (multiple check).

Course goal is prevocational	71.0%
Course goal is aesthetic	92.4%
Course is justified as a science tool	16.6%

What kinds of students are in the class? When organizing a course, it is desirable to know what the ability and grade level of the students will be. The students were classified as having average ability by 83.4 per cent of the respondents, while 4.2 per cent classified the students as above average and 12.4 per cent classified the students as below average.

There were no prerequisites for the class in 66.7 per cent of the returns. The other 33.3 per cent listed student prerequisites as satisfactory grade point, appropriate grade level, and (in two cases) owning of a good camera.

The figures below show the grades in which photography may be taken as a class. From the figures it would

appear that in most schools photography is taught in the eleventh and twelfth grades.

Grade nine	12.5%
Grade ten	58.6%
Grade eleven	91.2%
Grade twelve	100.0%

Most teachers did not agree with Goldstein's opinion (12:320) that photography students were poor readers. Seventy-five per cent said that their students were average readers. Eight and four-tenths per cent rated their students above average in reading, while 16.6 per cent rated their students as below average in reading.

What photographic experience has the instructor had? Most photography teachers are college science majors. Figure II shows the college major field of the photography instructors. Most photography instructors in Washington State, 62.5 per cent, have had some training in photography. This training was of the following types (multiple answers):

college class	93.5%
military training	26.6%
studio training	46.6%
industrial training	6.7%

Those who had received no training obtained their knowledge from the following sources (multiple answers):

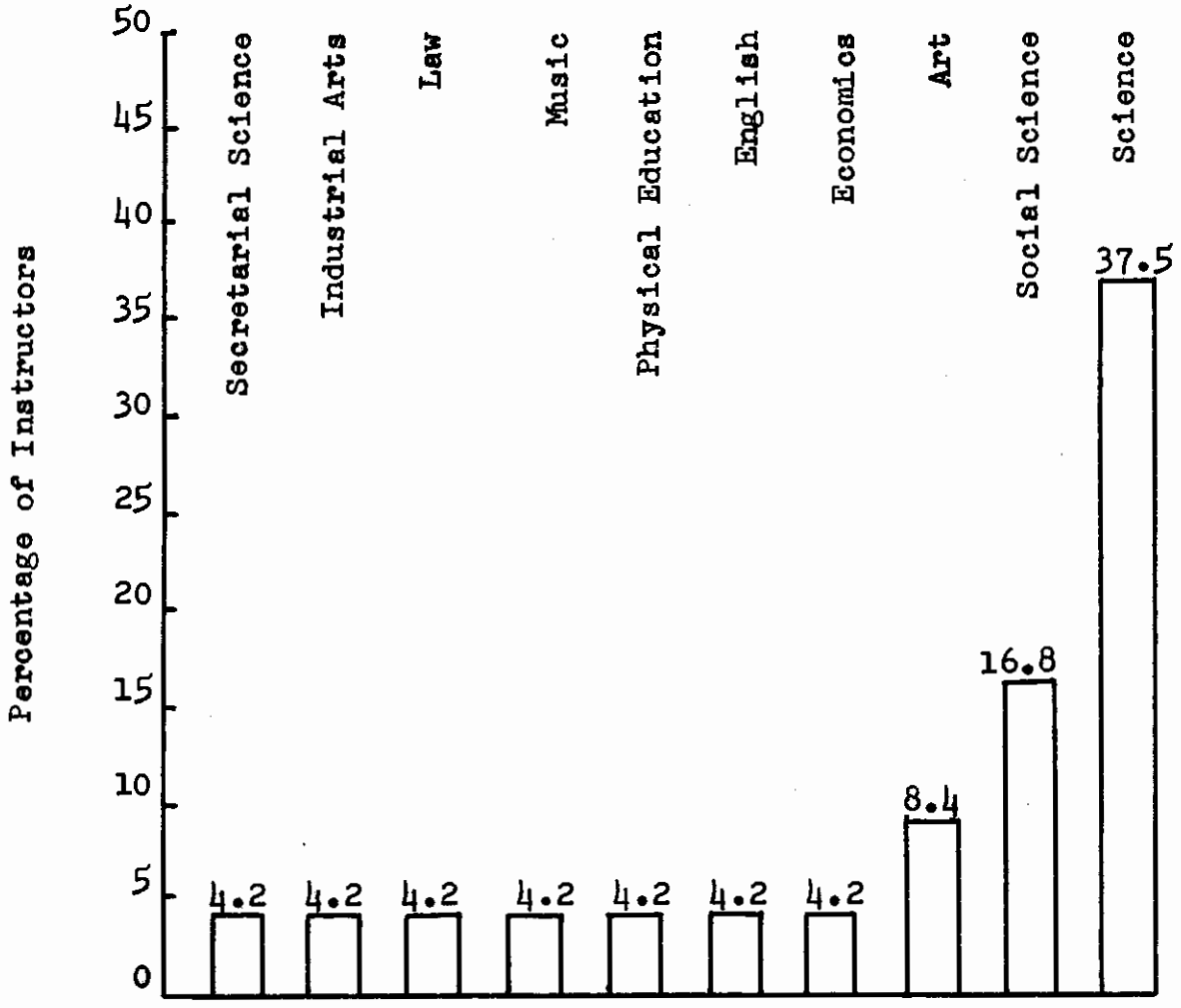

FIGURE II

COLLEGE MAJOR FIELD OF PHOTOGRAPHY INSTRUCTORS

self-taught	33.3%
hobby	55.5%
studio work	11.1%
no experience	11.1%

The opinion of the instructors as to whether they are qualified to teach photography closely parallels the training received.

feel qualified to teach photography	78.2%
do not feel qualified to teach photography	13.6%
uncertain	8.8%
no comment	4.4%

What equipment is available? The respondent was asked to indicate the number of each of the listed pieces of equipment which he had available. Table I shows the percentage of schools possessing a given quantity of specific equipment.

Column one shows the percentage of schools possessing one of the items listed, e. g., one press camera. The column labeled "total" refers to the total percentage of the schools which own a specific item. Of the schools teaching photography, 84 per cent have press cameras, although no school replying indicated that it owned more than two press cameras.

All of the replying schools had at least one enlarger,

TABLE I

EQUIPMENT POSSESSED BY SCHOOLS
TEACHING PHOTOGRAPHY

EQUIPMENT POSSESSED	PER CENT OF SCHOOLS HAVING						
	One only	two	three	four	five	six more	total
Press Camera	68	16					84
Flash for Press Camera	60	20					80
Electronic Flash	48	4	8				60
Roll Film Camera, 35 mm	48	16					64
Roll Film Camera, other	32	32	4	4	4		76
Tripod	52	20	12	4		8	88
Light Meter	68	12	4			12	96
Photoflood Lamp	24	12	4	8	12	24	84
Enlarger	36	12	12	16	4	20	100
Easel	32	4	12	24	4	16	92
Contact Printer	36	4	16	8	8	24	96
Print Frame	28	4			4	8	44
Paper Cutter	60	20	8	12			100
Roll Film Developing Tank	28	8	8	20	8	24	96
Cut Film Developing Tank	60	4				4	68
Daylight Cut Film Developing Tank	32	16					48
Print Syphon	24	4	4				32
Print Washer	68	4	4				76
5 x 7" tray sets	40	12	8	4		12	76
8 x 10" tray sets	48	28	12	8		4	100
11 x 14" tray sets*	4	4					8
Drier	68	32					100
View Camera*	16						16

*Not listed on questionnaire.

paper cutter, and set of eight by ten inch trays. Most of the schools possessed the items of essential equipment.

The instructors were asked whether or not their darkrooms had running water. All replied that the darkroom had cold running water; 88 per cent had both hot and cold running water.

Ventilation was occasionally a problem. Seventy-one per cent reported that they could ventilate the darkroom, but 29 per cent replied that the darkroom could not be ventilated while the students were working.

What teaching methods are used in the photography classroom? The photography instructors teach with a variety of methods, as shown by Figure III. Photography is essentially a laboratory class.

What is taught in the photography course? The topics discussed in the photography courses are listed in Table II. Most of the photography courses include theory of light and lenses. Instruction is given in the taking of photographs and in processing the film to produce a finished print. Almost all of the schools teach the mixing of the photographic solutions, but only about half of the respondents taught how to mix the solutions by formula.

Instruction in photo-oil coloring was given in about half of the schools. Color photography theory was taught

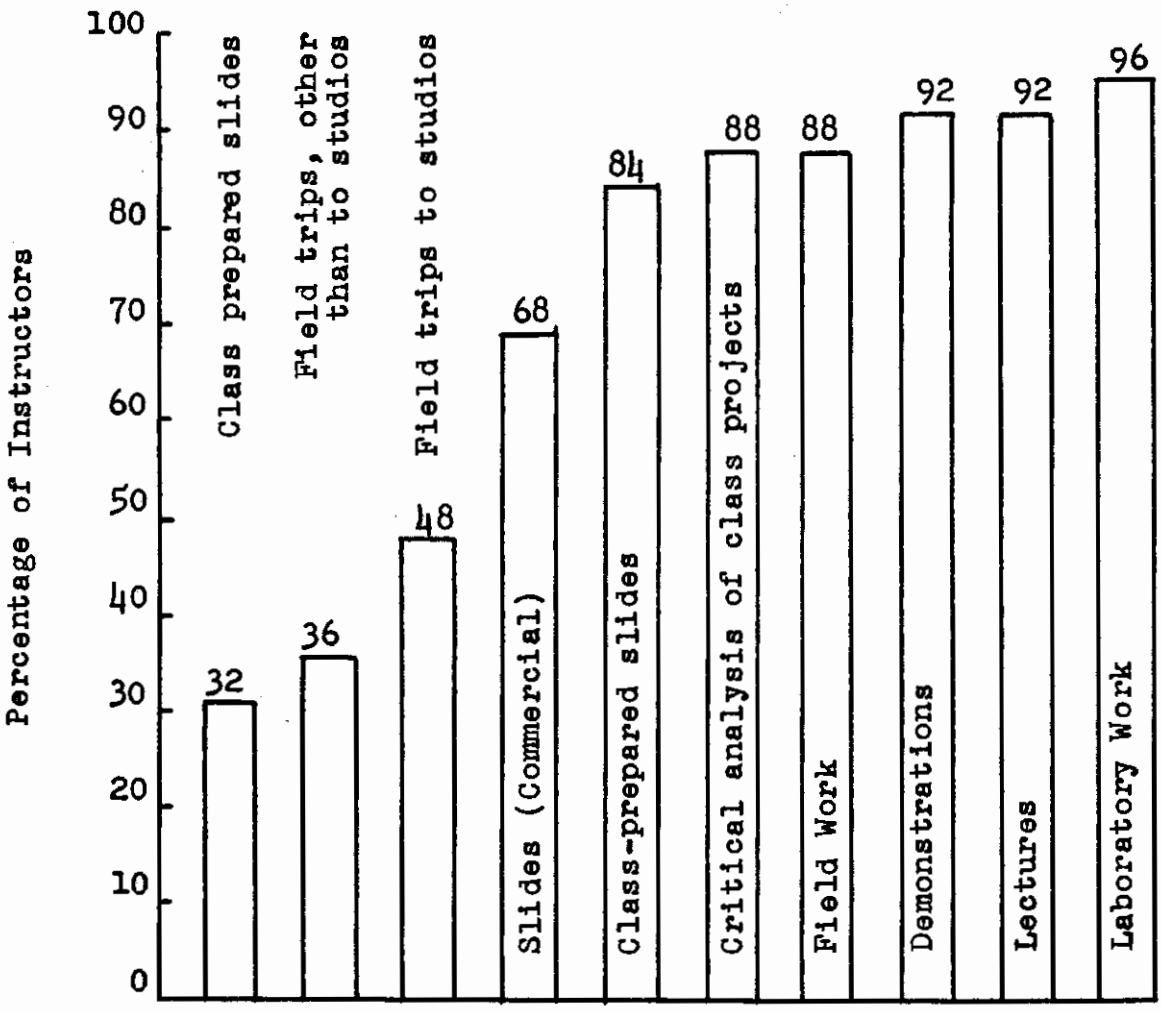

FIGURE III

TEACHING METHODS USED BY PHOTOGRAPHY INSTRUCTORS
(MULTIPLE ANSWERS TABULATED BY PER CENT)

TABLE II

CONCEPTS BEING TAUGHT IN HIGH SCHOOL PHOTOGRAPHY CLASSES

Concept being taught	Theory taught percentage	Student projects percentage
Light and lenses	96	--
Types of cameras	91.5	--
Types of shutter	82.5	--
Composition	87	82.5
Use of light meter	91.5	96
Operation of student's camera	87	91.5
Press camera operation	91.5	87
Function of chemicals and solutions used	96	91.5
Mixing solutions by formula	48	56.5
Film sensitivity and exposure	96	52
Film development	91.5	91.5
Paper (speed, surface, uses)	91.5	87
Contact printing	91.5	96
Projection printing	87	82.5
Flash photography	91.5	87
Existing-light photography (high speed film)	65	56.5
Filters	78	43.5
Still life	65	74
Portraiture	91.5	87
Copying	74	74
Toning prints	74	70
Photo oil coloring	52	61
Color photography	56.5	39
Color processing	26	13
Motion picture photography	26	8.5
Use of supplementary lenses	52	30
Mounting prints for display	70	65
Individual greeting cards	82.5	74
Negative retouching	39	35

in 56.5 per cent of the schools, but only 39 per cent did any projects in color photography. Only 26 per cent taught color processing, and only 13 per cent actually processed color film.

Motion picture photography also rated low, with 26 per cent teaching theory and only 8.5 per cent actually taking motion pictures. Seventy per cent taught how to mount pictures for display. Seventy-four per cent of the schools had their students make photo greeting cards. This appears to be quite a popular project. Negative retouching, a difficult task, was taught in less than 40 per cent of the schools with classes.

Those schools offering photography appear to be presenting a comprehensive course, with instruction in many areas.

Which book is used for a text? The opinions of the photography instructors as to which text is best are varied. Twenty-four per cent of the instructors use no text; one respondent didn't check this item, and the remaining 72 per cent of those who teach a class use one or more texts.

Eighteen instructors, or 72 per cent, use texts and supplementary reference works, as shown in Table III. The percentages are computed on the basis of the twenty-five classes taught. The most popular text was This is

TABLE III

PHOTOGRAPHY BOOKS USED AS TEXTS
(RETURNS EXPRESSED IN PER CENT)

	Text	Supplementary Reference Works
Boucher, Paul E., Fundamentals of Photography	--	12
Chamberlain, Katherine, An Introduction to the Science of Photography	--	4
Flynn, J. O., A. J. Rosenberg, and Allen Kellock, How to Develop, Print, and Enlarge Your Own Pictures	4	16
Kodak, How to Make Good Pictures	8	52
McCoy, Robert A., Practical Photography	8	4
Kodak, Kodak's Reference Handbook	--	72
Miller, T. H. This is Photography	36	28
Neblette, C. B., Elementary Photography	8	36
Quarles, G. C., Elementary Photography	8	16
Smith, V. C. Photography Workbook	12	20
Sussman, A. The Amateur Photographer's Handbook	16	12
U. S. Air Force, Photography Vol. I	--	32
U. S. Navy, Photography Vol. I	--	28
Zim, H. S., P. W. Burnett, Photography	--	8
Argus, Taking Pictures for the High School Yearbook	--	8
Medlin, C. H., School Yearbook Editing and Management	--	8

Photography, by T. H. Miller.

IV. MISCELLANEOUS FINDINGS

No private or parochial school replying had a full time photography class. Seattle Prep had a photography club and taught photography as part of the Yearbook class. The private schools found that in a pre-college curriculum photography was a frill. The cost was another deterring factor.

Of the three Technical High Schools in the State, only Edison High of Seattle taught photography. The other two, in Tacoma and Spokane, found no demand for the class.

The writer judges that substantially all the photography instructors in the state are men, although it is true that use of initials by some respondents made it impossible to determine the sex of the instructor.

Less than 30 per cent of the schools that did not have a photography class stated that the reason was financial. The schools citing financial reasons were not necessarily the smaller ones; in fact, no correlation between a school's size and this financial problem was apparent.

CHAPTER V

SUMMARY AND RECOMMENDATIONS

The purpose of this study was to determine the basic characteristics of photography courses in the high schools of Washington State. To determine this, one hundred sixty-two questionnaires were mailed to high schools of the state which had an enrollment of one hundred eighty or more students. It was gratifying to receive an 82 per cent return. The teachers of photography and the photography advisors who answered gave extremely helpful comments.

I. SUMMARY

The writer has chosen to summarize the answers to his basic study questions as a method of arriving at the findings of this study.

Why isn't a photography course offered? Inasmuch as photography courses are offered predominately in the larger schools of the state, it would appear that the reasons for not adding additional courses in small schools would be valid reasons for not offering a photography class. The non-availability of qualified instructors and the cost of purchasing the initial equipment seem to be the chief deterring factors. Scheduling also presents a problem in

the small high school.

What is the role of the photography club? The photography club seems to be one way of offering photography when it is impossible to offer a class. In only 10.4 per cent of the responses did the club supplement the class; rather, the club tends to be an activity existing when no class is taught. This suggests that the club should attempt to train its members. Actually 85 per cent of the photography clubs replying do attempt such training. Other activities of the clubs are holding exhibits and taking pictures for the school publications.

What is the role of the photography class in the curriculum? The photography classes appear to be considered one of the science classes in many Washington high schools. The course is taught both as a pre-vocational course and as an aesthetic (hobby) class. The class is taught daily for a full year in 72 per cent of the replying schools which teach photography.

What is the composition of the photography classes? The students taking a photography class are usually juniors and seniors in high school. Fifty-eight per cent of the schools allowed sophomores to take the class, while only 12.5 per cent allowed the freshmen to take the class. From

the standpoint of scholarship, classes consist of students with average or only slightly below average ability as rated by their instructors.

What training has the instructor received? More instructors majored in science in college than in any other field of study. Almost two-thirds of the instructors had received photography training and 93.5 per cent of these had attended a college photography class. In addition, almost half of the instructors had some previous studio experience. The one-third of the instructors without formal training were self-trained. Many instructors had pursued photography as a hobby for years.

What topics are studied in a photography course? Photography courses are usually taught by first explaining the nature of light and basic optics. Next, cameras of various types are studied and the student's own camera is explained. How to take pictures under various conditions and with different objectives in mind is the next project. Almost all courses include the darkroom work of mixing chemicals, developing film, and printing pictures. Finishing the prints by toning and coloring is often the next step. Only a few (13 per cent) of the schools with classes teach color processing. Fewer yet (8.5 per cent) give practical work in motion-picture photography.

For the most part, the class consists of instruction in the taking of black-and-white pictures and supervision of the darkroom processing necessary to produce the finished picture.

What methods are employed in the teaching? The methods used in photography are many and varied. Typical of the methods of science are the lecture, the demonstration, and the laboratory work. Critical analysis of the finished product, a method commonly employed in shop classes, is used to advantage in the photography classroom. Audio-visual aids in the form of films and slides are used by many instructors. About one-third of the instructors were having their classes take colored slides which were then used for training purposes. Field trips were considered indispensable.

What equipment is available for the class use? All the schools teaching a photography class had at least one enlarger, one paper cutter, one set of eight-by-ten inch trays, and a print drier. Over 80 per cent of the schools had at least one each of the following pieces of equipment: press camera and flash, tripod, light meter, photo floods, enlarging easel, contact printer, and roll film developing tank. Over 60 per cent of the schools had at least one each of the following pieces of equipment: electronic flash,

roll film camera (35 millimeter), roll film camera (other), cut film developing tank, and print washer.

It would appear that the larger schools could use more equipment of special nature. A school that teaches photography four or five times daily must have a problem with only two press cameras.

The schools appear to be adequately equipped although there seems to be no limit to the equipment that could be purchased.

Which books are used for texts? Textbooks suitable for photography classes depend much upon the course goals. The text most often used by the respondent to this survey was This is Photography, by T. H. Miller. This writer's opinion is that the book is too elementary for a high school text.

A wide variety of books were used as supplementary texts, with two Kodak publications heading the list: How to Make Good Pictures and the indispensable Kodak Reference Handbook. The Navy and Air Force Photography Manuals were both popular supplementary texts. A text by C. B. Neblette, Elementary Photography, also rated popularly as a second text.

II. AREAS FOR FURTHER STUDY

After surveying high schools for the existence of a

photography class, a study of photography in the junior high curriculum would seem desirable. Research into the use of photography after high school by students of selected schools could determine if photography as a pre-vocational subject is justified. A follow-up study of students who have completed photography courses at Central Washington College of Education to determine what use they are making of photography would help evaluate the role of photography in the college.

III. RECOMMENDATIONS FROM THIS STUDY

As a result of this study the writer makes the following recommendations:

1. That all instructors use an outline similar to Goldstein's and teach many or all the suggested topics in that course outline (4:320).

2. That all the recommendations of Barnard (1:150) be considered with one change: that photography be taught in grades ten through twelve instead of in grades nine through twelve.

3. That all instructors use one or more texts supplemented by periodicals and manufacturers' booklets.

4. That advisors and instructors should either be photography fans or have received photographic training.

5. That photography be offered as a full-year

course with a selected advanced (second year) section in which the students take pictures for the school publications.

6. That all students be required to use a personal camera because it is probably the camera they will use after graduation.

7. That if possible the course include an assignment to take a sequence of Ektachrome slides showing a specific process, such as use of the light meter, and that these colored slides be developed by the students. In this way all the students will become acquainted with a phase of color photography.

It is the writer's desire that the findings of this study be helpful to others in an objective evaluation of their photography courses.

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BIBLIOGRAPHY

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APPENDIX A

THE QUESTIONNAIRE

112 East Pleasant Avenue
Cashmere, Washington
November 20, 1958

Dear Sir:

I am conducting a study for the Master of Education Degree, and need your help in determining how Photography is being taught in the high schools.

If your school does not offer a Photography Course, it will take only a few seconds to fill out sections I and II of this check-list type questionnaire.

If your school has a Photography class or club, the teacher in charge might be interested in the list of applicable books or some of the course content suggestions.

Many thanks for your time and help.

Sincerely,

Gordon K. Irle

P. S. There is a stamped envelope enclosed for your convenience.

If your school does not offer classroom instruction in photography please fill in part I and II of the questionnaire. If you do offer a course please fill in parts II and III.

PART I
WHY ISN'T A PHOTOGRAPHY COURSE OFFERED?

Please fill out this portion if your school does not offer a photography class.

1. Which of the following reasons probably affected your decision not to offer a photography class?
   - ____ no qualified instructor
   - ____ no equipment
   - ____ no student interest
   - ____ school financial reasons
   - ____ no "frills" in the curriculum
   - ____ other (specify) _____

PART II
WHAT DOES YOUR PHOTOGRAPHY CLUB DO?

1. Does your school have an active photography club? yes ____ no ____
   If yes:
   a. Does the club take pictures for the school yearbook? yes ____ no ____
   b. Does the club hold a photography exhibit? yes ____ no ____
   c. Does the club attempt to train its members? yes ____ no ____
   d. What is the approximate club size?(number) ____
   e. Has the advisor taken any photographic training? yes ____ no ____
   f. Is the advisor a photography fan? yes ____ no ____
   g. In which general area does the advisor teach?

   - ____ Science
   - ____ Industrial Arts
   - ____ English
   - ____ Journalism
   - ____ History
   - ____ Mathematics
   - ____ Secretarial Science
   - ____ Other (Specify) _____

2. Please fill out this portion also.
   Your name _____

   School _____

   Town or city _____

   Approximate enrollment of high school _____
   3 ____ 4 ____ years

   Criticisms or comments _____

PART III
IS THE CLASS A TYPICAL ONE?

1. Do you offer a full time photography course? Yes ____ No ____
   If not, how long is the course? ____ class days
   how many periods per week? ____
   if part of another class, which class? _____
2. Are the students required to use a personal camera? yes ____ no ____
3. What is the average photography class size? ____ (number)
4. How many times daily is the class taught? ____ (number)
5. How many years may a student take the class with credit? 1____, 2 ____, 3 ____, 4 ____.
6. Do students within the class work on the school yearbook on an assignment basis? yes ____ no ____
7. In which field is the photography class considered?
   ____ Journalism
   ____ Science
   ____ Industrial Arts
   ____ Unknown
   ____ Other (specify) _____
8. What is the course goal?
   ____ pre-vocational
   ____ aesthetic (hobby)
   ____ other (specify) _____

WHAT KIND OF STUDENTS DO YOU HAVE?

1. Are the students of average ability? ____ average
   ____ above average
   ____ below average
2. Are there any prerequisites for the class? yes ____ no ____
   If yes, ____ grade level
   ____ grade point
   ____ other (specify) _____
3. Please check the grade levels of the students in your photography class. (Use a 2 for advanced students.) 8____ 9____ 10____ 11____ 12____
4. How would you rate the reading ability of the class as a whole?
   ____ average
   ____ above average
   ____ below average

WHAT IS YOUR PHOTOGRAPHIC EXPERIENCE?

1. What was your major field in college? _____

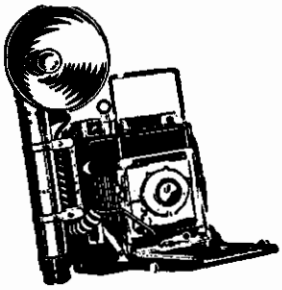
2. Have you had any photographic training? yes ____ no ____
   If yes, ____ college class
   ____ military training
   ____ studio work
   ____ other (specify) _____

   If no, ____ self taught (hobby)
   ____ no experience
   ____ other (specify) _____

3. Do you feel qualified to teach photography? yes ____ no ____ uncertain ____

WHAT EQUIPMENT DO YOU HAVE AVAILABLE?

1. Please designate the number of the following pieces of equipment available for class use.

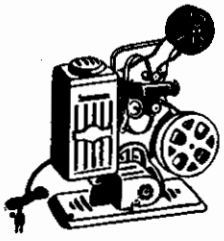


____ camera, press type
____ flash for the press camera
____ electronic flash unit
____ camera, roll film, other than 135mm
____ camera, roll film, 135mm
____ tripod
____ photoelectric light meter
____ photoflood lamps and reflectors
____ enlarger
____ easel
____ contact printer
____ print frames
____ paper cutter
____ roll film tanks
____ cut film tanks, hangers
____ cut film tanks, daylight type
____ print syphon
____ print washer
____ trays, (5x7) sets of three
____ trays, (8x10) sets of three
____ print drier
____ other (specify) _____

2. Does your darkroom have running water? yes ____ no ____
   If yes, hot ____ cold ____
3. Can you ventilate the darkroom while the students are working? yes____ no ____

WHAT TEACHING METHODS DO YOU USE?

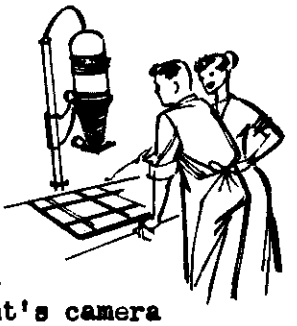
1. Check the following methods which you have used.



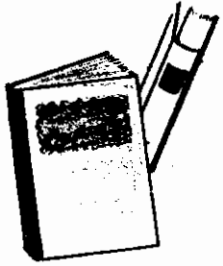
____ lecture
____ demonstration
____ laboratory
____ field (outdoor) work
____ films
____ slides
____ slides (class prepared)
____ critical analysis of class projects
____ field trips to professional studios
____ field trips, other (specify) _____

WHAT DO YOU TEACH IN THE COURSE?

1. Check the following areas which you cover in the course. Check either block or both. (If covered only in advanced course, please use a 2)



Explain Theory	Assign Projects (students perform)	
____	____	Light and lenses
____	____	Types of cameras
____	____	Types of shutters
____	____	Composition
____	____	Use of light meters
____	____	Operation of student's camera
____	____	Press camera operation
____	____	Chemicals and solutions
____	____	Mixing chemicals and solutions by formula (not packaged)
____	____	Film sensitivity and exposure
____	____	Film development
____	____	Paper, speed, surfaces, uses
____	____	Contact printing
____	____	Projection printing
____	____	Flash photography
____	____	Existing light photography with high speed film
____	____	Filters
____	____	Still life photography (not scenic)
____	____	Portraiture
____	____	Copying
____	____	Toning of print
____	____	Photo oil coloring of prints
____	____	Color photography
____	____	Color processing
____	____	Motion picture photography
____	____	Use of supplementary (porta) lenses
____	____	Mounting prints for display
____	____	Individual greeting cards
____	____	Negative retouching
____	____	Other (specify) _____



	Text	Supplementary Text	Not Available
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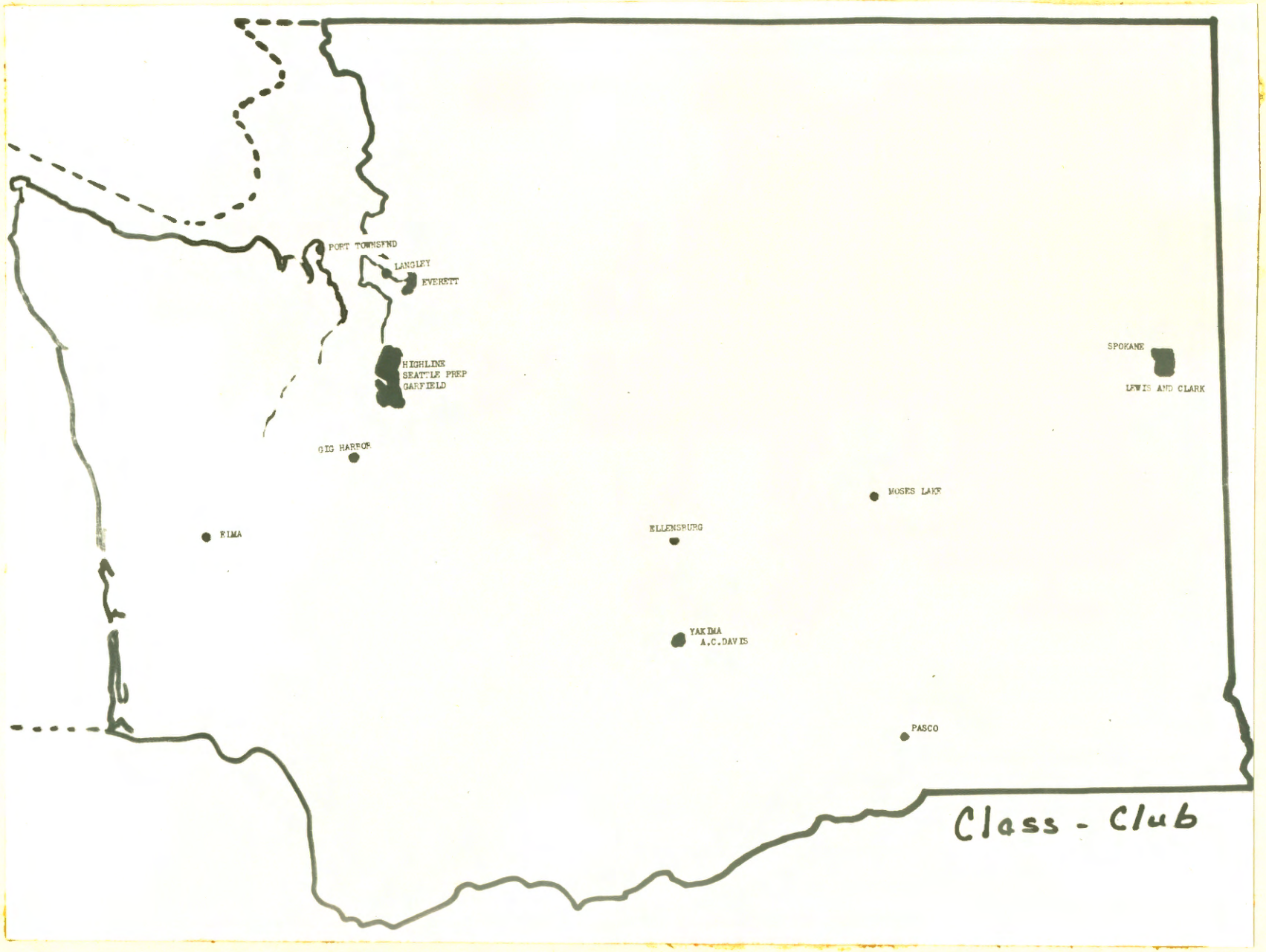
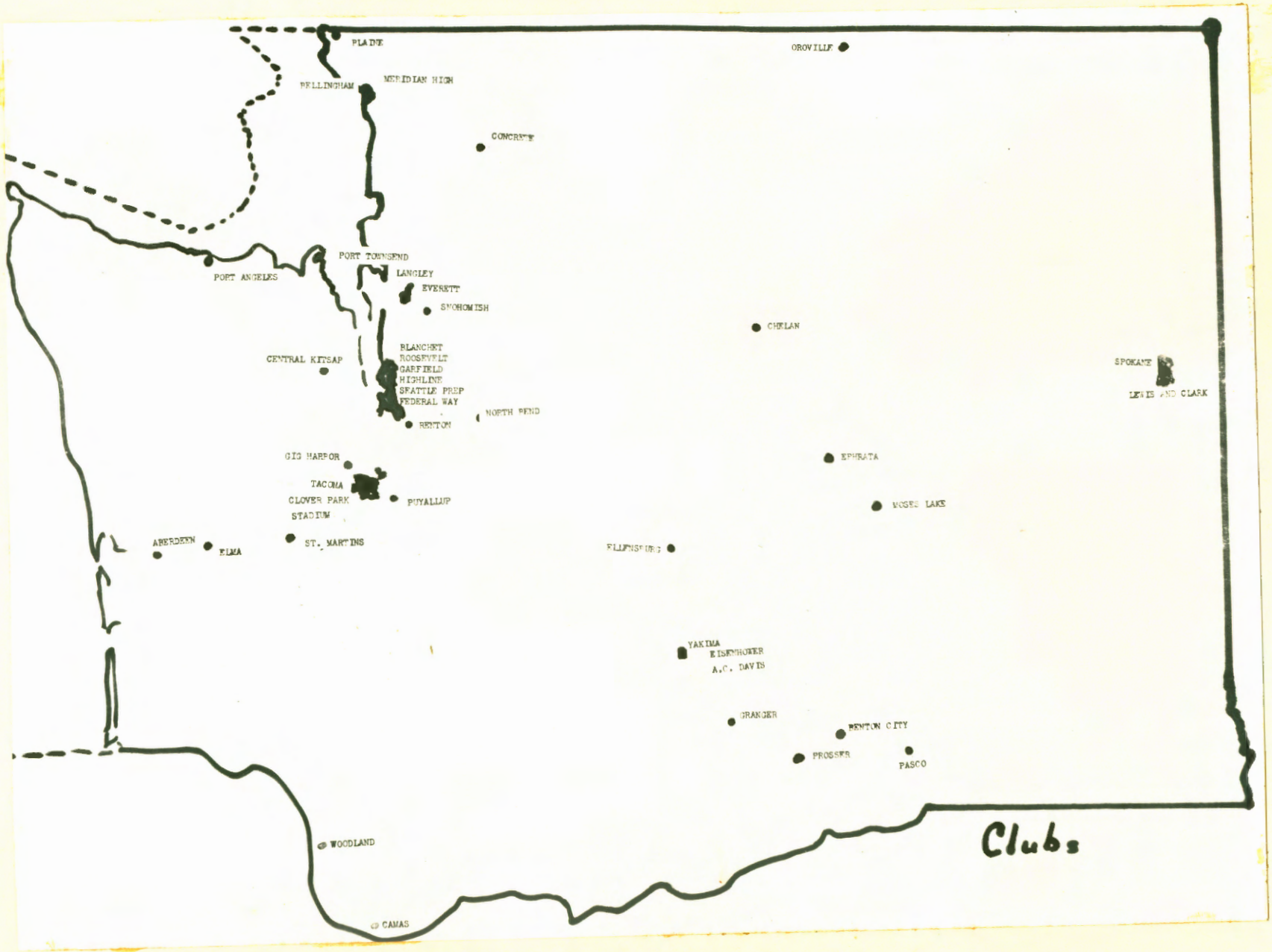
APPENDIX B

THE LOCATION OF SCHOOLS WITH BOTH A PHOTOGRAPHY CLASS AND CLUB


PORT TOWNSEND
LANGLEY
EVERETT
HIGHLINE
SEATTLE PREP
GARFIELD
GIG HARBOR
ELMA
SPOKANE
LEWIS AND CLARK
MOSES LAKE
ELLENSBURG
YAKIMA
A.C.DAVIS
PASCO
Class - Club

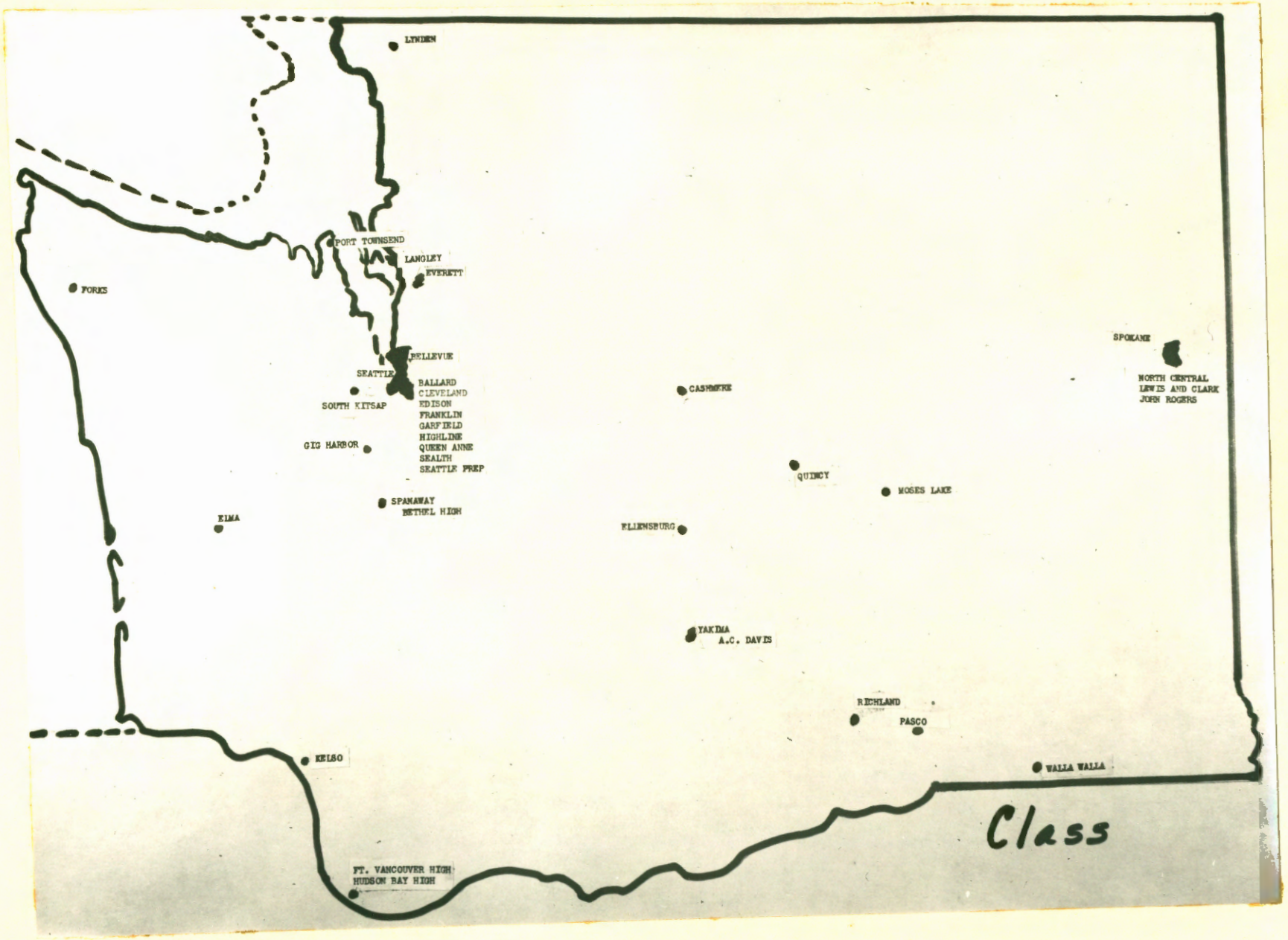
APPENDIX C

THE LOCATION OF SCHOOLS WITH A PHOTOGRAPHY CLUB


BLAINE
OROVILLE
BELLINGHAM
MERIDIAN HIGH
CONCRETE
PORT TOWNSEND
PORT ANGELES
LANGLEY
EVERETT
SNOHOMISH
CHELAN
CENTRAL KITSAP
BLANCHET
ROOSEVELT
GARFIELD
HIGHLINE
SEATTLE PREP
FEDERAL WAY
SPOKANE
LEWIS AND CLARK
NORTH BEND
RENTON
GIG HARBOR
EPHRATA
TACOMA
CLOVER PARK
PUYALLUP
MOSES LAKE
STADIUM
ABERDEEN
ELMA
ST. MARTINS
ELLENSBURG
YAKIMA
EISENHOWER
A.C. DAVIS
GRANGER
RENTON CITY
PROSSER
PASCO
WOODLAND
CAMAS
Clubs

APPENDIX D

THE LOCATION OF SCHOOLS WITH A PHOTOGRAPHY CLASS


LYNDEN
PORT TOWNSEND
LANGLEY
EVERETT
FORKS
BELLEVUE
SEATTLE
BALLARD
CLEVELAND
EDISON
FRANKLIN
GARFIELD
HIGHLINE
QUEEN ANNE
SEALTH
SEATTLE PREP
SOUTH KITSAP
GIG HARBOR
SPANAWAY
BETHEL HIGH
ELMA
CASHMERE
ELLENSBURG
QUINCY
MOSES LAKE
SPOKANE
NORTH CENTRAL
LEWIS AND CLARK
JOHN ROGERS
YAKIMA
A.C. DAVIS
RICHLAND
PASCO
KELSO
WALLA WALLA
FT. VANCOUVER HIGH
HUDSON BAY HIGH
Class