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Clarification of Photographic Training Needed by the Instructional Media Specialist

William Carl Holland
Central Washington University

CLARIFICATION OF PHOTOGRAPHIC TRAINING NEEDED BY THE INSTRUCTIONAL MEDIA SPECIALIST

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William Carl Holland

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Kenneth R. Berry, COMMITTEE CHAIRMAN

_____

Donald J. Murphy

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Dohn A. Miller

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CHAPTER I

BACKGROUND OF THE PROBLEM AND STATEMENT OF THE PURPOSE

I. INTRODUCTION

Instructional media would be quite limited without photography. Film strips, slides and movies exist through the use of photography. The still photograph is utilized not only in recording school activities, but also in magazines, newspapers, books and displays. However, since the inception of audiovisual instructional materials, there has been no concerted effort to determine what photographic training is needed by the instructional media specialist.

The photograph was developed in the early nineteenth century to meet the demand for easily made pictures. It combined factors of visual art as well as science, and developed from the dual activity of experimenters and practicing photographers. The two nineteenth-century inventions from which modern photography evolved were the daguerreotype and the calotype. The collodion, or wet-plate photography, superseded daguerreotypy and calotypy. Though clumsy, the collodion

was used to document the Civil War. Dry-plate photography was invented in 1871 and accelerated the interest in photography. Dry-plate photography was faster and more portable than preceding processes. In 1884 flexible roll film was invented, paving the way for motion pictures. Flexible roll film, together with the Kodak camera first produced in 1888, made the United States a nation of photographers. Photographers recorded explorations, the territorial expansion after the Civil War, and current events. Photographs were used to illustrate books in the first decade of the twentieth century, and picture magazines were introduced in the United States in 1936 (8: 13-15).

The development of photography had a marked influence on teaching materials and methods. It ushered in the newest member of the family of education --audiovisual instruction. Photographs and pictures were used with frequency in books. Projection devices were used to show motion pictures, slides and film strips. The effectiveness of audiovisual instruction was proven during World War I when it was utilized to rapidly train large groups with dissimilar backgrounds. Subsequently, motion pictures and other visual projection devices were employed in schools (3: 485-485B).

Thus the audiovisual technician came into being. Someone was needed to operate and maintain the various projection devices.

Initially, the audiovisual technician was not required to be an educator. However, as audiovisual equipment and instructional materials became increasingly more varied and sophisticated, it became evident that more than a technician was needed. Education needed a specialist--an educator who was also an innovator and a technician. It had been found that audiovisual instructional materials (1) stimulated interest in learning; (2) aided in the retention of information; and (3) had greater value in terms of meaningful experience for the learner; provided, however, such materials were carefully selected and correctly used (3: 485B). A mere technician was not qualified to determine the educational value of instructional materials, nor the best use of such materials in conjunction with the curriculum. Audiovisual instruction needed to be administered by an educator.

Present trends indicate a greater use of audiovisual materials, an increasing interest in photography, and greater participation in television production (3: 485B). If the instructional media specialist is

to be adequately trained, the requirements of his job must be determined. Is photography among such requirements?

II. RELATED RESEARCH

The importance of structuring jobs and the curriculum to train people for them was recognized by Freda D. Bernotavicz and Jim Wallington, who conducted a study called "The Jobs in Instructional Media Study," or JIMS. The main objective of JIMS was to analyze jobs in instructional media in terms of what the worker did and what got done. This analysis was done to establish a pool of data which could be used to restructure jobs and to suggest training for those jobs (1:.25-30).

Dr. Kenneth H. Silber also contributed to JIMS by modifying the "Domain of Instructional Technology" (11: 21-24). Further research is being conducted in an attempt to design a curriculum package and to develop a job inventory (1: 30).

Norberg, et al, prepared a list of ten significant tasks in a position paper prepared for the DAVI Board of Directors. Robert E. Fite used this position paper as a guide in designing a survey instrument to determine the actual and desired roles of audiovisual

coordinators. Fite's study found that the task designated "production duties" was considered one of the most important tasks of the audiovisual coordinator, and the one which demanded the most man-hours per week. It could not be determined whether photography was involved in the performance of such "production duties" (6: 38-39).

While not directly related to the need for photographic training of the instructional media specialist, various studies pertaining to facilities and programs of production centers found that photographic equipment, supplies and darkroom facilities were necessary to audiovisual production centers. Among such studies are the following:

In a national survey conducted in 1963 by Gene Faris, John Moldstad and Harvey Frye, it was recommended that provision should be made in a basic production program for a Polaroid camera, 35mm camera, large copy camera, copy stands, darkroom facilities and equipment, and photographic supplies. It was also recommended that more advanced production centers should have an 8mm motion picture camera, a 16mm motion picture camera, a film strip camera, slide reproducer and process camera (5: 114-19).

Provision of darkroom facilities and photographic equipment was recommended for the typical single elementary school by James W. Brown and Kenneth Norberg (1965). It was suggested that the following equipment be provided: a 35mm camera, a copy stand, appropriate light controls, motion picture editing equipment, and developing tanks, trays, a contact printer, an enlarger and timing devices (2:123-24).

E. S. Ellis conducted a study in 1968 to determine the nature, scope and operation of production centers in school districts in the State of Washington. In such study, it was recommended that district and county production programs provide for photographic activities. It was also recommended that district production centers be equipped with darkroom facilities, an enlarger and miscellaneous darkroom equipment, film and chemicals necessary to develop and print all types of film, a 35mm camera, 8mm camera, 16mm camera, 4 x 5 camera, $2\frac{1}{4}$ x $2\frac{1}{4}$ camera, Polaroid camera and a copy stand.

The recommended presence of photographic equipment and darkroom facilities would indicate that a need for training in the use of such equipment and facilities exists. The Ellis study investigated the need for training teachers in production procedures, and found

that school superintendents and audiovisual directors agreed that teachers needed more training in production procedures, and that only a few schools provided training classes in production techniques. The Ellis survey also found that audiovisual directors from large school districts felt teachers should produce their own materials. (4: 73-80).

Robert I. Milkman conducted a study in 1969 which dealt with training considered essential by master's degree candidates in audiovisual education. Milkman found that photography was considered essential by 161 of the 258 master's degree candidates, but courses in photography were available to only 121 of such candidates. Fourteen graduate study areas in audiovisual education were considered essential; photography ranked fourth. Milkman recommended that master's degree candidates in audiovisual education have the opportunity for instruction in areas they considered essential (9: 1-23).

G. A. Giles in his study to determine competencies of audiovisual specialists in State of Washington community colleges found that 61 per cent of the audiovisual specialists needed stronger emphasis on "local production methods" in their preparation as audiovisual specialists. The Giles' survey instrument described

"local production methods" as including black-and-white still pictures, color still pictures, black-and-white motion pictures, color motion pictures, developing black-and-white and color negatives and prints, developing color reversal film, enlarging, duplicating slides, and film strip production. Giles found that 44 per cent of community college audiovisual specialists had the most training in local production methods, and 33 per cent had the least training in local production methods (7: 61-62).

Sources of training of community college audiovisual specialists were also investigated by Giles. His findings indicated that college course work represented the most common form of formal audiovisual training, and experience and audiovisual related hobbies were the most common forms of informal training (7: 58). Giles suggested that audiovisual specialists get training stressed in the area of local production of instructional materials, particularly still and motion picture photography techniques, and video tape recording. This suggestion was based upon the conclusion that:

> "Photography is an important and growing service of the audiovisual local production department, particularly 8mm motion picture work. Processing of negatives and prints is not a widespread activity." (7: 77-79).

III. STATEMENT OF THE PROBLEM

Related research indicates photography is an important part of audiovisual production, and that production is recognized as one of the important tasks of the instructional media specialist. Photography represents an extensive area of possible study for the instructional media specialist. Yet, consideration of the specific photography curriculum that should be included in preparations of the instructional media specialist, and the need of such photographic training, have been clouded by the incorporation of photography into "production methods", which includes non-photographic techniques. Clarification of the needed photography curriculum is required in order to adequately train the instructional meda specialist for his profession.

The basic problem of this clarification relates to whether the instructional media specialist is expected to provide photographic services and what kinds of photographic services he is expected to provide. These expectations can best be ascertained by exploring the vocational needs of the instructional media specialist and the adequacy of his present training to meet those needs.

IV. STATEMENT OF THE PURPOSE

The purpose of this study was to determine what photographic training is needed by the instructional media specialist in high schools of the State of Washington. In order to make such determination, both the need and the photographic training had to be clarified. This investigation attempted to make such clarifications by (1) specifying school personnel who provide photographic services to high schools in the State of Washington; (2) specifying the source, extent and adequacy of training of such personnel in photography; (3) specifying present utilization of photography by high schools in the State of Washington; and (4) ascertaining what the instructional media specialist considered was his need for photographic training.

V. DEFINITION OF TERMS

For purposes of this study, the following definitions of the terms were used:

1. Instructional Media Specialist defines the person primarily responsible for audiovisual equipment, materials, production and services for high schools in the State of Washington, and whose duties are limited to such responsibilities.

2. Part-time Audiovisual Coordinator defines the person in a State of Washington high school who is responsible for audiovisual equipment, materials, production and services in conjunction with other duties which demand a substantial portion of such person's time.

3. Librarian defines the person in a State of Washington high school primarily responsible for library facilities and services, and who is not officially responsible for audiovisual services, but is called upon in the absence of audiovisual personnel to provide some audiovisual-related services.

4. Subsidiary Photographer defines the person whose primary duties are unrelated to the audiovisual field, but who is called upon to provide photographic services for a high school in the State of Washington.

5. Photographic Training defines the acquisition of photographic knowledge and skill.

6. Photographic Background defines the extent of photographic knowledge and skill.

7. Photographic Knowledge is an understanding of the principles and procedures involved in performing designated photographic tasks.

8. Photographic Skill is defined as the ability

to perform designated photographic tasks.

9. Need is defined as what presently is or could be utilized.

CHAPTER II

METHOD

I. SUBJECT POPULATIONS

The focal population of this study consisted of instructional media specialists serving high schools in the State of Washington. This particular subject population had an N of 21.

Other school personnel included in the subject population were those persons deemed by principals of high schools not served by an instructional media specialist to be logically responsible for providing audiovisual and/or photographic services. This portion of the subject population consisted of:

1. Part-time audiovisual coordinators. This particular subject population had an N of 10.

2. Librarians. This particular subject population had an N of 8.

3. Subsidiary photographers. This particular subject population had an N of 14.

The subject population was obtained by utilizing a list of public, private and endowed schools and colleges in the State of Washington (10: 486-94) as follows:

1. A random sample of 100 of the 271 listed Washington school districts was taken.

2. The first high school listed for each of the districts comprising the random sample was selected.

3. The principal of each of the selected high schools was instructed to deliver the research instrument to the person in such school or district primarily responsible for audiovisual equipment, materials, production and services.

Utilizing educational personnel from 100 different school districts in the State of Washington as a population from which the sample for this study was drawn aided the investigation in permitting inclusion of districts with an enrollment of less than 100 as well as districts with an enrollment in excess of 40,000.

Initially sending the research instrument to the principal of each selected high school also aided the investigation. It provided reasonable assurance that the proper person completed the research instrument, and also provided an opportunity for the need for photography to be reflected in the absence of an instructional media specialist.

II. DEVELOPMENT OF THE INSTRUMENT

A review of past research revealed that an

instrument appropriate for collection of data on clarification of photographic training needed by the high school instructional media specialist did not exist.

Faced with the task of developing such an instrument, the initial step was to enumerate the various tasks which pertain to camera handling and shooting pictures, film processing, the handling of negatives, the handling of photographic supplies, darkroom procedures, and the photography-related production of instructional materials. The itemization of such tasks was used to (1) determine the photographic background, i.e. photographic knowledge and skill, of the subject population; and (2) ascertain what the subject population considered was the instructional media specialist's need for photographic training. The photographic tasks were itemized under Section II, entitled Photographic Background, and the respondent was instructed to designate the extent of his knowledge and skill in the performance of such tasks. Extent was measured as (1) None; (2) Slight; (3) Fair; (4) Good; or (5) Very Good.

These photographic tasks were also enumerated under Section IV entitled Evaluation of Need of Photographic Training. The instructional media specialist's

need for photographic training pertaining to the designated tasks was evaluated by the respondent as (1) Absolutely None; (2) Slight; (3) Moderate; or (4) Essential.

Section III entitled Utilization of Photography consisted of an itemization of possible utilizations of photography in the high school. This section separated the above sections in order to avoid confusion. The respondent was instructed to designate the frequency of utilization of each item. Frequency of utilization was measured in terms of (1) Daily to Weekly; (2) Weekly to Every 2 Weeks; (3) Every 2 Weeks to Monthly; (4) Monthly to Quarterly; (5) Quarterly to Yearly; or (6) Never.

Finally, pertinent information was requested in Section I entitled Demographic Information. This information was used to determine the official position of the respondent, his source of photographic training, whether he considered such training adequate to meet the needs of his vocation, the extent photographic services provided by respondent were requested or volunteered, the extent respondent personally performed such services, and other personnel assisting respondent in the provision of photographic services.

III. GATHERING OF DATA

The principal of each selected high school was contacted by letter which explained the study and asked his assistance in delivering the questionnaire to the person in such school or district primarily responsible for audiovisual equipment, materials, production and services. A questionnaire (the instrument) was enclosed with each letter. To insure confidentiality and maximum return, a pre-addressed, stamped envelope was attached to each questionnaire. An identification number was assigned to each questionnaire.

A six-week interval was allowed for the return of the questionnaires before terminating data collection. Because of the commencement of summer vacations, no follow-up was sent to the non-respondents.

Total returns were 53 for a percentage of return of 53 per cent.

IV. TREATMENT OF DATA

Collection of data was accomplished through the use of a questionnaire. The questionnaire was comprised of four subdivisions requesting ninety-three responses.

The data was first segregated into groups determined by the official position held by the respondent

as follows:

1. Group A included all data provided by instructional media specialists.

2. Group B included all data provided by part-time audiovisual coordinators.

3. Group C included all data provided by librarians.

4. Group D included all data provided by other personnel not connected with the audiovisual field, but who provided photographic services. This group was designated "subsidiary photographers".

The data for each group was separately tabulated and analyzed. In order to obtain average scores for the four groups and the respondents individually, an ordinal scale was used to rank responses in each of Sections II, III and IV. The lowest possible degree of response (None or Never) was assigned the numerical value "1", the next lowest the numerical value "2", and so on until the highest degree of response was reached for each section. The numerical values of responses were then used to obtain average response scores pertaining to background, utilization and evaluation of need, both as to each item and as to each respondent.

Average response scores and percentage scores

were used in comparisons and analyses of data.

CHAPTER III

RESULTS

The intent of this chapter is to report the research findings pertaining to the areas investigated:

(1) School personnel providing photographic services to Washington State high schools;

(2) The photographic background of such school personnel;

(3) Utilization of photography in high schools in the State of Washington; and

(4) Evaluation of the instructional media specialist's need for photographic training.

Findings are reported in terms of percentage scores and average response scores. Percentage scores are used to reflect the distribution of responses. Average response scores are used to measure and average the responses. An ordinal scale was utilized to obtain average response scores.

I. SCHOOL PERSONNEL PROVIDING PHOTOGRAPHIC SERVICES

Population Groups

School personnel providing, or considered most

logically responsible for providing, photographic services to high schools are shown in Table I.

The findings indicate that instructional media specialists are employed by 39.62 per cent of high schools in the State of Washington. Many titles are used to describe the instructional media specialist. Titles used include: Audiovisual Coordinator, Audiovisual Director, Director of Instructional Media, Director of Instructional Resources, Media Director, Supervisor Multi-Media Study Center, Media Specialist, Coordinator of Instructional Materials, Coordinator of Audiovisual Services, and Instructional Materials Coordinator. The most common titles are Audiovisual Coordinator and Audiovisual Director. (This group is designated Group A).

The findings indicate that 18.87 per cent of the high schools do not employ a full-time instructional media specialist, but do employ a part-time audiovisual coordinator. The audiovisual duties of the part-time audiovisual coordinator are subservient to the primary position of (1) teacher, (2) principal, (3) assistant principal or (4) librarian. One part-time audiovisual coordinator stated that only one hour a day was allotted for audiovisual duties. (This group is designated Group B.)

It was indicated by the findings that high schools which did not employ either full-time or part-time audiovisual personnel expected the librarian or other personnel with aptitude in photography to provide the photographic services needed.

In 15.10 per cent of the high schools, librarians were expected to provide needed photographic services. The librarians in this group hold the position of librarian only, and do not hold the official dual capacity of librarian and audiovisual coordinator. Librarians holding a dual capacity are included in Group B, part-time audiovisual coordinators. (This group is designated Group C.)

A variety of school personnel was expected to provide photographic services because of aptitude in photography. The findings indicate that 26.41 per cent of the high schools expected these subsidiary photographers to fulfill the photographic needs of the high school. These subsidiary photographers include teachers, principals, assistant principals, a school counselor, a coach, and a chairman of special education. (This group is designated Group D.)

TABLE I

PERSONNEL PROVIDING PHOTOGRAPHIC SERVICES TO HIGH SCHOOLS

Group		N	Percentage
A.	Instructional Media Specialists	21	39.62
B.	Part-time Audio-visual Coordinators	10	18.87
C.	Librarians	8	15.10
D.	Subsidiary Photographers	14	26.41

The extent the above population groups personally do the needed photographic work is shown in Table II.

The findings indicate that 49.06 per cent of the population do only part of the needed photographic work, and are assisted by students and/or other staff members. Sixty per cent of Group B, part-time audio-visual coordinators, fall in this category; and fifty per cent of Group D, subsidiary photographers, also fall in this category. A large percentage of instructional media specialists (47.62 per cent) provide photographic services with the assistance of others.

Instructional media specialists (Group A) had

the highest percentage (38.11 per cent) personally perform all photographic services needed without assistance. The findings indicate that 20.75 per cent of the population personally performed all needed photographic services without assistance from others.

The findings indicate that 13.21 per cent of the population had others perform all photographic services and did no photographic work themselves. It appears that 16.98 per cent of the high schools had no photographic services at all. Instructional media specialists (Group A.) had the lowest percentage in these two categories. Only 4.76 per cent of the high schools employing instructional media specialists had no photographic services, and only 9.52 per cent of the instructional media specialists had all photographic work done by others. Group C, librarians, had the highest percentage (37.50 per cent) of high schools with no photographic services.

Affect of School District Enrollment

School district enrollments are compared for the four population groups to ascertain whether the size of the school district affected employment of an instructional media specialist. This comparison is shown in Table III.

TABLE II

EXTENT POPULATION PERFORMS PHOTOGRAPHIC WORK FOR HIGH SCHOOLS

Group	Percentage Scores			
	Does Without Assistance	Does With Assistance	Work Done By Others	No Photo Work At All
A. Instructional Media Specialists	38.11	47.62	9.52	4.76
B. Part-time Audiovisual Coordinators		60.00	20.00	20.00
C. Librarians	12.50	37.50	12.50	37.50
D. Subsidiary Photographers	14.29	50.00	14.29	21.43
Entire Subject Population N 53	20.75	49.06	13.21	16.98

The findings indicate in Table III that school district enrollments of high schools employing instructional media specialists range from a district enrollment of 225 to a district enrollment of 40,260. High schools represented by Group A had the highest average district enrollment (11,809). High schools represented by Groups C

TABLE III

SCHOOL DISTRICT ENROLLMENTS
AND POPULATION GROUPS

School District Enrollment	Percentage of Distribution			
	Group A	Group B	Group C	Group D
40,000-50,000	4.76	10.00		
30,000-39,999	4.76	10.00		
20,000-29,999	9.52			
15,000-19,999	9.52	10.00		
10,000-14,999	14.30			14.29
5,000- 9,999	23.80			14.29
1,000- 4,999	23.80	30.00	50.00	21.43
500- 999	4.76	30.00	25.00	14.29
100- 499	4.76		25.00	35.70
0- 99		10.00		

and D had a considerably lower average district enrollment (1,632 and 3,701, respectively), and high schools represented by Group B had an average district enrollment of 10,209. It appears, therefore, that school district enrollment is a factor that may affect employment of an instructional media specialist.

II. PHOTOGRAPHIC BACKGROUND OF POPULATION

Sources of Training

The various sources of photographic training of the subject population are displayed in Table IV. The major sources of such training are college courses (37.74 per cent of the population) and self-taught skills (32.08 per cent of the population). Other sources of training account for 20.75 per cent of the population. Such other sources include training through a photography studio, audiovisual seminars, a friend or member of the family, and high school classes. No photographic training was had by 9.43 per cent of the population.

Group D (subsidiary photographers) had the highest percentage of college-trained personnel (57.14 per cent of Group D). The findings indicate that 38.11 per cent of Group A (instructional media specialists) were college trained, and 38.11 per cent were self-taught. Fifty per cent of Group C (librarians) had no training at all. In tabulating the percentages in Table IV the most advanced source of training was considered. In some instances college-trained respondents were also self-taught.

TABLE IV

SOURCES OF TRAINING

Group	Percentage scores						
	College Trained	Self-Taught	Photo Studio	A-V Seminars	Friend-Family	High School	None
A. Instructional Media Specialists	38.11	38.11	9.52	9.52	4.76		
B. Part-time Audiovisual Coordinators	30.00	50.00				20.00	
C. Librarians	12.50			25.00	12.50		50.00
D. Subsidiary Photographers	57.14	28.57	7.14				7.14
Entire Subject Population N 53	37.74	32.08	5.66	7.55	3.77	3.77	9.43

A comparison of sources of training, average background response scores, and respondents' considered adequacy of training is made in Table V. The adequacy ratings reflect respondents' confidence in their photographic training to meet vocational needs, rather than actual proficiency. Average background response scores measure considered photographic knowledge and skill of respondents.

College-trained respondents displayed the greatest confidence that their training was adequate to meet vocational needs, and had an average background response score of 3.6 (Fair-Good). Photography-studio trained respondents had the highest average background response score (3.93, almost Good). Most photography-studio trained respondents had confidence in the adequacy of such training. Most respondents who had other sources of photographic training did not consider such training adequate to meet vocational needs. These respondents also had lower average background response scores, ranging from 2.9 (almost Fair for high school trained) to 1.52 (None-Slight for those with no training).

TABLE V

COMPARISON OF SOURCES OF TRAINING WITH ADEQUACY OF PHOTOGRAPHIC BACKGROUNDS

Source of Training	*Average Background Response Score	Considered Adequacy		
		Adequate	Not Adequate	Undecided
College courses	3.60	16	3	1
Self-taught	2.44	2	11	4
Photography-studio	3.93	2	1	
A.V. Institute or Seminar	2.28	1	3	
Through friend or family	1.92		2	
High school class	2.90		2	
No training at all	1.52	1	3	1
Total N		22	25	6

*Ordinal scale used to obtain average background response scores:

	Score
No background	1
Slight background	2
Fair background	3
Good background	4
Very good background	5

Photographic Background of Instructional Media Specialists

Instructional media specialists estimated their knowledge and skill pertaining to thirty-eight photographic tasks, and these estimations are displayed in Table VI. The thirty-eight tasks pertained to (1) camera handling; (2) film processing and negative handling; (3) darkroom procedures; and (4) photography-related production of instructional materials.

Camera handling. Examination of the percentage distributions for camera handling tasks indicates tasks one and two (... using a light meter; using a 35mm single lens reflex camera) received the highest percentage of Very Good responses (38.10 per cent of instructional media specialists). The least competence was shown for task six (... using a 16mm movie camera), which received the highest percentage of None responses (42.86 per cent of Group A).

Film processing. Of the four film processing tasks, task fourteen (... developing black-and-white film for negatives) had the highest percentage of Very Good responses (19 per cent of Group A). The least competence was displayed for task sixteen (... developing color film for 35mm slides), which had 57.14 per

cent of instructional media specialists rate their background as None.

Darkroom procedures. The findings indicate that darkroom procedure tasks nineteen, twenty-four and twenty-six (... using an enlarger; washing prints; drying prints with matte finish) each had 19.05 per cent of instructional media specialists rate their background as Very Good. The highest degree of competence was displayed for these three darkroom procedure tasks. The lowest degree of competence was displayed by tasks twenty-nine and thirty (... increasing film speed through use of developer; decreasing film speed through use of developer), which had 47.62 per cent of Group A rate their background as None.

Photography-related production. Examination of the percentage distributions for production tasks indicate task thirty-two (... mounting 35mm slides) displayed the highest degree of competence, with 28.57 per cent of Group A considering their background as Very Good. The lowest degree of competence was displayed by task thirty-six (... producing a 16mm movie), which had 33.33 per cent of Group A rate their background as None.

TABLE VI

INSTRUCTIONAL MEDIA SPECIALISTS RESPONSES FOR PHOTOGRAPHIC BACKGROUND

Task (...knowledge and skill is ...)	* Percentage of Group A				
	None	Slight	Fair	Good	Very Good
CAMERA HANDLING					
1. Using a light meter		9.52	19.05	28.57	38.10
2. Using a 35mm single lens reflex camera	4.76	4.76	23.81	23.81	38.10
3. Using a copy stand with a 35mm camera	14.29	4.76	23.81	23.81	28.57
4. Using a 4x5 camera	23.81	14.29	23.81	28.57	4.76
5. Using an 8mm movie camera	9.52	28.57	14.29	28.57	14.29
6. Using a 16mm movie camera	42.86	4.76	9.52	33.33	9.52
7. Shooting pictures in available daylight		4.76	19.05	42.86	28.57
8. Shooting pictures in available light at night	14.29	23.81	19.05	23.81	14.29
9. Using strob or electronic flash	14.29	4.76	9.52	42.86	23.81

TABLE VI (continued)

Task (...knowledge and skill is ...)	*Percentage of Group A				
	None	Slight	Fair	Good	Very Good
10. Using flash bulb	4.76	14.29	23.81	42.86	9.52
11. Using multiple lighting units	9.52	19.05	14.29	47.62	4.76
12. Shooting various B&W film	9.52	9.52	23.81	28.57	23.81
13. Shooting color film	9.52	19.05	23.81	19.05	23.81
FILM PROCESSING					
14. Developing B&W film for negatives	28.57	14.29	14.29	19.05	19.05
15. Devloping B&W film for direct positives	38.10	23.81	14.29	9.52	9.52
16. Developing color film for slides	57.14	9.52	4.76	14.29	9.52
17. Handling, storing and cataloging of negatives	28.57	14.29	14.29	28.57	9.52
DARKROOM PROCEDURES					
18. Mixing and storing of chemicals	33.33	9.52	14.29	23.81	14.29
19. Using an enlarger	28.57	23.81	9.52	14.29	19.05
20. Using contact printer	23.81	23.81	14.29	19.05	14.29

TABLE VI (continued)

Task (...knowledge and skill is ...)	*Percentage of Group A				
	None	Slight	Fair	Good	Very Good
21. Processing photographic papers through chemicals	28.57	19.05	19.05	14.29	14.29
22. Processing photographic papers through 2-bath processor	38.10	23.81	28.57		4.76
23. Using hypo-clearing agent	33.33	14.29	23.81	9.52	14.29
24. Washing prints	28.57	9.52	28.57	9.52	19.05
25. Drying prints glossy finish	33.33	14.29	14.29	19.05	14.29
26. Drying prints matte finish	28.57	14.29	19.05	14.29	19.05
27. Spotting prints	42.86	19.05	14.29	19.05	
28. Dodging and cropping a negative	33.33	23.81	19.05	14.29	4.76
29. Increasing film speed through developer	47.62	14.29	19.05	9.52	4.76
30. Decreasing film speed through developer	47.62	19.05	19.05	9.52	

TABLE VI (continued)

Task (...knowledge and skill is ...)	*Percentage of Group A				
	None	Slight	Fair	Good	Very Good
PRODUCTION					
31. Telling a story through pictures	9.52	4.76	38.10	33.33	9.52
32. Mounting 35mm slides	9.52	9.52	14.29	33.33	28.57
33. Producing and programming a 35mm slide show	9.52		33.33	28.57	23.81
34. Making a film strip	23.81	14.29	28.57	14.29	14.29
35. Producing an 8mm movie	9.52	23.81	19.05	28.57	14.29
36. Producing a 16mm movie	33.33	9.52	23.81	19.05	14.29
37. Editing and splicing of movie film	9.52	9.52	19.05	33.33	23.81
38. Using a video camera	4.76	4.76	28.57	38.10	23.81

*NOTE: Except for task six and thirty-eight, 4.76 per cent of Group A left responses blank.

Photographic Background of Part-Time Audiovisual Coordinator

Part-time audiovisual coordinators (Group B) estimated their photographic knowledge and skill, and these estimations are displayed in Table VII.

Camera handling. Examination of the percentage distributions for camera handling tasks indicates that half of these tasks received no Very Good rating, and the other half had 10 per cent of Group B rate themselves as Very Good. Tasks which had 10 per cent Very Good responses are tasks one through five, inclusive, and task seven (... using a light meter; using a 35mm camera; using a copy stand with a 35mm camera; using a 4x5 camera; using an 8mm movie camera; shooting pictures in available daylight). The least competence was shown for task six (... using a 16mm movie camera), which received the highest percentage of None responses (60 per cent of Group B).

Film processing. The findings indicate that task fourteen (... developing black-and-white film for negatives) had the highest percentage of Very Good responses (10 per cent of Group B) and Good responses (20 per cent). The lowest degree of competence was exhibited by task fifteen (... developing black and white film for direct positives), with 50 per cent of the responses

None, and zero responses in the Good-Very Good categories.

Darkroom procedures. Tasks nineteen and twenty (... using an enlarger; using a contact printer) displayed the highest degree of competence, with 40 per cent of Group B rating themselves as either Good or Very Good. Tasks twenty-seven, twenty-nine and thirty (... spotting prints; increasing film speed through use of developer; decreasing film speed through use of developer) exhibited the lowest degree of competence, with 50 per cent of Group B responses None, and zero per cent falling in the Good-Very Good categories.

Production. Examination of the percentage distributions for photography-related production tasks indicates tasks thirty-three and thirty-eight (... producing a 35mm slide show; using a video camera) had the highest percentage of Very Good responses (20 per cent of Group B). The least competence was shown for task thirty-six (... producing a 16mm movie), which received the highest percentage of None responses (50 per cent of Group B).

TABLE VII

PART-TIME AUDIOVISUAL COORDINATORS' RESPONSES FOR PHOTOGRAPHIC BACKGROUND

Task (...knowledge and skill is ...)	Percentage of Group B					
	None	Slight	Fair	Good	Very Good	Blank
CAMERA HANDLING						
1. Using a light meter			40	30	10	20
2. Using a 35mm single lens reflex camera			50	20	10	20
3. Using a copy stand with a 35mm camera	10	20	20	20	10	20
4. Using a 4x5 camera	10	30		20	10	30
5. Using an 8mm movie camera		20	30	20	10	20
6. Using a 16mm movie camera	60			20		20
7. Shooting pictures in available daylight		10	30	30	10	20
8. Shooting pictures in available light at night	20	30	30			20
9. Using strob or electronic flash	20	10	40	10		20
10. Using flash bulb	10		40	30		20
11. Using multiple lighting units	20	20	30	10		20

TABLE VII (continued)

Task (...knowledge and skill is ...)	Percentage of Group B					
	None	Slight	Fair	Good	Very Good	Blank
12. Shooting various B&W film			40	40		20
13. Shooting various color film		20	30	30		20
FILM PROCESSING						
14. Developing B&W film for negatives	10	10	30	20	10	20
15. Developing B&W film for direct positives	50	10	20			20
16. Developing color film for 35mm slides	50		10	10	10	20
17. Handling, storing and cataloging of negatives	20		50		10	20
DARKROOM PROCEDURES						
18. Mixing and storing of photographic chemicals	10	10	40	10	10	20
19. Using an enlarger	10	10	20	30	10	20
20. Using a contact printer	20	10	10	40		20
21. Processing photographic papers through chemicals	10	20	20	20	10	10
22. Processing photographic papers through a 2-bath processor	30	10	30	10		20

TABLE VII (continued)

Task (...knowledge and skill is ...)	Percentage of Group B					
	None	Slight	Fair	Good	Very Good	Blank
23. Using hypo-clearing agent	30	10	10	20		30
24. Washing prints	10	10	30	20	10	20
25. Drying prints with glossy finish	10	20	20	30		20
26. Drying prints with matte finish	20	10	20	30		20
27. Spotting prints	30	20	20			30
28. Dodging and cropping a negative	10	20	20	10	10	30
29. Increasing film speed through developer	30	20	30			20
30. Decreasing film speed through developer	30	20	30			20
PRODUCTION						
31. Telling a story through pictures	20		10	40	10	20
32. Mounting 35mm slides		20	10	40	10	20
33. Producing a 35mm slide show	10	10	10	20	20	30
34. Making a film strip	30		10	20	10	30
35. Producing an 8mm movie	30		20	20	10	20
36. Producing a 16mm movie	50		10	10		30

TABLE VII (continued)

Task (...knowledge and skill is ...)	Percentage of Group B					
	None	Slight	Fair	Good	Very Good	Blank*
37. Editing and splicing of movie film	20		10	30	10	20
38. Using a video camera	10		20	30	20	20

*NOTE: Last column represents the percentage of responses that were left blank for this Group.

Photographic Background of Librarians

Group C, Librarians, estimated their knowledge and skill pertaining to the photographic tasks, and these estimations are displayed in Table VIII.

Camera handling. Examination of the percentage distributions for camera handling tasks indicates that none of the tasks received a Very Good response. A general lack of photographic knowledge and skill is shown. Task seven (... shooting pictures in available daylight) received the highest percentage of Good responses (37.5 per cent of Group C). The responses falling in the None category range from 25 per cent of Group C for tasks seven, eight, ten and thirteen (... shooting pictures

in available daylight; shooting pictures in available light at night; using flash bulb; shooting various types of color film) to 87.5 per cent of Group C for task six (... using a 16mm movie camera). The None category, indicating no photographic aptitude, received the highest percentage of responses.

Film processing. There were no Very Good or Good ratings for any of the film processing tasks. The most competence was displayed for task seventeen (... handling, storing and cataloging of negatives), which had 12.5 per cent of Group C in the Fair category. The least competence was shown for task sixteen (... developing color film for 35mm slides), which had 100 per cent of the librarians rate their background as None.

Darkroom procedures. The None category received the highest percentage of responses pertaining to darkroom procedure tasks, ranging from 75 per cent to 87.5 per cent. The findings indicate a lack of competence in such darkroom procedures.

Production The findings indicate a lack of competence in production tasks. The None category had the highest percentage of responses, ranging from 37.5 per cent to 87.5 per cent of Group C.

TABLE VIII

LIBRARIANS' RESPONSES FOR PHOTOGRAPHIC BACKGROUND

Task (...knowledge and skill is ...)	Percentage of Group C				
	None	Slight	Fair	Good	Very Good
CAMERA HANDLING					
1. Using a light meter	37.5	25.0	25.0	12.5	
2. Using a 35mm single lens reflex camera	37.5		37.5	25.0	
3. Using a copy stand with a 35mm camera	50.0	12.5	12.5		
4. Using a 4x5 camera	75.0	25.0			
5. Using an 8mm movie camera	62.5	37.5			
6. Using a 16mm movie camera	87.5		12.5		
7. Shooting pictures in available daylight	25.0		37.5	37.5	
8. Shooting pictures in available light at night	25.0	25.0	37.5	12.5	
9. Using strob or electronic flash	50.0	25.0	12.5	12.5	
10. Using flash bulb	25.0		62.5	12.5	
11. Using multiple lighting units	75.0	12.5	12.5		

TABLE VIII (continued)

Task (...knowledge and skill is ...)	Percentage of Group C				
	None	Slight	Fair	Good	Very Good
12. Shooting various B&W film	37.5	50.0		12.5	
13. Shooting various color film	25.0	25.0	37.5	12.5	
FILM PROCESSING					
14. Developing B&W film for negatives	75.0	25.0			
15. Developing B&W film for direct positives	87.5	12.5			
16. Developing color film for 35mm slides	100.0				
17. Handling, storing and cataloging of negatives	62.5	25.0	12.5		
DARKROOM PROCEDURES					
18. Mixing and storing photographic chemicals	87.5		12.5		
19. Using an enlarger	75.0		12.5	12.5	
20. Using a contact printer	75.0		25.0		
21. Processing photographic papers through chemicals	75.0	25.0			

TABLE VIII (continued)

Task (...knowledge and skill is ...)	Percentage of Group C				
	None	Slight	Fair	Good	Very Good
22. Processing photographic papers through a 2-bath processor	75.0	25.0			
23. Using hypo-clearing agent	87.5		12.5		
24. Washing prints	75.0	12.5	12.5		
25. Drying prints with glossy finish	75.0	12.5	12.5		
26. Drying prints with matte finish	75.0	25.0			
27. Spotting prints	75.0	25.0			
28. Dodging and cropping a negative	75.0	25.0			
29. Increasing film speed through developer	87.5	12.5			
30. Decreasing film speed through developer	87.5	12.5			
PRODUCTION					
31. Telling a story through pictures	37.5		37.5	25.0	
32. Mounting 35mm slides	75.0	12.5	12.5		
33. Producing a 35mm slide show	37.5	12.5	25.0	25.0	

TABLE VIII (continued)

Task (...knowledge and skill is ...)				
34. Making a film strip	75.0	12.5		12.5
35. Producing an 8mm movie	75.0	12.5		12.5
36. Producing a 16mm movie	87.5	12.5		
37. Editing and splicing of movie film	62.5	25.0	12.5	
38. Using a video camera	50.0	25.0	12.5	12.5

Photographic Background of Subsidiary Photographers

Group D, subsidiary photographers, estimated their knowledge and skill pertaining to the photographic tasks, and these estimations are displayed in Table IX.

Camera handling. Examination of the percentage distribution for camera handling tasks indicates tasks two and seven (... using a 35mm single lens reflex camera; shooting pictures in available daylight) received the highest percentage of Very Good responses (57.1 per cent of Group D). The least competence was shown for

task six (... using a 16mm movie camera), which had 50 per cent of Group D responses falling in the None category.

Film processing. It appears that film processing task fourteen (... developing black-and-white film for negatives) received the highest percentage of Very Good responses (57.1 per cent of Group D). Task sixteen (... developing color film for 35mm slides) displayed the lowest degree of competence, with 71.4 per cent of Group D responding None.

Darkroom procedures. The findings indicate that darkroom procedure task twenty-four (... washing prints) had the highest percentage of Very Good responses (64.25 per cent of Group D). Except for darkroom procedure tasks twenty-seven, twenty-nine and thirty, the percentage of Group D responses falling in the Very Good category range from 42.8 per cent to 64.25 per cent, indicating a high degree of competence in darkroom procedures. Task twenty-two (... processing photographic papers through a 2-bath processor) shows the lowest degree of competence, with 35.7 per cent falling in the None category.

Production. Examination of the percentage distribution for photography-related production indicates

production tasks thirty-one and thirty-three (...telling a story through pictures; producing a 35mm slide show) received the highest percentage of Very Good responses (28.58 per cent of Group D). The least competence was shown for production task thirty-six (... producing a 16mm movie), which received the highest percentage of None responses (64.25 per cent of Group D). Responses falling in the None category range from 21.4 per cent to 64.25 per cent.

TABLE IX

SUBSIDIARY PHOTOGRAPHERS' RESPONSES FOR PHOTOGRAPHIC BACKGROUND

Task (... knowledge and skill is ...)	Percentage of Group D				
	None	Slight	Fair	Good	Very Good
CAMERA HANDLING					
1. Using a light meter	14.28		28.58	57.10	
2. Using a 35mm single lens reflex camera	14.28			28.58	57.10
3. Using a copy stand with a 35mm camera	14.28	21.40	7.14	28.58	28.58

TABLE IX (continued)

Task (...knowledge and skill is...)	Percentage of Group D				
	None	Slight	Fair	Good	Very Good
4. Using a 4x5 camera	7.14	7.14	21.40	28.58	35.70
5. Using an 8mm movie camera	28.58		28.58	28.48	14.28
6. Using a 16mm movie camera	50.00	14.28	7.14	14.28	14.28
7. Shooting pictures in available daylight			7.14	35.70	57.10
8. Shooting pictures in available light at night	7.14		14.28	42.80	35.70
9. Using strob or electronic flash	14.28	7.14		28.58	50.00
10. Using flash bulb	14.28	21.40		28.58	35.70
11. Using multiple lighting units	21.40	14.28	21.40	14.28	28.58
12. Shooting various B&W film	14.28			35.70	50.00
13. Shooting various color film		7.14	7.14	35.70	50.00
FILM PROCESSING					
14. Developing B&W film for negatives	14.28	14.28	7.14	7.14	57.10

TABLE IX (continued)

Task (...knowledge and skill is ...)	Percentage of Group D				
	None	Slight	Fair	Good	Very Good
15. Developing B&W film for direct positives	35.70	28.58	14.28	7.14	14.28
16. Developing color film for 35mm slides	71.40	14.28		7.14	7.14
17. Handling, storing and cataloging of negatives	21.40	14.28	7.14	42.80	14.28
DARKROOM PROCEDURES					
18. Mixing and storing of photographic chemicals	14.28		14.28	14.28	57.10
19. Using an enlarger	14.28	14.28	7.14	7.14	57.10
20. Using a contact printer	21.40	7.14	7.14	21.40	42.80
21. Processing photographic papers through chemicals	21.40	7.14	14.28	7.14	50.00
22. Processing photographic papers through 2-bath processor	35.70	7.14		7.14	42.80*

TABLE IX (continued)

Task (...knowledge and skill is ...)	Percentage of Group D				
	None	Slight	Fair	Good	Very Good
23. Using a hypo-clearing agent	14.28	7.14	7.14	21.40	50.00
24. Washing prints	14.28	14.28		7.14	64.25
25. Drying prints glossy finish	14.28	14.28		14.28	57.10
26. Drying prints matte finish	14.28	14.28		14.28	57.10
27. Spotting prints	28.58	21.40	14.28	7.14	21.40*
28. Dodging and cropping a negative	14.28	7.14	14.28	14.28	50.00
29. Increasing film speed through developer	14.28	14.28	21.40	21.40	28.58
30. Decreasing film speed through developer	28.58	21.40	21.40	14.28	14.28
PRODUCTION					
31. Telling a story through pictures	21.40	7.14	7.14	35.70	28.58
32. Mounting 35mm slides	35.70	14.28	7.14	28.58	14.28

TABLE IX (continued)

Task (...knowledge and skill is ...)	Percentage of Group D				
	None	Slight	Fair	Good	Very Good
33. Producing a 35mm slide show	21.40		14.28	35.70	28.58
34. Making a film strip	50.00	14.28	21.40	7.14	7.14
35. Producing an 8mm movie	50.00		21.40	14.28	14.28
36. Producing a 16mm movie	64.25		14.28	14.28	7.14
37. Editing and splicing of movie film	28.58	7.14	21.40	28.58	14.28
38. Using a video camera	35.70		7.14	35.70	21.40

*NOTE: 7.14 per cent of Group D left response to task 22 and 27 blank.

Comparison of Photographic Backgrounds

Photographic backgrounds of the four population groups are compared in Table X. Average background response scores are also compared in Table X relative to camera handling, film processing, darkroom procedures, and photography-related production.

A comparison of average background response scores indicates that the photographic knowledge and skill of the four population groups are ranked as:

(1) Group D, Subsidiary Photographers (3.33);

(2) Group A, Instructional Media Specialists (3.16);

(3) Group B, Part-time Audiovisual Coordinators (2.78); and

(4) Group C, Librarians (1.62).

The average background response scores of Group D and A fall into the Fair-to-Good background category. The average background response score of Group B indicates Slight-to-Fair background, and the average background response score of Group C indicates None-to-Slight background.

A comparison of photographic tasks indicates the population groups have the greatest photographic knowledge and skill pertaining to camera handling tasks (except Group B has a slightly higher average background score for production tasks.) The findings also indicate the population groups have the least aptitude in film processing tasks. While Group A (instructional media specialists) and Group D (subsidiary photographers) are both in the Fair-to-Good background category, the

TABLE X

COMPARISON OF AVERAGE RESPONSE SCORES FOR PHOTOGRAPHIC BACKGROUNDS

Comparison of Population Groups	Average Response Score	Average Background Rated
A. Instructional media specialists	3.16	Fair-Good
B. Part-time audiovisual coordinators	2.78	Slight-Fair
C. Librarians	1.62	None-Slight
D. Subsidiary photographers	3.33	Fair-Good

Comparison of Areas of Photographic Tasks	Population Groups' Average Response Scores			
	A	B	C	D
Camera handling	3.36	2.93	2.01	3.80
Film processing and negative handling	2.45	2.40	1.22	2.71
Darkroom procedures	2.45	2.62	1.29	3.51
Photography-related production	3.31	2.94	1.72	2.76

Ordinal scale used to obtain average response score:

	Score
None background	1
Slight background	2
Fair background	3
Good background	4
Very Good background	5

findings indicate a difference in aptitude in darkroom procedure tasks and production tasks. Darkroom procedure tasks received the second highest average background response score for Group D (3.51); production tasks received the second highest average background response score for Group A (3.31).

III. UTILIZATION OF PHOTOGRAPHY IN HIGH SCHOOLS

Initiation of Photographic Work Done in High Schools

The extent photographic work done in high schools in the State of Washington is requested by the schools or other school personnel, and the extent such work is volunteered (i.e. done without being requested) is shown in Table XI. The findings indicate that most photographic work performed by instructional media specialists is requested work (57.14 per cent). Only 4.76 per cent of the instructional media specialists stated that they mostly volunteered photographic work.

Utilization of Photography by Instructional Media Specialists

Instructional media specialists' responses pertaining to utilization of photography in their high

TABLE XI

INITIATION OF PHOTOGRAPHIC WORK DONE IN HIGH SCHOOLS

Population Group	Percentage scores: Work Mostly Requested by Others	Work Mostly Volunteered by Respondent	Work Equally Requested and Volunteered	No Photographic Work Done by Respondent
A. Instructional Media Specialists	57.14	4.76	23.81	14.29
B. Part-time Audiovisual Coordinators	10.00	20.00	30.00	40.00
C. Librarians	12.50	12.50	25.00	50.00
D. Subsidiary Photographers	42.86	14.29	21.43	21.43
Entire Subject Population N 53	37.74	11.32	24.53	26.42

schools are displayed in Table XII. Ten uses of photography were considered by respondents in estimating frequency of utilization.

Instructional meda specialists utilize photography most frequently in photographing school events and activities, and in video-taping (19.04 per cent of Group A used photography Daily-to-Weekly for such purposes). Photography is least used by Group A in producing a year book and in filming 16mm movies (66.6 per cent of Group A never used photography for these purposes).

Utilization of Photography by Part-time Audiovisual Coordinators

Part-time audiovisual coordinators' responses pertaining to utilization of photography in their high schools are displayed in Table XIII. Part-time audiovisual coordinators utilize photography most frequently in photographing school events and activities, in producing a year book, and in video-taping (10 per cent of Group B used photography Daily-to-Weekly for such purposes). The highest percentage of Group B responses are Quarterly-to-Yearly utilization and Never utilization. Sixty per cent of Group B never produced a year

TABLE XII

INSTRUCTIONAL MEDIA SPECIALISTS' UTILIZATION OF PHOTOGRAPHY

Utilize Photography in ...	Percentages of Group A					
	Daily to Weekly	Weekly to Every 2 Weeks	Every 2 Weeks to Monthly	Monthly to Quarterly	Quarterly to Yearly	Never
1. Taking photographs for public relation purposes	4.76	14.30	14.30	14.30	33.30	14.30*
2. Photographing school events and activities	19.04	14.30		19.04	14.30	28.48
3. Producing a year book	9.52	4.76	4.76		9.52	66.60*
4. Filming 35mm B&W slides	14.30		19.04	9.52	4.76	38.10*
5. Filming 35mm color slides	9.52	9.52	28.48	14.30	23.80	9.52*
6. Producing film strips	9.52		4.76	4.76	28.48	47.60*
7. Filming 8mm movies	4.76	4.76	9.52	14.30	42.80	23.80

TABLE XII (continued)

Utilize Photography in ...	Percentages of Group A					
	Daily to Weekly	Weekly to Every 2 Weeks	Every 2 Weeks to Monthly	Monthly to Quarterly	Quarterly to Yearly	Never
8. Filming 16mm movies	4.76		4.76	4.76	14.30	66.60*
9. Editing movie film	9.52		4.76	9.52	47.60	19.04*
10. Video-taping	19.04	23.80	23.80	4.76	19.04	9.52

*NOTE: The following percentages of Group A did not respond to utilization items below:

Item 1 - 4.76
Item 3 - 4.76
Item 4 - 14.30
Item 5 - 4.76
Item 6 - 4.76
Item 8 - 4.76
Item 9 - 9.52

TABLE XIII

PART-TIME AUDIOVISUAL COORDINATORS' UTILIZATION OF PHOTOGRAPHY

Utilize Photography in	Percentages of Group B (Items 1-9 20% blank; Item 10 30% blank.)					
	Daily to Weekly	Weekly to Every 2 Weeks	Every 2 Weeks to Monthly	Monthly to Quarterly	Quarterly to Yearly	Never
1. Taking photographs for public relation purposes		10			40	30
2. Photographing school events and activities	10	10		20	20	20
3. Producing a year book	10		10			60
4. Filming 35mm B&W slides				10	10	60
5. Filming 35mm color slides			10	20	20	30
6. Producing film strips					30	50
7. Filming 8mm movies				10	40	30
8. Filming 16mm movies				10	10	60
9. Editing movie film				20	30	30
10. Video-taping	10	10	10	10	20	10

book, filmed 35mm black-and-white slides, or filmed a 16mm movie.

Utilization of Photography by Librarians

Librarians' responses pertaining to utilization of photography in their high schools are displayed in Table XIV. Librarians utilized photography most frequently in producing a year book, filming 35mm black-and-white slides, and in video-taping (12.5 per cent of Group C used photography Daily-to-Weekly for such purposes). The highest percentage of Group C responses are Never utilization. None of the librarians ever filmed a 16mm movie or edited movie film.

Utilization of Photography by Subsidiary Photographers

Subsidiary photographers' responses pertaining to utilization of photography in their high schools are displayed in Table XV. Group D utilized photography most frequently in photographing school events and activities (35.7 per cent of Group D used photography Daily-to Weekly for such purposes). Group D utilized photography the least in producing film strips and in filming 16mm movies (71.4 per cent of Group D Never used photography for these purposes).

TABLE XIV

LIBRARIANS' UTILIZATION OF PHOTOGRAPHY

Utilize Photography in ...	Percentage of Group C (Item 5 had 12.5% blank) *					
	Daily to Weekly	Weekly to Every 2 Weeks	Every 2 Weeks to Monthly	Monthly to Quarterly	Quarterly to Yearly	Never
1. Taking photographs for public relation purposes				25.0	25.0	50.0
2. Photographing school events and activities		25.0			12.5	62.5
3. Producing a year book	12.5					87.5
4. Filming 35mm B&W slides	12.5				12.5	75.0
5. Filming 35mm color slides				25.0		62.5*
6. Producing film strips					25.0	75.0
7. Filming 8mm movies				12.5		87.5
8. Filming 16mm movies						100.0
9. Editing movie film						100.0
10. Video-taping	12.5			12.5	12.5	62.5

TABLE XV

SUBSIDIARY PHOTOGRAPHERS' UTILIZATION OF PHOTOGRAPHY

Utilize Photography in ...	Percentage of Group D					
	Daily to Weekly	Weekly to Every 2 Weeks	Every 2 Weeks to Monthly	Monthly to Quarterly	Quarterly to Yearly	Never
1. Taking photographs for public relations purposes	28.58	21.40	7.14	7.14	14.28	21.4
2. Photographing school events and activities	42.8	14.28	7.14	7.14	7.14	21.4
3. Producing a year book	35.7	14.28	7.14		14.28	28.58
4. Filming 35mm B&W slides	21.4		14.28		21.40	42.80
5. Filming 35mm color slides	28.58			14.28	14.28	42.80
6. Producing film strips	7.14			14.28	7.14	71.40
7. Filming 8mm movies	7.14	7.14		14.28	28.58	42.80
8. Filming 16mm movies	7.14				21.40	71.40
9. Editing movie film	7.14		7.14		28.58	57.10
10. Video-taping	14.28	7.14	7.14	14.28	14.28	42.80

Comparison of Utilizations Between Groups and With Photographic Backgrounds

A comparison of average utilization response scores for the subject population is displayed in Table XVI. The findings indicate that frequency of utilization is consistent with ranking of the four groups as to photographic background, i.e., Group D utilized photography the most (2.72); Group A utilized photography to the second greatest extent (2.70); Group B to the third greatest extent (2.05); and Group C utilized photography the least (1.53).

TABLE XVI

COMPARISON OF UTILIZATIONS BETWEEN POPULATION GROUPS

Population Group	Average Utilization Response Score	Average Utilization Rated
A. Instructional Media Specialists	2.70	Quarterly-Yearly to Monthly-Quarterly
B. Part-time Audiovisual Coordinators	2.05	Quarterly-Yearly to Monthly-Quarterly
C. Librarians	1.53	Never to Quarterly-Yearly
D. Subsidiary Photographers	2.72	Quarterly-Yearly to Monthly-Quarterly

The average utilization response score of each respondent was compared with his average background response score. The results of such comparison are displayed in Table XVII. The percentage scores depicted in Table XVII refer to all respondents falling into the photographic background rating stated. For ease of reference, the various frequencies of utilization have been expressed in the numerical values assigned to obtain average utilization response scores. (See Table XVII for an explanation of the numerical values).

Respondents with a photographic background rating of None-to-Slight had the highest percentage in utilization 1 (28.5 per cent), and also the highest percentage in utilization 1-to-2 (57.1 per cent). These respondents had the lowest percentages in more frequent utilizations.

Respondents with a photographic background rating of Slight-to-Fair had the second highest percentage in utilization 1-to-2 (33.3 per cent), and the highest percentage in utilization 2-to-3 (55.5 per cent). The balance of these respondents are in utilization 3-to-4.

Respondents with a photographic background rating of Fair-to-Good had the widest spread of utilizations, ranging from 5 per cent in utilization 1 to

TABLE XVII

COMPARISON OF PHOTOGRAPHIC BACKGROUNDS
WITH UTILIZATION OF PHOTOGRAPHY

Respondents with Average Photographic Background of ...	Average Frequency of Utilization						
	1 %	1-to-2 %	2-to-3 %	3-to 4 %	4-to-5 %	5-to-6 %	6 %
None-to-Slight	28.50	57.10	7.14		7.14		
Slight-to-Fair		33.33	55.50	11.10			
Fair-to-Good	5.00	25.00	40.00	20.00	5.00	5.00	
Good-to-Very Good			28.50	57.20	14.30		

Key to numerical values of utilization:

1 - Never utilized
1-to-2 - Utilized Never to Quarterly-Yearly
2-to-3 - Utilized Quarterly-Yearly to Monthly-Quarterly
3-to-4 - Utilized Monthly-Quarterly to Every 2 Weeks-Monthly
4-to-5 - Utilized Every 2 Weeks-Monthly to Weekly-Every 2 Weeks
5-to-6 - Weekly-Every 2 Weeks to Daily-Weekly
6 - Daily-Weekly

5 per cent in utilization 5-to-6. The highest percentage of respondents with Fair-to-Good average photographic background are in utilization 2-to-3.

Respondents with a photographic background rating of Good-to-Very Good had percentages in utilization 2-to-3 (28.5 per cent) to utilization 4-to-5 (14.3 per cent). The highest percentage of these respondents are in utilization 3-to-4 (57.2 per cent).

The findings indicate that photographic background (i.e. photographic knowledge and skill) of the respondents affect the frequency photography is utilized in their respective schools.

IV. EVALUATION OF THE INSTRUCTIONAL MEDIA SPECIALIST'S NEED FOR PHOTOGRAPHIC TRAINING

Evaluation of Need by Instructional Media Specialists

Instructional media specialists' evaluations of their need for photographic training are displayed in Table XVIII. The thirty-eight tasks enumerated in Table XVIII are identical with the tasks enumerated in Tables VI, VII, VIII and IX, and pertain to (1) camera handling; (2) film processing and negative handling; (3) darkroom procedures; and (4) production

through photography.

Camera handling. The findings indicate that except for camera handling task six (... use of a 16mm movie camera), the highest percentage of Group A evaluated their need for training in all other tasks as Essential.

Film processing. The findings indicate that the highest percentage of Group A evaluated their need for training in film processing tasks as Moderate or Essential, except task sixteen (... developing color film for 35mm slides) was generally evaluated of lesser need.

Darkroom procedures. The findings indicate that the highest percentage of Group A evaluated their need for training in darkroom procedure tasks as either Moderate or Essential, except for task twenty-three (... how to use hypo-clearing agent), which was mostly evaluated either Slight or Essential.

Photography-related production. The findings indicate that the highest percentage of Group A evaluated their need for training in production tasks as Essential, except for task thirty-six (... how to produce a 16mm movie), which was mostly evaluated either Moderate or Essential.

TABLE XVIII

INSTRUCTIONAL MEDIA SPECIALISTS' EVALUATION OF NEED FOR PHOTOGRAPHIC TRAINING

Task (... evaluation of need is ...)	Percentage of Group A *			
	None	Slight	Moderate	Essential
1. Using a light meter	4.76		14.29	76.19
2. Using 35mm single lens reflex camera	4.76		14.29	76.19
3. Using copy stand with 35mm camera	4.76		28.57	61.90
4. Using 4x5 camera	9.52	14.29	33.33	38.10
5. Using 8mm movie camera	4.76	4.76	19.05	66.66
6. Using 16mm movie camera	4.76	38.10	28.57	23.81
7. Shooting pictures in available daylight	4.76		14.29	76.19
8. Shooting pictures in available light at night	9.52		28.57	57.14
9. Using strob or electronic flash	4.76	4.76	19.05	66.66
10. Using flash bulbs	4.76	4.76	19.05	66.66
11. Using multiple lighting units	4.76		42.86	47.60
12. Using B&W film	4.76	4.76	23.81	61.90
13. Using color film	4.76		19.05	71.43

*NOTE 4.76 per cent of Group A left evaluation blank.

TABLE XVIII (continued)

Task (... evaluation of need for training is ...)	* Percentage of Group A			
	None	Slight	Moder-ate	Essen-tial
FILM PROCESSING				
14. Developing B&W film for negatives	14.29	19.05	23.81	38.10
15. Developing B&W film for direct positives	14.29	19.05	28.57	33.33
16. Developing color film for 35mm slides	14.29	33.33	19.05	28.57
17. Handling, storing and cataloging of negatives	9.52		33.33	52.38
DARKROOM PROCEDURES				
18. Mixing and storing photographic chem-icals	14.29	19.05	28.57	33.33
19. Using an enlarger	4.76	19.05	23.81	47.60
20. Making contact prints	14.29	9.52	28.57	42.86
21. Processing photograph-ic papers through chemicals	14.29	19.05	23.81	38.10
22. Processing photo-graphic papers through 2-bath processor	14.29	28.57	28.57	23.81
23. Using hypo-clear-ing agent	14.29	33.33	14.29	33.33

TABLE XVIII (continued)

Task (... evaluation of need for training is ...)	Percentage of Group A *			
	None	Slight	Moder-ate	Essen-tial
24. Washing prints	14.29	19.05	23.81	38.10
25. Drying prints with glossy finish	14.29	19.05	23.81	38.10
26. Drying prints with matte finish	14.29	23.81	14.29	42.86
27. Spotting prints	14.29	19.05	23.81	38.10
28. Dodging and cropping negatives	14.29	23.81	19.05	38.10
29. Increasing film speed through developer	14.29	19.05	38.10	23.81
30. Decreasing film speed through developer	14.29	28.57	33.33	19.05
PRODUCTION				
31. How to tell a story using pictures	4.76		19.05	71.43
32. Mounting 35mm slides		4.76	33.33	57.14
33. Producing a slide show		4.76	23.81	66.66
34. Making a film strip	4.76	9.52	28.57	52.38
35. Producing 8mm movie			42.86	52.38
36. Producing 16mm movie	9.52	14.29	38.10	33.33
37. Editing movie film	4.76	4.76	33.33	52.38
38. Video camera use			28.57	66.66

Table XIX lists the photographic tasks in accordance with priority of need for training to accomplish such tasks, based on instructional media specialists' average evaluation response scores. Average evaluation response scores were obtained by assigning a numerical value to each response in accordance with an ordinal scale. (See Table XIX for ordinal scale used.)

TABLE XIX

PRIORITY OF NEED FOR PHOTOGRAPHIC TRAINING PER GROUP A AVERAGE RESPONSE SCORES

Priority of Need	Task for which Training Needed	Average Evaluation Response Score
1	Using a light meter	3.70
1	Using 35mm single lens reflex camera	3.70
1	Shooting pictures in available daylight	3.70
1	Using video camera	3.70
2	Using color film	3.65
2	How to tell a story in pictures	3.65
2	How to produce a 35mm slide show	3.65
3	Using copy stand with 35mm camera	3.55
3	Using 8mm movie camera	3.55
3	Using strob or electronic flash	3.55

TABLE XIX (continued)

Priority of Need	Task for which Training Needed	Average Evaluation Response Score
3	Using flash bulbs	3.55
3	Mounting 35mm slides	3.55
3	Producing an 8mm movie	3.55
4	Using black-and-white film	3.50
5	Shooting pictures in available light at night	3.40
5	Using multiple lighting units	3.40
5	Editing movie film	3.40
6	Handling, storing and cataloging negatives	3.35
6	Making a film strip	3.35
7	Using an enlarger	3.20
8	Using a 4x5 camera	3.05
8	Making a contact print	3.05
9	Producing a 16mm movie	3.00
10	Developing B&W film for negatives	2.90
10	Processing photographic papers through chemicals	2.90
10	Washing prints	2.90
10	Drying prints with glossy finish	2.90
10	Drying prints with matte finish	2.90
10	Spotting prints	2.90

TABLE XIX (continued)

Priority of Need	Task for which Training Needed	Average Evaluation Response Score
11	Developing B&W film for direct positives	2.85
11	Mixing and storing photographic chemicals	2.85
11	Dodging and cropping a negative	2.85
12	Using a 16mm movie camera	2.75
12	Increasing film speed through developer	2.75
13	Using hypo-clearing agent	2.70
14	Developing color film for 35mm slides	2.65
14	Processing photographic papers through 2-bath processor	2.65
15	Decreasing film speed through developer	2.60

Ordinal scale used to obtain evaluation response scores:

No need for training 1

Slight need for training 2

Moderate need for training 3

Essential need for training 4

Evaluation of Instructional Media Specialist's Need for Photographic Training by Entire Subject Population

The entire subject population's evaluations of the instructional media specialist's need for photographic training are shown in Table XX. Table XX gives a composite picture of the evaluations received. Generally, the subject population evaluated the instructional media specialist's need for training in all photographic tasks (except task sixteen) to be either Moderate or Essential.

TABLE XX

ENTIRE SUBJECT POPULATION'S EVALUATION OF NEED FOR PHOTOGRAPHIC TRAINING

Task (... evaluation of need is ...)	Percentage of Population *			
	None	Slight	Moder-ate	Essen-tial
1. Using a light meter	1.90	3.77	28.30	58.49
2. Using 35mm camera	3.77	5.66	20.75	60.38
3. Using copy stand with 35mm camera	3.77	7.55	28.30	52.83
4. Using 4x5 camera	7.55	13.21	39.62	30.19
5. Using 8mm movie camera	1.90	5.66	35.85	47.17
6. Using 16mm movie camera	3.77	30.19	33.96	22.64

TABLE XX (continued)

Task (... evaluation of need is ...)	Percentage of Population*			
	None	Slight	Moder-ate	Essen-tial
7. Shooting pictures in available daylight	1.90	5.66	18.87	64.15
8. Shooting pictures in available light at night	5.66	9.43	28.30	47.17
9. Using strob or electronic flash	1.90	9.43	24.53	54.72
10. Using flash bulbs	1.90	9.43	26.42	52.83
11. Using multiple lights	3.77	9.43	41.51	33.96
12. Using B&W film	3.77	5.66	30.19	50.94
13. Using color film	3.77	5.66	30.19	50.94
14. Developing B&W film for negatives	7.55	15.09	26.42	41.51
15. Developing B&W film for direct positives	9.43	16.98	35.85	28.30
16. Developing color film for 35mm slides	18.87	33.96	18.87	18.87
17. Handling, storing and cataloging negatives	3.77	3.77	28.30	54.72
18. Mixing and storing chemicals	7.55	13.21	32.08	37.74
19. Using an enlarger	3.77	16.98	22.64	47.17
20. Using contact printer	5.66	16.98	28.30	39.62

TABLE XX (continued)

Task (... evaluation of need is ...)	Percentage of Populations*			
	None	Slight	Moder-ate	Essen-tial
21. Processing papers through chemicals	5.66	20.75	22.64	41.51
22. Processing papers through 2-bath processor	9.43	24.53	28.30	24.53
23. Using hypo-clearing agent	7.55	24.53	26.42	30.19
24. Washing prints	7.55	18.87	24.53	39.62
25. Drying prints with glossy finish	7.55	18.87	24.53	39.62
26. Drying prints with matte finish	7.55	20.75	24.53	37.74
27. Spotting prints	7.55	20.75	28.30	32.08
28. Dodging and cropping negatives	7.55	22.64	20.75	39.62
29. Increasing film speed through developer	7.55	24.53	30.19	24.53
30. Decreasing film speed through developer	9.43	28.30	32.08	20.75
31. How to tell a story using pictures	3.77	11.32	20.75	58.49
32. Mounting 35mm slides		13.21	35.85	41.51
33. Producing 35mm slide show		9.43	24.53	56.60

TABLE XX (continued)

Task (... evaluation of need is ...)	Percentage of Population*			
34. Making a film strip	3.77	11.32	32.08	43.40
35. Producing an 8mm movie		7.55	30.19	49.06
36. Producing a 16mm movie	9.43	11.32	37.74	30.19
37. Editing movie film	3.77	7.55	35.85	43.40
38. Using video camera	1.90	1.90	26.42	60.38

* NOTE: Tasks 1 and 3 had 7.55 per cent of population leave evaluations blank; tasks 11, 23, 27 and 36 had 11.32 per cent leave evaluations blank; task 22 had 13.21 per cent leave evaluations blank; task 31 had 7.55 per cent blank; and all other tasks had 9.43 per cent blank.

Comparison of Evaluations of Need for Photographic Training

The subject population groups' evaluations of the instructional media specialist's need for photographic training are compared in Table XXI. Average evaluation response scores are used in such comparison.

Groups A, B and D (instructional media specialists, part-time audiovisual coordinators and subsidiary

photographers) consider the instructional media specialist's need for photographic training to be Moderate to Essential. Group C, librarians, consider such need almost Moderate.

Average evaluation response scores for photographic training tasks are also compared in Table XXI. The comparison indicates that Groups A, B and D evaluated training in photography-related production tasks to be of first priority, and training in camera handling tasks to be of second priority. Group C evaluated training in camera handling tasks of first priority, and production tasks of second priority. Groups A and C evaluated training in film processing tasks to be of third priority, and training in darkroom procedure tasks to be of fourth priority.

Comparison of Evaluations of Need for Training and Photographic Backgrounds

A comparison was made between average evaluation response scores and average photographic background scores of the subject population. This comparison is reflected in Table XXII. The findings indicate that respondents' evaluations of need for training were affected by their photographic background.

TABLE XXI

COMPARISON OF EVALUATIONS OF NEED FOR PHOTOGRAPHIC TRAINING

Population Group	Average Evaluation Response Score	Average Evaluation Rating
A. Instructional Media Specialists	3.18	Moderate-Essential
B. Part-time Audio-visual Coordinators	3.15	Moderate-Essential
C. Librarians	2.91	Almost Moderate
D. Subsidiary Photographers	3.31	Moderate-Essential

Photographic Tasks for which training is needed	Average Evaluation Response Scores for Population Group A	B	C	D
Camera handling tasks	3.47	3.16	3.07	3.37
Film processing and negative handling tasks	2.94	3.16	2.83	3.01
Darkroom procedure tasks	2.79	2.89	2.75	3.29
Photography-related production tasks	3.48	3.25	2.98	3.43

Key to ordinal scale used for average evaluation response scores:

Need	Score
None	1
Slight	2
Moderate	3
Essential	4

TABLE XXII

COMPARISON BETWEEN EVALUATIONS OF NEED FOR TRAINING AND PHOTOGRAPHIC BACKGROUNDS

Average Background Rating of Respondents	Percentage scores of respondents					
	None-Slight Need	Slight-Moderate Need	Moderate Need	Moderate-Essential Need	Essential Need	No Response as to Need
None-Slight Background	14.20	42.80	7.14	14.20	7.14	14.20
Slight-Fair Background		33.33	22.20	44.40		
Fair-Good Background		5.00	5.00	75.00	15.00	
Good-Very Good Background				85.70	14.30	

CHAPTER IV

DISCUSSION

I. DISCUSSION OF RESULTS

This investigation was concerned with clarification of the instructional media specialist's need for photographic training. The basic problem relates to clarifying (a) the need for such training; and (b) the kind of photographic training needed.

Clarifying the Need for Photographic Training

This study attempts to clarify the need by answering the following questions:

(1) Does the high school instructional media specialist's job include the provision of photographic services to his school?

(2) To what extent does the instructional media specialist personally do the photographic work?

(3) Do others request the photographic services provided by the instructional media specialist, or are such services mostly volunteered by the instructional media specialist?

(4) How is photography used by high schools, and how often is it used?

(5) What do instructional media specialists consider their need for photographic training to be?

The first question is answered by the findings shown in Table II, which shows that 85.72 per cent of the instructional media specialists performed photographic services as part of their job.

The second question is also answered by the findings in Table II. Only 9.52 per cent of the instructional media specialists had others do all photographic work, and only 4.76 per cent of the high schools served by instructional media specialists had no photographic services at all. A large percentage of instructional media specialists performed all photographic work by themselves (38.11 per cent), and 47.62 per cent performed such work with help from students and/or other staff members. Thus, the findings indicate that instructional media specialists personally perform a substantial part, if not all, of the needed photographic services.

The third question is answered by the findings in Table XI, which indicate that most photographic work done by instructional media specialists is requested by the school or other personnel.

The fourth question is answered by the findings

in Table XII, XIII, XIV and XV. A small percentage of instructional media specialists used photography daily-to-weekly for each of the ten uses of photography. The present utilization of photography by high schools in the State of Washington varies. One of the factors affecting the use of photography is the photographic background of the photographer. This is shown by Table XVII.

The last question is answered by the findings in Table XVIII and Table XIX. It appears instructional media specialists recognize at least a moderate need for photographic training in all areas, especially in camera handling and photographic productions.

The need can also be clarified by the existence of Groups B, C and D. The need for photography exists in high schools in the State of Washington. If an instructional media specialist is not available to do the needed photographic work, the high schools find someone else to do it. Those called upon to do such photographic work either have some connection with the audiovisual field, or have an aptitude in photography.

Clarifying the Photographic Training Needed

This study attempts to clarify the photographic

training needed by determining:

(1) Sources of photographic training of instructional media specialists.

(2) Considered adequacy of such photographic training to fulfill vocational needs.

(3) Present photographic background of instructional media specialists and of other personnel performing photographic work for Washington State high schools in the absence of an instructional media specialist.

(4) Description of specific photographic tasks for which training is needed, and the considered extent of need of training for each task.

Sources of training. Sources of photographic training of instructional media specialists are set forth in Table IV, which indicates the two major sources of training are college course work and self-taught skills. Other sources of training account for a small percentage of the instructional media specialists.

Adequacy of training. Table V indicates that instructional media specialists who obtained their photographic training through college course work considered such training adequate to meet vocational needs. However, instructional media specialists who were self-taught (an equal percentage as college trained), did

not consider their training adequate to meet vocational needs. Thus, a substantial portion of the instructional media specialists presently serving high schools in the State of Washington are not adequately trained to fulfill the photographic needs of their vocation.

Present photographic background. The present photographic backgrounds of personnel performing photographic work for high schools in the State of Washington are set forth in Tables VI, VII, VIII, and IX. Table X summarizes such photographic backgrounds. It can be seen from the findings that instructional media specialists presently have an average of fair to good background in photography. The findings also indicate that two major groups called upon to perform photographic work have insufficient knowledge and skill to do the work. This is particularly true of librarians, who generally have slight-to-no photographic knowledge and skill.

Description of specific photographic tasks. The tasks for which photographic training is needed are listed in Table XIX, together with priorities of need as determined by instructional media specialists' evaluations. Darkroom procedures and film processing were considered of lesser importance than camera handling and production tasks, which is consistent with the

photographic background findings, but may be inconsistent with findings pertaining to utilization of photography. Among the uses of photography in high schools, taking photographs to record school events and activities, and taking photographs for public relation purposes represented two of the more frequent utilizations of photography. (Ranked third and fourth according to instructional media specialists' average utilization response scores). Thus, the question comes to mind as to who processed the film and printed those photographs. If the instructional media specialist did not do this work, then there would be no inconsistency. However, if the instructional media specialist processed the film and printed the school events and public relations photographs, then an inconsistency exists. Notice that 38.11 per cent of the instructional media specialists stated they personally did all photographic work (Table II). An inconsistency between utilization of photography and evaluation of the need for photographic training would indicate that the greater influence on the evaluated need for training is photographic background and not utilization.

II. IMPLICATIONS FOR EDUCATION

Results of the present investigation indicates

that a large percentage of instructional media specialists and other personnel called upon to do photographic work do not have adequate training to do it. This results in less use of photography and poorer photographic services provided to schools. In other words, the better the photographer, the better the photographic services provided, and the greater the need for such services.

Photographic training appears to be the key to improvement of photographic services offered to education by the audiovisual field. The data of this study provides a basis from which education can begin to design a better photography curriculum for the instructional media specialist.

III. LIMITATIONS OF PRESENT INVESTIGATION

Interview and observation procedures would have enhanced the reliability of the data collected and enabled a more precise analysis to have been made.

Generalization for this study cannot be made beyond the State of Washington because the study was limited to that state alone. Further, the data can be generalized only to instructional media specialists employed by high schools.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER STUDY

I. SUMMARY

This investigation was concerned with clarification of the instructional media specialist's need for photographic training, with the purpose of establishing guidelines for the development and/or improvement of a photography curriculum for the instructional media specialist.

The background of the problem and an explanation of the scope of this study are set forth in Chapter I. The purpose of this study was to determine what photographic training is needed by instructional media specialists in high schools in the State of Washington. This investigation attempted to make such determination by (1) specifying school personnel who provide photographic services to high schools in the State of Washington; (2) specifying the source, extent and adequacy of training of such personnel in photography; (3) specifying present utilization of photography by high schools; and (4) ascertaining what the instructional media specialist considered was his need for photographic

training. Related research was also reviewed in Chapter I.

Chapter II describes (1) the subject population; (2) development of the research instrument; (3) gathering of the data; and (4) treatment of the data. This chapter explains how the subject population was segregated into four groups according to the official positions held by respondents.

The results of the survey are presented in Chapter III. Questionnaire replies were received from 53 high schools, each representing a different school district in the State of Washington. The first section of Chapter III deals with school personnel providing photographic services. The second section of Chapter III deals with the photographic background of such personnel. The third section of Chapter III deals with utilization of photography in high schools, and the fourth section deals with an evaluation of the instructional media specialist's need for photographic training.

The results of the study are discussed and generalizations are made in Chapter IV.

II. CONCLUSIONS

Based upon the results of this study, the following conclusions have been formulated:

1. Photographic services are generally the responsibility of the instructional media specialist.

2. If an instructional media specialist is not available, either personnel related to the audiovisual field, such as part-time audiovisual coordinators and librarians, or personnel having an aptitude in photography are called upon to provide photographic services.

3. College-trained instructional media specialists have adequate training to meet the photographic needs of their vocation.

4. Self-taught photographers, including instructional media specialists who trained themselves in photography, do not have adequate photographic training to meet vocational needs.

5. An equal number of instructional media specialists do have adequate photographic training as do not have adequate training.

6. Most librarians have little or no photographic training, but yet are sometimes called upon to provide photographic services.

7. Most part-time audiovisual coordinators do not have adequate photographic training to meet vocational needs.

8. Those who obtained their photographic training through college course work have adequate photographic training to meet vocational needs.

9. Instructional media specialists personally do a substantial portion of the photographic work needed by their high schools.

10. A substantial portion of instructional media specialists have help from students and/or other staff members in doing the needed photographic work.

11. Instructional media specialists have a greater aptitude in camera handling and production, than in film processing and darkroom procedures.

12. The average photographic background of instructional media specialists is from fair to good.

13. Most photographic work done by instructional media specialists is requested by others.

14. Photography is used most frequently by the instructional media specialists in (a) video-taping; (b) photographing school events and activities; (c) taking photographs for public relations purposes; and (d) in filming 35mm slides.

15. Photography is used the least by instructional media specialists in filming 16mm movies and in producing a year book.

16. Instructional media specialists with a good or very good photographic background use photography more frequently in their work.

17. The use of photography is affected by the photographic background of the personnel providing the photographic services, with the trend being the better the background the more photography is utilized.

18. The instructional media specialist's need for photographic training is considered moderately essential by all personnel presently providing photographic services to high schools in the State of Washington.

19. The instructional media specialist considers his need to be greater for training in camera handling and in photography-related productions.

20. The instructional media specialist considers his need to be not as essential for training in film processing and darkroom procedures. However, these two areas represent the areas of least proficiency in the instructional media specialist's background.

III. RECOMMENDATIONS

These recommendations are a guide to help prepare instructional media specialists meet the photographic needs of their vocation:

1. The instructional media specialist should be required to pursue college course work in photography.

2. The instructional media specialist should obtain the broadest photographic background and training possible, with particular emphasis on camera handling techniques and production.

3. The instructional media specialist should have adequate training in photography not only to do photographic work, but also to enable him to instruct teachers in the production of their own materials.

4. More dialogue between the instructors of instructional media specialists and the employers of instructional media specialists is needed to design a curriculum in photography to meet vocational needs.

5. Those preparing to be instructional media specialists should be advised in regard to what photographic services they will be expected to provide as instructional media specialists.

IV. SUGGESTIONS FOR FURTHER STUDY

There is need for further study to be made regarding the instructional media specialist's need for training by surveying instructional media specialists in colleges, private schools, and elementary schools.

The extent instructional media specialists use their photographic knowledge in training teachers to do their own photographic work should be investigated.

A detailed investigation is also needed pertaining to present training of instructional media specialists, particularly those pursuing a master's degree. Such investigation should be made to determine (a) whether any photography courses are required of the master's degree candidate; (b) the content of the photography courses presently being offered by colleges; and (c) a determination of the adequacy of such courses to prepare the instructional media specialist to fulfill the photographic needs of his vocation.

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APPENDIX A

QUESTIONNAIRE

Please complete and return
to: William C. Holland

DEMOGRAPHIC INFORMATION

Section I

To ascertain what photographic training is needed by the instructional media specialist (i.e., a person primarily responsible for audiovisual equipment, materials, production and services), we would like to have information concerning your knowledge of photographic equipment and procedures, utilization of photography in your work, and your opinion as to the value of photographic knowledge to the media specialist. Please remember that your answers are completely confidential. Please answer each item as accurately as possible by placing a mark (x) on the appropriate line.

---

1. What is your official position within your school organization?

   _____

2. Where did you obtain your photographic training, if any?

   ___ College
   ___ High School
   ___ Vocational school
   ___ Through a photo studio or photographer
   ___ Correspondence course in photography
   ___ Photo club
   ___ Self taught
   ___ Other_____(specify).

3. Do you consider your photographic training adequate to meet the needs of your vocation as an instructional media specialist?

   ___ Yes
   ___ No
   ___ Undecided

4. What percentage of photographic work performed by you as an instructional media specialist is done at the request of others?

___ 0% - 25%
___ 26% - 50%
___ 51% - 75%
___ 76% -100%

5. What percentage of photographic work performed by you as an instructional media specialist is volunteered by you?

___ 0% - 25%
___ 26% - 50%
___ 51% - 75%
___ 76% -100%

6. Do you personally perform whatever photographic work is required as a part of audiovisual services?

___ Yes
___ No
___ Sometimes

7. If you do not personally perform such photographic work, or if someone assists you in such photographic work, what is such person's official position in your school organization?

_____
(Title)

PHOTOGRAPHIC BACKGROUND

Section II

I consider my knowledge and skill pertaining to the following to be . . .

(I.e., "Knowledge" is an understanding of the principles and procedures involved in performing the designated task, and "skill" is the ability to perform the same. The extent of knowledge and skill may be measured by the consistent quality of photographic work produced when performing the designated task.)

		NONE	SLIGHT	FAIR	GOOD	VERY GOOD
1.	Using a light meter	___	___	___	___	___
2.	Using a 35mm single lens reflex camera	___	___	___	___	___
3.	Using a copy stand in conjunction with a 35mm camera	___	___	___	___	___
4.	Using a 4x5 camera	___	___	___	___	___
5.	Using an 8mm movie camera	___	___	___	___	___
6.	Using a 16mm movie camera	___	___	___	___	___
7.	Shooting pictures in available daylight	___	___	___	___	___
8.	Shooting pictures in available light at night	___	___	___	___	___
9.	Using strob or electronic flash lighting	___	___	___	___	___
10.	Using flash bulb lighting	___	___	___	___	___
11.	Using multiple lighting units	___	___	___	___	___

	NONE	SLIGHT	FAIR	GOOD	VERY GOOD
12. Shooting various types of black and white film (i.e. Panatomic X, Plus X,TriX)	___	___	___	___	___
13. Shooting various types of color film (i.e. Kodachrome II, high speed Ektachrome, indoor and outdoor film)	___	___	___	___	___
14. Developing black and white film for negatives	___	___	___	___	___
15. Developing black and white film for direct positives for projection purposes	___	___	___	___	___
16. Developing color film for 35mm slides	___	___	___	___	___
17. Handling, storing and cataloging of negatives	___	___	___	___	___
18. Mixing and storing of photographic chemicals	___	___	___	___	___
19. Using an enlarger	___	___	___	___	___
20. Using a contact printer or making contact prints	___	___	___	___	___
21. Processing various photographic papers through chemicals	___	___	___	___	___
22. Processing various photographic papers through a 2-bath processor	___	___	___	___	___
23. Using a hypo-clearing agent	___	___	___	___	___
24. Washing prints	___	___	___	___	___
25. Drying prints with glossy finish	___	___	___	___	___

26. Drying prints with matte finish	___	___	___	___	___
27. Spotting prints	___	___	___	___	___
28. Dodging and cropping a negative	___	___	___	___	___
29. Increasing film speed through use of developer	___	___	___	___	___
30. Decreasing film speed through use of developer	___	___	___	___	___
31. Telling a story through pictures (a story book)	___	___	___	___	___
32. Mounting 35mm slides	___	___	___	___	___
33. Producing and programming a 35mm slide show	___	___	___	___	___
34. Making a film strip	___	___	___	___	___
35. Producing an 8 mm movie	___	___	___	___	___
36. Producing a 16mm movie	___	___	___	___	___
37. Editing and splicing of movie film	___	___	___	___	___
38. Using a video camera	___	___	___	___	___

UTILIZATION OF PHOTOGRAPHY

Section III

Photography is utilized in my work . . .

		Never	Quarterly to Yearly	Monthly to Quarterly	Every 2 Weeks to Monthly	Weekly to Every 2 Weeks	Daily to Weekly
1.	In taking photographs for public relations purposes	___	___	___	___	___	___
2.	In photographing school events and activities	___	___	___	___	___	___
3.	In producing a year book	___	___	___	___	___	___
4.	In filming 35mm black and white slides	___	___	___	___	___	___
5.	In filming 35mm color slides	___	___	___	___	___	___
6.	In producing film strips	___	___	___	___	___	___
7.	In filming 8mm movies	___	___	___	___	___	___
8.	In filming 16mm movies	___	___	___	___	___	___
9.	In editing movie film	___	___	___	___	___	___
10.	In video-taping	___	___	___	___	___	___

EVALUATION OF NEED OF PHOTOGRAPHIC TRAINING

Section IV

I think the instructional media specialist's need for the following training to be . . .

(i.e., the instructional media specialist is the person primarily responsible for audiovisual equipment, materials, production and services).

	NONE	SLIGHT	MODERATE	ESSENTIAL
1. Using a light meter	___	___	___	___
2. Use of a 35mm single lens reflex camera	___	___	___	___
3. Use of a copy stand in conjunction with a 35mm camera	___	___	___	___
4. Use of a 4x5 camera	___	___	___	___
5. Use of an 8mm movie camera	___	___	___	___
6. Use of a 16mm movie camera	___	___	___	___
7. How to shoot pictures in available daylight	___	___	___	___
8. How to shoot pictures in available light at night	___	___	___	___
9. How to use a strob or electronic flash	___	___	___	___
10. How to use flash bulbs	___	___	___	___
11. How to use multiple lighting	___	___	___	___
12. How to use various types of black and white film	___	___	___	___

	NONE	SLIGHT	MODERATE	ESSENTIAL
13. How to use various types of color film	___	___	___	___
14. How to develop black and white film for negatives	___	___	___	___
15. How to develop black and white film for direct positives for projection purposes	___	___	___	___
16. Developing color film for 35mm slides	___	___	___	___
17. How to handle, store and catalog negatives	___	___	___	___
18. How to mix and store photographic chemicals	___	___	___	___
19. How to use an enlarger	___	___	___	___
20. How to use a contact printer or make contact prints	___	___	___	___
21. How to process various photographic papers through chemicals	___	___	___	___
22. How to process various photographic papers through a 2-bath processor	___	___	___	___
23. How to use a hypo-clearing agent	___	___	___	___
24. How to wash prints	___	___	___	___
25. How to dry prints with glossy finish	___	___	___	___
26. How to dry prints with matte finish	___	___	___	___
27. How to spot prints	___	___	___	___

	NONE	SLIGHT	MODERATE	ESSENTIAL
28. How to dodge and crop a negative	___	___	___	___
29. How to increase film speed through use of developer	___	___	___	___
30. How to decrease film speed through use of developer	___	___	___	___
31. How to tell a story using pictures (a story book)	___	___	___	___
32. How to mount 35mm slides	___	___	___	___
33. How to produce and program a 35mm slide show	___	___	___	___
34. How to make a film strip	___	___	___	___
35. How to produce an 8mm movie	___	___	___	___
36. How to produce a 16mm movie	___	___	___	___
37. How to edit movie film	___	___	___	___
38. How to use a video camera	___	___	___	___

May 21, 1971

Principal
High School
City, Washington, Zip Code Number

Dear Sir:

Re: Questionnaire to determine what photographic training is needed by the instructional media specialist.

I am presently pursuing a Master's Degree in Instructional Media at Central Washington State College. Research for my thesis involves determining what photographic training is needed by the instructional media specialist (i.e., a person primarily responsible for audiovisual equipment, materials, production and services.)

In this connection, I would very much appreciate your cooperation in passing the enclosed questionnaire along to the person in your district or school primarily responsible for audiovisual equipment, materials, production and services. Since the school year is almost at an end, time is of the essence. I would appreciate the prompt completion and return of this questionnaire. A self-addressed, stamped envelope is enclosed.

Thank you for your cooperation in expediting this matter.

Yours truly,

William C. Holland

P. S. If you have any questions, please feel free to call "collect".