CHAPTER - III

The Related Studies
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The literature from 1941-1947 includes at least 27 status surveys in the field of audio-visual aids. These surveys range from the number and types of projectors available in a given country, state, or nation to the expenditure of funds for audio-visual materials and equipment. The most important of these surveys was the one conducted by the Research Division of the National Education Association in U.S.A. (Audio-Visual Education in City School System), 1946. Other surveys of importance were those of Kauffman ("Audio-Visual Programmes in State Universities"), 1946; Mc Callum ("Audio-Visual Aides in the Secondary Schools of the Southern Association") 1946; Mc Pherson, ("The Organization, Administration, and Support of Visual Instruction in California"), 1939; Molyneaux, ("Audio-Visual Aides - A Survey") 1943; and Roberts ("Trends in Audio-Visual Instruction in Illinois"), 1945. These surveys revealed a widespread growth in all phases of audio-visual field. The amount of equipment and materials available have increased sharply in the schools and universities in the U.S.A. Audio-visual materials are much more widely used in public schools, colleges, and universities. However, expenditure for audio-visual materials and services vary greatly from city to city and from institution to institution.

The following claims for properly used audio-visual materials in teaching situation are supported by the research evidence:
1. They supply a concrete basis for conceptual thinking and hence reduce meaningless word-responses for students.

2. They have a high degree of interest for students.

3. They supply the necessary basis for developmental learning and hence make learning more permanent.

4. They offer a reality of experience which stimulates self-activity on the part of pupils.

5. They develop a continuity of thought, this is especially true of motion pictures.

6. They contribute to growth of meaning and hence to vocabulary development.

7. They provide experiences not easily secured by other materials and contribute to the efficiency, depth, and variety of learning.

Research in the field of audio-visual education indicates that realistic objective materials have genuine value in teaching and that their effectiveness depends on the clarity of the purpose for which they are used, the age of children, the type of children, the type of materials used, the method of use, place of use, and the influence of the teacher who used the materials. Significant gains have been reported in informational learning, retention and recall, thinking and reasoning, activity, interest, imagination, degree of assimilation, and personal growth and expression; and these results have indicated a saving of time both in preparation of work and in completion of minimum essentials.

In a study by the N.E.A. Research Division, 1946 ("Audio-Visual Education in City School Systems"), particular interests were stated by the superintendents regarding the major barriers which kept their own audio-visual programmes from developing. Prominent organizational barriers were "lack of a specially trained director" and "lack of a central Audio-Visual agency". Administrators rated very low the barriers of "indifference" or of "opposition by the board of education or the administration".

In 1953, Califord V. Wait in his doctor's thesis for Indiana University, ("A Study of Audio-Visual Programs in Selected Teachers Colleges in the United States for the Purpose of Identifying and Describing Some Effective Administrative Patterns") studied effective administrative patterns in 8 selected teachers colleges in the U.S.A. and found leadership to be the most important factor in the programme development with a direct administrative channel to and from the office of the president are important influence.

The N.E.A. Research Division's study in 1955 ("Audio-Visual Education in Urban School Districts") also found the need for special trained audio-visual leadership.

The study by Rolland O. Messer, 1952 ("An Exploration of Factors Affecting the Utilization of Audio-Visual Materials") in his Doctor's thesis for Indiana University analysed why grade 5 and 6 Indiana teachers
took little or no advantage of available audio-visual facilities and services. He found greater use by teachers who projected films in their own classrooms, had taken of instruction, and used democratic teaching practices in their classrooms.

Frederick A. White, 1953 (in "Teacher Competence in the Use of Audio-Visual Materials") studied the problem of teacher competence in the use of audio-visual materials, and Herbert Hite, 1951 (in "A Study of Teacher Educational Methods for Audio-Visual Competency in Washington 1939-47") which is his Doctor's thesis for State C. Washington University) found that teachers who had instruction in audio-visual techniques used more audio-visual materials in their teaching and used them better.

In 1946, Amo De Bernardis and J.W. Brown (in "A study of Teacher Skills and Knowledge Necessary for the Use of Audio-Visual Aids") surveyed 44 directors of audio-visual aid programmes and 200 teachers, supervisors, and administrators as to their opinion of what audio-visual instructional skills and knowledge are most important and should be included in teacher educational courses. He rating was given to the operation of audio-visual equipment and the technique of utilizing audio-visual aids in teaching. Lower ratings were given to production techniques and the provision of proper facilities for audio-visual programmes. High ratings were given, in almost all cases, to those items about which the respondents had knowledge, and the findings did not entirely qualify the conclusion of the authors who indicated that all items
rated below should not.

Alizbeth G. Noel and J.P. Leonard, 1947 (in "Foundations for Teacher Education in Audio-Visual Instruction") from the deliberation of a California Committee consisting of audio-visual directors, professors of education, public school administrators, teachers, etc. appointed on a statewide basis by the State Department of Public Institution, U.S.A., suggested the content of audio-visual courses. There is some disagreement with the De Bernardis and Brown studies both as to content and emphasis. Noel and Leonard included a detailed content, suggested programmes for preservice and in-service education of teachers, and guides for the evaluation of teacher education programmes in audio-visual education.

A comparative study of audio-visual programme in the public schools was reported by Godfrey in 1965. Started in 1960 with a nationwide survey of 2,927 public school districts, it provided national estimate of the amount of audio-visual equipment and materials available for classroom use in the spring of 1961. Levels and types of use were determined by surveying 572 schools in 247 districts. A follow up study surveyed 258 of the original 247 districts in the winter of 1963-64. The direction and extent of change and the impact of studies was drawn from 2,500 school districts enrolling 150 to 24,949 pupils, stratified by region and size over a three year period. There was a relatively greater increase of audio-visual equipment than an increase in number of pupils and teachers, with the exception of the small schools. The data supported the contention that new techniques appear to be
adopted most readily in "a complex society with expanding populations", and that the greatest hindrances to new media may be the small, stable districts with a restricted curriculum. Godfrey stated that the reasons for nonadoption of a new medium are: (a) more evidence of the value of the medium when the alternative methods were thought to be equally good, (b) the new medium was too expensive and (c) few teachers were trained to use the new technique.

The studies of De Bernardis and Brown, Hite, and Zimmerman about the problems of knowledge and skills needed by teachers to use audio-visual materials effectively and the content of courses designed to provide such knowledge and skills necessary to make the full use of audio-visual materials reported that many teachers were unprepared to make such use because they lacked the necessary training.


The studies of Hoel¹ and Taylor² found that as a whole, state departments of education have increasingly recognized the importance of audio-visual materials in teaching. This is reflected in:

1. The increased number of personnel and services provided.
2. The growing concern for better training of teachers in the use of audio-visual materials.
3. The increased number of the states requiring audio-visual courses for the teachers, administrative and supervisory personnel, and librarians.
4. The general acceptance of audio-visual services and activities as responsibilities of state departments of education.
5. The general enthusiasm and support of the National Defence Education Act which has augmented and extended the services of state departments of education in the new media.

De Kieffer³ has conducted two studies on teacher training in the United States. The second study indicated that there was an increased emphasis on the training of teachers, over a ten year period in the institutes of higher learning. Furthermore, the number and variety of courses offered by these institutions had sharply increased. In the first study, the greatest

2. Taylor, James W., *A Study of State Programs of Audio-Visual Education with Applications to Nebraska.* Doctoral thesis presented at the University of Nebraska, Lincoln, Nebraska, 1951.
deterrent to the use of audio-visual materials in the classroom seemed to be shortage of funds, while in the second study the greatest deterrent was reported to be apathy towards the use of new materials.

An investigation by De Kieffer into the status of teacher training in the audio-visual field presents rather complete information as to the content of introductory audio-visual courses. He reported the following distribution of units or topics and the percentage of all courses which included each item.

<table>
<thead>
<tr>
<th>Unit or topic</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Utilization of materials</td>
<td>97.0</td>
</tr>
<tr>
<td>2. Selection of materials</td>
<td>96.0</td>
</tr>
<tr>
<td>3. Operation of equipment</td>
<td>95.0</td>
</tr>
<tr>
<td>4. Evaluation of materials</td>
<td>93.0</td>
</tr>
<tr>
<td>5. History and Philosophy of audio-visual education</td>
<td>67.0</td>
</tr>
<tr>
<td>6. Administration of Audio-visual programs</td>
<td>78.0</td>
</tr>
<tr>
<td>7. Production of nonphotographic aids*</td>
<td>63.0</td>
</tr>
<tr>
<td>8. Production of photographic aids*</td>
<td>44.0</td>
</tr>
<tr>
<td>9. Radio Script-writing, transcription and recording</td>
<td>35.0</td>
</tr>
<tr>
<td>10. Other types of production*</td>
<td>21.00</td>
</tr>
<tr>
<td>11. Other items</td>
<td>12.0</td>
</tr>
</tbody>
</table>

*Production activities were arranged into four groups marked* for more precise information on these activities.

1. Ibid. pp. 79-81
The main reason for greater emphasis on the first five items is that all of them pertain to the basic problem i.e. the teachers should be able to select and use materials effectively. The remaining units diminish quite rapidly in frequency of inclusion in courses. Administration also holds a high rank in what is basically a teacher's area of study. That less emphasis is placed on teacher production-skills is readily understandable. Heavy demands are made on any institution which offers audio-visual training with respect to providing equipment, materials and personnel. Training for production increased that demand sharply and consumed much of students' and instructors' time. All these factors will have a profound effect on determining the content of the introductory audio-visual course.

In India, Ansarul Haque Siddiqi, in his master's thesis for Aligarh Muslim University, 1964 ("Audio-Visual Education in India and Its Application to the Teaching of English") concluded that:

(1) The reasons that hinder the use of audio-visual aids in the schools of India are two: lack of materials in the institutions and lack of interest on the part of teachers.

(2) The importance of preparing simple and inexpensive aids is not sufficiently realised by the teachers.

(3) About the attitude of teachers in using audio-visual aids the author concluded that 20% teachers use them because they attract students'
attention, 10% because they keep students interested, 12% because they
give joy in the lessons, 8% because they give better pictures of the
lessons, 6% because they help in increasing knowledge, 4% because they
help the students to learn successfully, and 2% because they excuse
intellectual ability.

(4) Most of the students like audio-visual aids because they found
both the lessons and aids more interesting.

In Thailand the study by K. Amoradhat, 1967 ("A Study of School
Designs for the Use of Audio-Visual Aids") is worth mentioning. The findings
of this study is summarised below:

(1) The use of audio-visual materials in the teaching process is
appreciated by all schools. But because of certain difficulties, some schools
use them only rarely (25%) while others (75%) use them more often.

(2) The reason for infrequent use of audio-visual materials are
(a) that the teachers do not find time to prepare their own audio-visual
materials (37.5%), (b) the audio-visual aids are too expensive (25%)
(c) the set up of the classrooms is not suited to the proper utilization
of audio-visual aids (25%), (d) the schools do not provide audio-visual
aids to the teachers because of lack of funds (12.5%), (e) the teachers think
that the use of these aids is time wasting (12.5%).

(3) The audio-visual aids which are available in all schools are chalkboard, map, globe, sound amplifier, and tape recorder. The aids which most of the schools possess are pictures, model, graphic material, slide, 16mm film projector, filmstrips and slide-projector, gramophone player and radio sets.

(4) The simple and inexpensive audio-visual aids are usually prepared in the classrooms by the teachers and the students.

(5) So far as the facilities for the use of audio-visual materials is concerned it was suggested that not many schools have proper facilities for new appliances like the projection implements etc.

In her study, Chaloa Chaturapajin in 1970 ("A Study of the Planning for Audio-Visual Programmes in the Private High Secondary Schools in Bangkok and Nhonburi") reported that:

(1) It is recognised by the teachers and the school administrators that the improvement of the audio-visual programme should be given greater importance.

(2) A majority of the private secondary school teachers lack knowledge and skills in the utilization of audio-visual aids in their teaching and they also cannot prepare the instructional aids themselves.

(3) The aids supplied by the schools are insufficient and the conditions of the classrooms are least suitable for the display of the materials available.

In 1971, the Department of Audio-visual Materials, A.V. Aids Centre, Ministry of Education of Thailand conducted a study concerning 126 secondary schools of three different types, government schools, municipal schools, and private schools. The main findings were

(1) In every type of school, the only aids sufficiently available are chalkboards (97%) and maps (59.8%).

(2) The non-projected materials are usually prepared by the teachers in the schools.

(3) The main problem for the proper utilization of audio-visual aids is lack of training given to the teachers in this area.

(4) It was also suggested by the author that the lending service of the aids by the Centre be improved and the second in-service programme for teachers be organized.

A number of studies have been conducted to determine some of the reasons why teachers do not make more use of audio-visual materials in their teaching. The Committee on the utilization of College Teaching Resources of the Fund for the Advancement of Education reported that the inertia of the faculty and the administration was the greatest deterrent. De Kieffer


Hubbard, Macomber, No Intyre found additional obstacles such as lack of funds for the purchase of materials, lack of building space, including adequate classroom facilities in which to use audio-visual materials and equipment, lack of trained audio-visual personnel to assist faculty members in the utilization and production of materials, shortage of materials appropriate to the given grade-level and subject matter, the problem of obtaining the correct materials at the proper time and lack of information about sources of materials and services.

Brumbaugh, Wait, Taylor, and Meierhenry concluded that leadership was the most important characteristic necessary to carry out an effective audio-visual program at the local or state level.


7. Meierhenry, Wesley C., Enriching the Curriculum Through Motion Pictures, (University of Nebraska Press, Lincoln: Nebraska, 1952).
Hoban concluded that there are five major characteristics of audio-visual materials which act as deterrents to the more rapid extension of their use in the curriculum: (1) Many of these materials are expensive. (2) They are difficult to obtain when they can be used to best advantage; (3) Expensive equipment is required for projection. (4) Such equipment needs manual skills for operation and technical skill for maintenance. (5) Some form of building modification is often necessary for the effective use of this equipment.

A selected number of studies investigated, among other things, the attitude of teachers towards the use of audio-visual materials and towards specific media. Knowlton and Eaves\(^1\) reported that 1,400 National Science Foundation Summer Institute participants displayed negative attitude towards conventional audio-visual materials, more as a facet of negativism toward instructionally nonrelevant conditions related to use than as a negativism toward the material itself. In managing audio-visual programmes, utilization barriers should be minimised through better organization and better avenues of communication.

Miller\(^2\), using data processing to identify barriers to audio-visual use, found 1,627 barriers encountered in 1,025 uses. The most frequent barriers in descending order were seating arrangement, screen placement, condition of equipment, electrical cords, room acoustics, lack of preparation time.

operation of equipment, use of screen, focussing, and hall noise.

Centralization and specialization in the administration of the audio-visual programme was found to be positively related to inventory increases. Godfrey cited a study by Tansman and Brown\(^1\), which showed that the amount of money spent for audio-visual equipment decreased progressively when the district had a part-time or a full-time audio-visual co-ordinator. This may be accounted for by the possibility that requirements were at optimum level and co-ordinators were devoting their time to closing gaps in needs.

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