A PROPOSED PLAN FOR THE EFFECTIVE UTILIZATION
OF AUDITORY AIDS IN THE DELAWARE, OHIO,
PUBLIC SCHOOLS

A Thesis Presented
for the Degree of Master of Arts

By

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Approved by:

[Signature]
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## CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Introduction</strong></td>
<td>1</td>
</tr>
</tbody>
</table>

## PART I

### RADIO -- TOOL OR WEAPON?

<table>
<thead>
<tr>
<th>I. WORLD CITIZENSHIP</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Isolation</td>
<td>1</td>
</tr>
<tr>
<td>A. Nationalism</td>
<td>2</td>
</tr>
<tr>
<td>2. Reorientation of Beliefs</td>
<td>5</td>
</tr>
<tr>
<td>A. Previous Reorientations</td>
<td>6</td>
</tr>
<tr>
<td>B. Democratic Method of Reorientation</td>
<td>6</td>
</tr>
<tr>
<td>C. Promise of Future Reorientations</td>
<td>8</td>
</tr>
<tr>
<td><strong>By Way of Summary</strong></td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>II. THE RADIO</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A Brief History</td>
<td>12</td>
</tr>
<tr>
<td>A. Advertising Pays</td>
<td>12</td>
</tr>
<tr>
<td>B. Regulation of Radio</td>
<td>14</td>
</tr>
<tr>
<td>2. The Problem of Control</td>
<td>14</td>
</tr>
<tr>
<td>3. Indoctrination</td>
<td>16</td>
</tr>
<tr>
<td>A. Indoctrination vs. Education</td>
<td>17</td>
</tr>
<tr>
<td>4. Advertising</td>
<td>20</td>
</tr>
<tr>
<td>A. Discriminate Listening -- A Necessity</td>
<td>22</td>
</tr>
<tr>
<td><strong>By Way of Summary</strong></td>
<td>24</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>III. DISCRIMINATE LISTENERS</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Why Radio Listeners Should be Discriminating</td>
<td>26</td>
</tr>
<tr>
<td>2. Discriminate Listeners In the Making</td>
<td>27</td>
</tr>
<tr>
<td>A. Characteristics of a Discriminate Listener</td>
<td>27</td>
</tr>
<tr>
<td>B. Adults As Discriminate Listeners</td>
<td>28</td>
</tr>
<tr>
<td>C. The School Can Help Make Discriminate Listeners</td>
<td>33</td>
</tr>
<tr>
<td><strong>By Way of Summary</strong></td>
<td>37</td>
</tr>
</tbody>
</table>
## CONTENTS

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART II</td>
<td></td>
</tr>
<tr>
<td>EFFECTIVE UTILIZATION OF AUDITORY AIDS</td>
<td>39</td>
</tr>
<tr>
<td>IV. DISCRIMINATION -- TEACHING AIDS</td>
<td>39</td>
</tr>
<tr>
<td>1. Introduction</td>
<td></td>
</tr>
<tr>
<td>A. Influences in Program Content</td>
<td>39</td>
</tr>
<tr>
<td>B. Teaching Discrimination with Auditory Aids</td>
<td>40</td>
</tr>
<tr>
<td>2. Areas of Discrimination</td>
<td>41</td>
</tr>
<tr>
<td>A. Three Basic Areas</td>
<td>42</td>
</tr>
<tr>
<td>B. Good and Poor Production</td>
<td>42</td>
</tr>
<tr>
<td>C. Program Content and Advertising</td>
<td>43</td>
</tr>
<tr>
<td>D. Be Alert</td>
<td>44</td>
</tr>
<tr>
<td>3. Radio and Recordings in the School</td>
<td>44</td>
</tr>
<tr>
<td>A. Crowded Curriculum</td>
<td>45</td>
</tr>
<tr>
<td>B. Integration</td>
<td>46</td>
</tr>
<tr>
<td>V. THE STATUS OF RADIO AND OTHER AUDITORY AIDS IN THE DELAWARE, OHIO, PUBLIC SCHOOLS</td>
<td>49</td>
</tr>
<tr>
<td>1. Introduction</td>
<td>49</td>
</tr>
<tr>
<td>A. Scope of the Problem</td>
<td>49</td>
</tr>
<tr>
<td>B. Reasons for Choosing Delaware</td>
<td>50</td>
</tr>
<tr>
<td>C. Plan and Method</td>
<td>51</td>
</tr>
<tr>
<td>2. The Survey</td>
<td>52</td>
</tr>
<tr>
<td>A. Delaware</td>
<td>52</td>
</tr>
<tr>
<td>B. Interviews with Principals</td>
<td>52</td>
</tr>
<tr>
<td>C. Interviews with Teachers</td>
<td>54</td>
</tr>
<tr>
<td>D. Information Gained from Teacher Questionnaire</td>
<td>58</td>
</tr>
<tr>
<td>E. Class Discussions and Student Questionnaire</td>
<td>64</td>
</tr>
<tr>
<td>F. Auditory Aids Equipment</td>
<td>76</td>
</tr>
<tr>
<td>By Way of Summary</td>
<td>78</td>
</tr>
</tbody>
</table>
CONTENTS

Chapter

VI. A PROPOSED PLAN FOR THE EFFECTIVE
UTILIZATION OF RADIO AND OTHER AUDITORY AIDS
IN THE DELAWARE, OHIO, PUBLIC SCHOOLS 80

1. The services of a competent radio repair
and service man should be engaged 81

2. The East Elementary School should install a
radio-equipped and acoustically treated
listening and music room 88

3. Portable table-model radios and portable
transcription players should be purchased
for North and South Elementary Schools 90

4. Adequate central-sound systems are necessary
at both the West Elementary School and the
Willis High School 90

5. A cooperative plan for securing effective
use of the equipment must be inaugurated 92

6. A coordinating radio committee should be
set up to study, advise and administer the
over-all radio plan 94

7. In-service training of teachers in
utilization must be provided 97

8. Training of teachers and students in the
production of radio programs must be
provided 100

9. The physical facilities and training of
teacher-student personnel must be
coordinated 103

By Way of Summary 105
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>VII. CONCLUSIONS AND SUMMARY</td>
<td>108</td>
</tr>
<tr>
<td>1. Implications for Other Cities</td>
<td>108</td>
</tr>
<tr>
<td>2. Conclusions</td>
<td>109</td>
</tr>
<tr>
<td>3. Summary</td>
<td>111</td>
</tr>
<tr>
<td>BIBLIOGRAPHY</td>
<td>113</td>
</tr>
<tr>
<td>1. General</td>
<td>113</td>
</tr>
<tr>
<td>2. A Selective and Annotated Bibliography for the Delaware Plan</td>
<td>114</td>
</tr>
</tbody>
</table>
LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. REPLIES TO QUESTIONNAIRE FROM 19 ELEMENTARY AND 13 HIGH SCHOOL</td>
<td>60</td>
</tr>
<tr>
<td>TEACHERS</td>
<td></td>
</tr>
<tr>
<td>II. ANSWERS ON STUDENT QUESTIONNAIRE ACCORDING TO GRADE AND SEX</td>
<td>68</td>
</tr>
<tr>
<td>III. ANSWERS TO QUESTION NUMBER THREE ON STUDENT QUESTIONNAIRE</td>
<td>70</td>
</tr>
<tr>
<td>ACCORDING TO GRADE AND SEX</td>
<td></td>
</tr>
<tr>
<td>IV. ANSWERS TO QUESTION NUMBER SIX ON STUDENT QUESTIONNAIRE</td>
<td>71</td>
</tr>
<tr>
<td>ACCORDING TO GRADE AND SEX</td>
<td></td>
</tr>
</tbody>
</table>

LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>59</td>
</tr>
<tr>
<td>SAMPLE COPY OF THE TEACHER QUESTIONNAIRE</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>67</td>
</tr>
<tr>
<td>SAMPLE COPY OF THE STUDENT QUESTIONNAIRE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>95</td>
</tr>
<tr>
<td>ORGANIZATIONAL DIAGRAM FOR RADIO COMMITTEES</td>
<td></td>
</tr>
</tbody>
</table>
INTRODUCTION

Democracy is dynamic. Its values are always undergoing modifications. In a democracy, freedom is considered as being of paramount importance; freedom of speech, freedom of press, freedom of worship, and others. Freedom does not mean that each individual can do as his fancy dictates; he cannot infringe without restraint upon the activities of his neighbors. He cannot call his neighbors names and circulate lies about them. That is, he cannot do these things without encountering the possibility of penalties. In other words, freedom in a democracy is not an irresponsible right to live one's live without due regard for others. Freedom is a right coupled with responsibility. Freedom in a democracy is a controlled privilege. The control exists in the interplay of relations between the individual and society. The exact nature of the control is never static; it is always being changed as people acquire new concepts concerning the relationship of the individual to society.

With every freedom there is some form of control; perhaps it may be personal prejudice or social stigma. Perhaps the control is unwritten and unspoken but exists in the minds of men; perhaps it is codified in laws. One of the problems which faces people is the question as to what form the control of a freedom should be. Today, the world is concerned with the matter of atomic energy; how shall it be controlled to benefit the most people? The issue is not
merely to learn how to control its physical properties. Much has been learned in that respect. What is meant is—how can atomic energy be controlled in the minds of men? There probably will be no one final solution of this problem.

Just as there is no single, steadfast solution to the atomic energy question, there is no one answer to the problem of how the radio shall be controlled to benefit the largest number of people. The answer varies from country to country in accordance with customs, habits, beliefs, and desires of the peoples.

Atomic energy is a potent force. It can be harnessed only to be released at a later date in the most destructive weapon yet known to mankind. The energy also can be harnessed constructively and, with future refinements, become one of the most beneficial creations ever to be used for human welfare.

The radio is to be compared with atomic energy. It can be controlled and if the control is inadequate or inappropriate, it can be just as destructive as atom bombs to the health and wealth of a people. If wisely controlled and permitted to be utilized freely by all peoples, it can be one of the forces to bring permanent peace to the world. In the United States the radio can render support to the democratic way of life. It can help the people to comprehend and solve the problems confronting them; it can make clear the issues which are concerned in the atomic energy
question and consequently help to solve them. On the other hand, the radio can be a force to mislead the people, to befuddle the atomic energy issues and other problems as well. It can be a source of danger to democracy.

Part I of this study presents the facts and implications of radio's dual relationship to its listeners for the purpose of encouraging constructive action by the listeners in their utilization of radio. More specifically, this part of the study is directed to those educators who have not as yet recognized the influence which radio plays in the lives of their students, and an attempt is made to make them aware of their responsibilities in assisting students to take advantage of radio's opportunities.

The problem of effective utilization of radio is not to be confined to the school. It is a social as well as a personal matter. Essentially, the problem is that of deciding how radio can best be used to further democracy in this country and world citizenship throughout the world. It has already been pointed out that radio is a source of danger, in addition to being a force of good, to democracy. The question, then for the people in this country, is how can radio most effectively be utilized to maintain and promote the democratic way of life? A subsidiary question is included; how can radio be used to foster the concept of world citizenship? The title to Part I summarizes these two questions - Radio -- Tool Or "Weapon?
A free radio, in this country at least, depends upon the majority of the listeners to prevent any minority group from exerting complete control over it. In effect, this means that there must be discriminate listeners who will be alert to prevent radio from being controlled by any group other than the majority. Adults and youngsters alike must become discriminating listeners. While the adults must depend largely upon themselves in learning how to become critical radio listeners, a social agency called the school exists for the purpose, among others, of helping the boys and girls learn how to use radio effectively. The school can, if it well, assist the students to recognize the pressures which are being exerted through the medium of radio and help them to learn ways of counteracting these pressures. Part II is mostly concerned with the ways in which the school can help its students to use radio as a tool rather than having minority groups use it as a weapon against their better interests.

It is believed that small city schools are not, in general, utilizing auditory aids as effectively as they might. For the purpose of testing this assumption, a study was made of the public schools in Delaware, Ohio. As a result of a survey made of the schools, it is shown that the schools are not utilizing auditory aids effectively for two principal reasons. There is a lack of adequate auditory aids equipment,
and the majority of the teachers have never had training in radio utilization techniques nor have they had much experience in using the radio and recordings.

The latter part of this study is devoted to a plan which is a possible remedy for the ineffective utilization in the Delaware schools. In the concluding chapter the tentative solution is analyzed for the purpose of seeing whether or not it can be applied to other small city schools where auditory aids are not being utilized effectively.

The central thoughts of this study are three:

1. The American radio, to remain free, depends upon discriminate radio listeners.

2. The school can help the young people to become discriminate listeners.

3. The school's effective utilization of auditory aids will assist the boys and girls to live their own lives. This means the aids will be used to make the students discriminate radio listeners and to enrich the curriculum.
CHAPTER I
WORLD CITIZENSHIP
Isolation

The United States no longer considers isolation as its policy in its relations with other nations. It no longer attempts to disregard the influence it has on other countries nor the influence other countries have on it. In a period of less than four years the people of this country have discarded a form of nationalism which has been connected with the United States since its inception. Washington acknowledged its existence in his Farewell Address when he warned against foreign entanglements, and Monroe reaffirmed Washington's warning in the Monroe Doctrine a few years later.

When the United States Senate voted against the proposal to enter the League of Nations, the American people, in spite of having just contributed men and material to fight a war in Europe, served notice to all other peoples that the old policy of isolation was still in effect. Even as late as the year, 1941, the American people still supported the policy of isolation.

Today, only a minority of people favor isolation. At the present time the American people are in a transition period between isolation and internationalism. This is

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1The term American belongs to any citizen in any of the South or North American countries. Here its meaning is restricted to a citizen or citizens of the United States.
exemplified by certain contradictory actions. On the one hand, the American people voted to join the United Nations Organization and the World Bank; and they have proposed a system of international control over the manufacture and use of atomic bombs even though the United States is the only nation now having such bombs in its possession. In effect, the United States is telling the world that it is renouncing its traditional policy of isolation.

At the same time, the national government is proclaiming its right to control certain Pacific islands and is bickering for military bases in other parts of the Western Hemisphere. The fact that the American people countenance such contradictory actions shows that they may have seen the futility of the isolationist policy, but they have not, as yet, realized and accepted the full consequences of their possession of the atomic bomb.

**Nationalism**

Today, the American people have in their hands an instrumentality which can be used to advance human knowledge and to promote more happiness for all peoples. That same instrument can be used to bring utter chaos and despair to the world. Atomic energy has unlimited possibilities for increasing the comforts of life. The atomic bomb offers nothing but fear and destruction. The American people have to decide. Which shall it be -- tool or weapon?
Their decision will not be made by mere words which indicate that the preference is for the tool rather than the weapon nor by pious hopes of averting more wars. That decision will be resolved only from the sum total of their attitudes and actions both abroad and here at home. They must cease trying to fool themselves for they certainly are not deluding the peoples of other nations by proclaiming that they are for permanent peace, which can be brought about only by the collective security of all nations, and at the same time engage in those activities which mock their very words.

The American people may confuse themselves but not other nations by zealously clinging to islands in the Pacific for the protection of their national welfare and at the same time condemning other countries for adopting similar policies in other parts of the world. Their insistence upon the right to control the Panama Canal is no different from the English claim to the Suez and the Russian bid for control of the Dardanelles. In each instance the country involved is intent upon the protection of its national sovereignty.

Permanent world peace cannot be achieved as long as the people of each country harbor the misconception that their nation is supreme. The war-weary world will not be traveling the road to permanent peace until all the peoples accept the conception of world citizenship. The
people in this country, as well as those in all other countries, must come to believe that everyone is first, a citizen of the world, and then, a citizen of a country. Just as, yesterday, the American people considered themselves as citizens of the United States and then as members of a state, so today they must first think of themselves as being citizens of the world and then as Americans.

That belief must permeate the entire population of each country. Here in the United States, for example, the people cannot be sincere in their beliefs for democracy let alone world government as long as there exists racial and religious minorities which are denied in fact, although perhaps not in name, the same privileges and responsibilities of the majority. The peoples in other nations likewise cannot be sincere in their efforts for a common world citizenship as long as they prevent their minority groups from participating in the same rights and responsibilities of the majority. World citizenship is democracy practiced at home as well as abroad.

The American people will be judged not entirely by what they say, but also by their actions within their own country and their attitudes and actions on the international level. They, in turn, will judge other peoples by the same standards. However, because the American people have the atomic bomb, their actions will be more closely scrutinized; because they have the bomb, they are
in the position of leadership in international affairs.
As some individuals have put it so aptly, the American
people must decide, even more than any one other people,
whether there is to be one world or none.

Reorientation of Beliefs

What all this means is that the acceptance of the
conception of world citizenship will require reorientation
of certain beliefs upon the part of the American people
and upon the part of all other peoples. The American
people believe in democracy. They also believe their
nation is supreme, is infallible in its relations with
other nations. What the majority of them have yet to
believe is that their country is not ordained to be the
greatest on earth, that it is one of many nations, that
democracy must not end at their country's borders. Before
they can have permanent peace, before they can enjoy the
highest standard of living possible, they must recognize
the need for a world democracy, a world government. Just
as in the past they have been willing to concede that
national sovereignty was greater than that of a state, so
today they must accept the idea of a world sovereignty
being more important than that of any one nation. The
American people can bring about such a reorientation if
they so desire for they have made similar reorientations
in the past.
Previous Reorientations

They effected a reorientation when the colonies broke away from England. The history books have not always stressed the tremendous change in thinking that had to occur before the colonists could become accustomed to considering themselves better off without England's support. Once that reorientation was made the colonists went to the other extreme in trying to get away from the disadvantages of a central authority as represented by the Parliament and King of England.

That other extreme was called a Confederation. It was an organization in which the colonies, renamed states, kept certain vital powers such as taxation and currency to themselves rather than entrusting them to a central authority. The Confederation did not work satisfactorily. The history books tell of the confusion which resulted as each state tried to act as a little nation. It was not long before there had to be another reorientation of beliefs. The people became convinced of the need for a stronger central authority than that represented by the Confederation.

Democratic Method of Reorientation

The reorientation took time. As all movements begin, a few people first recognized the need for a stronger central government and then they worked to convince the majority to accept their idea. They met much opposition.
The majority's conception of a weak central government was firmly entrenched and other minority groups had ideas which they, too, wanted the majority to accept. Eventually, the minority group which favored a strong representative government convinced enough people to enable such a government to come into existence. There was no indoctrination for the media of communication were not controlled by any one of the minority groups. The majority heard all of the ideas sponsored by the various minority groups which had cures for the ineffective Confederation.

There is no doubt but what the majority of people of that period in American history had just as much trouble bringing about the necessary reorientation in their minds concerning a stronger central government as their descendants do today in getting used to the idea of world citizenship. Yesterday, the American people took for granted that they were first, citizens of the United States, and then they were Ohioans or Texans or New Yorkers. Today, they must first consider themselves as citizens of the world and then as Americans.

The reorientation of the majority will take time. In a democracy the ideas sponsored by one minority group have to compete with those of all other minority groups. The majority then decides which ideas it wants to accept. The process of making the decisions takes time. The concept of world citizenship seems to be winning the battle
against the idea of isolationism which today is held by a minority rather than the majority of Americans. However, there still is the opposition being held by the majority which must be overcome - the opposition of the long-held tradition of supremacy of nationalism.

Promise of Future Reorientations

The American people, at least that group which now favors world citizenship, can take encouragement from their past history. It took approximately ten years for the one-time colonists to realize that a weak Confederation had to be scrapped in favor of the present form of government. That is not a very long period of time for the reorientation of a majority to occur. Ten years is a short period of time when it is considered what limited means of communications the minority, which first conceived the idea of a stronger federal government, had at its disposal with which to persuade enough people to accept the idea. In those days the forms of communication were by word-of-mouth, occasional letters, and a few newspapers. Yet, in ten years the people achieved a reorientation in their beliefs concerning the role of the federal government in their lives.

In less than four years the American people have been able to throw off the shackles of isolationism. Their reorientation is not yet complete. World citizenship is still around the corner. The rapidity with which they
discarded isolationism was due, of course, to certain influences of the second World War. They became conscious of how the many forms of rapid transportation and even more rapid means of communication had, in effect, made the earth smaller and made isolation of any one country impossible to achieve.

The means of communication such as the radio have made it possible for a minority to make its views known to most of the people in this country in a matter of hours. This fact is a promising one in regard to the promotion of the conception of world citizenship. This fact may help to hasten the day when the majority will believe in world citizenship.

The many means of communication, however, have a danger which must be guarded against. That danger is control. No one person or group of persons should be permitted to gain complete control over any of the means of communication, such as the radio. No matter what the method of the control - by government or by private ownership; no matter how enlightened the control; it constitutes a menace to democracy and world citizenship, for control, by its very nature, repudiates freedom of people and their ideas. Even the minority which now believes in world citizenship must not gain control of the media of communication for then it will defeat its own purpose. This minority must not disperse the seeds of world citizenship and the...
attendant freedom of expression of ideas with its right hand and then crush the seeds with its left.

By Way of Summary

The American people have had to make several changes in their beliefs concerning the role which the federal government should play in their lives. After discovering that a weak central government was not adequate, they decided upon the form of national government which exists today. In the realm of international affairs the American people have tended to play a lone hand. Perhaps that tendency is a natural one in that many of the immigrants to this country left Europe in order to escape its circle of influences, that having escaped Europe's entangling influences they desired to remain free of them. At any rate, the years between the two world wars witnessed the last attempt by the American people to isolate themselves from world affairs.

The second World War has forced them to revise their beliefs about the relationship of this country to others. They now know that isolation is impossible. At the same time the majority of the American people have been discarding isolation as being obsolete, it has been clinging determinedly to its beliefs about the United States as being supreme; it favors militant nationalism while hoping for permanent peace. The majority is willing to have the
United States cooperate with other nations as long as this country is not forced to give up any of its sovereignty. The American people, as yet, have not accepted the theory advanced in the radio program, "Operations Crossroad." The theory is that each person has sovereignty which, in the past, he has delegated to local, state, and national governments. The proposition is that now he should invest some of his sovereignty in a world government.

One of the factors, in addition to the airplane and the atom bomb, which helped the American people to reject the theory of isolationism was the radio. The radio, through its foreign news round-ups, for example, helped them to realize how closely all nations are linked together. Just as the radio assisted in causing the American people to throw overboard the idea of isolation, so can the radio acquaint them with the necessity to believe in world citizenship. The radio must be free; free from complete control by any one minority group; free so that all minority groups may use it to make most of the people familiar with their ideas. It must remain free in order that the minority which believes in world citizenship can reach most of the people. A free radio is a tool for democracy and world citizenship; a radio which is completely controlled by a minority is a weapon against democracy and world citizenship.

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1 A CBS public-service program designed to acquaint the listeners with the various implications of the atomic bomb. Station WENs, Columbus, Ohio, broadcast the original program and, in addition, rebroadcast it twice from recordings.
CHAPTER II

THE RADIO

A Brief History

In the preceding chapter it was mentioned that the radio, like atomic energy, is capable of being either a tool for the people or a weapon against them. Since radio is so pregnant with possibilities of harm as well as good, it may be worth the time to examine it more closely.

Advertising Pays

At first, from 1901 to 1920, radio was more commonly known as wireless and used primarily to transmit messages in Morse code from point-to-point and from ship-to-shore. According to one writer, it was not until 1920 that the first regular broadcasting of sound was made. In November of that year the Westinghouse Electric station KDKA in Pittsburgh was put into operation.\(^1\) Program content over that station and the others which followed shortly afterward was very meager and dull with the novelty of radio being the chief reason why people listened. Even so there soon rose the question of who would pay for the programs. The answer was not long in coming - the advertiser. While the original purpose of encouraging radio advertising was to defray program expenditures in order that radio sets would be sold, it soon became a profitable business in

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itself.\(^1\)

From the first commercial program over station KDKA in 1922, advertising has proved itself capable of financing program costs. According to Broadcasting, the number of homes with radio sets in that year totaled 60,000. Twenty-three years later in 1945 the total was 34,000,000.\(^2\) Not only did advertising encourage the sales of receiving sets, but it promoted the establishment of radio stations to furnish programs for the receiving sets. Broadcasting reveals that the official count of United States broadcasting stations was thirty on January 1, 1922, and 1,004 on January 1, 1946.\(^3\)

Advertising also is responsible for the existence of the four commercial networks. Subject to certain limitations, the more people which advertising reaches the more effective is the advertising and the more profitable it is. This is why radio stations have been linked in transcontinental associations called networks. Each station benefits by having high-priced programs made available to it for a nominal fee,\(^4\) and the advertisers benefit by reaching more people for each dollar spent than they otherwise could by furnishing programs to individual stations.

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\(^1\) Ibid., p. 17.

\(^2\) Broadcasting, 1946 Yearbook Number, p. 20.

\(^3\) Ibid., p. 19.

\(^4\) Radio stations do not pay for those sustaining programs which are sponsored by the networks. The stations receive this service in exchange for enabling advertisers to buy time from them.
Regulation of Radio

Advertising, however, is not a panacea for all of radio's problems. By 1927 the public recognized the need for some sort of jurisdiction in the radio industry as hundreds of stations were trying to operate on the same wave bands. As a result, the Radio Act of 1927 was passed by Congress. Under the terms of that act a governmental agency called the Federal Radio Commission\(^1\) was set up to maintain order. This was done by giving the agency the authority to allocate the channels through the granting of licenses. The licenses were to be granted for limited periods of time, not to exceed three years, and the radio act stated that such a license did not represent ownership of an allocated frequency. The radio act also stated that the radio stations, in order to hold their licenses, had to operate in the "public convenience, interest, or necessity."

The Problem of Control

Although the radio industry recognized the need for governmental regulation of radio, it resisted the efforts of the Federal Radio Commission and now openly assails the activities of the present Federal Communications Commission.

\(^{1}\) Renamed the Federal Communications Commission in the Radio Act of 1934.
The radio industry charges the FCC with attempting to gain governmental control of radio while the FCC counter-charges the radio industry and its ally, radio advertising, with excessive commercial control. Both groups claim to be acting in the best interests of the people, and each repudiates the charges made against it by the other.

It is not the purpose of this work to attempt an evaluation of the arguments put forth by the FCC and the radio industry. There have been many magazine articles and books written in support of the contentions of the two groups. Perhaps the truth lies somewhere between the charges and counter-charges. Landry may have been right when he wrote that the American system of radio, in order to remain democratic, needs the clashing of the radio industry and the FCC. The purpose of recording the differences of opinion is to show that the matter of control over radio is a problem which constantly faces the American people whether they are consciously aware of it or not.

The problem is one which cannot be solved by allowing any minority group, radio industry, advertisers, governmental agency, or any other social, economic, or political group, to assume control of radio or of the other means of communication. Rather than engage in a partisan attack in the radio industry or the FCC or any other minority group.

which is said to be grasping for control of radio, there will be an attempt to show the consequences of allowing any minority group to control radio or any other form of communication and to suggest a method whereby such control may be averted.

Indoctrination

There are some differences of opinion as to what indoctrination means. Some people believe it to be only teaching or instructing as it is defined by Webster.\(^1\) Others, and the writer belongs to this group, believe that indoctrination occurs only when a certain idea is presented to the exclusion of all others which may conflict with it. Indoctrination can occur only when all forms of education and communication such as classroom teachers, ministers, textbooks, radio, movies, and newspapers are so controlled as to permit only the exchange of "acceptable" ideas and at the same time to prevent the entrance of conflicting ones.

What this means is that teachers by themselves cannot indoctrinate; a minority group which gains control over the radio cannot indoctrinate; before there can be indoctrination all the means of communication must be controlled completely so the student leaving the classroom and the

\(^1\) Indoctrinate - "To instruct in the rudiments or principles of learning, or of a branch of learning; to instruct (in), or imbue (with), as principles or doctrines; teach." Webster's Collegiate Dictionary (Fifth Edition), p. 511.
listener turning off the radio will not be subject to conflicting ideas from other sources of information. However, a teacher can try to indoctrinate, and should a minority gain control of radio, it could attempt to indoctrinate.

There are some people in this country who say they favor indoctrination. It may be that they have the first definition in mind when they use the term, but the effect of their actions in support of their beliefs is that of fostering unwelcomed control. Those educators who attempt to indoctrinate their students in the principles of democracy are trying to do two things. First, they are trying to do their students' thinking for them; and secondly, they are attempting to force the students to accept what they, the teachers, consider to be the principles of democracy. The result would be the same if a minority were to gain control of the radio and attempt to indoctrinate its listeners with the principles of democracy.

**Indoctrination vs. Education**

Indoctrination is not education. It is the presentation of one idea to the exclusion of all others which disagree with it. Education implies the freedom of expression of ideas. The minute anyone attempts to indoctrinate others with the principles of democracy that person fails in his purpose. Use of an undemocratic method will not achieve a democratic result.
In this country, at least, the common intelligence of the population is high enough to warrant the people governing themselves. It is true that the American way of life is full of imperfections, full of injustices to many members of its society, and that reforms are few and slow. Indoctrination is a method by which a few people desire to increase and hasten certain reforms. While those who favor indoctrination say they desire to use it for the benefit of the majority, they forget or ignore the fact that indoctrination presumes control of the communications and education by a few people. They ignore or do not realize that they are assuming that the majority is not capable of making decisions for the betterment of its welfare. They ignore, do not realize, or do not care, that the use of the tool of indoctrination is dangerous not only because it may fall into the hands of a few who are not interested in bettering the welfare of the majority, but that indoctrination of a population will result in a people who need to be told, who lose the initiative to think for themselves.

Germany, Italy, and Japan have paid heavily for using the tool of indoctrination, and the rest of the world has paid, also. The people who marvel at the effectiveness of the tool of indoctrination and say that it should be used in this country in order to promote democracy and world citizenship forget the price which has been paid for the use of indoctrination in the past. They may be sincere in
their intentions, namely to improve the welfare of the majority, but they must realize that true and lasting reforms evolve from within a society, they are not doctrines imposed by an enlightened minority.

Those believers in democracy and world citizenship who plan to use the radio and other means of communication for the purpose of indoctrination show all too clearly that H. Gordon Hullfish was right when he wrote:

It is never an easy matter for those who are certain that they possess the truth to be tolerant of those who seem to live with error, and, as our experience in the last war demonstrated, the task is made more difficult when a way of life is itself at stake.¹

The educators who are ardent lovers of democracy must realize that in their hurry to instill the concepts of democracy in their students they have taken the wrong turn in the fork of the road and are stumbling along in a blind alley. Their obsession with indoctrination has caused them to neglect the job which they are supposed to do. They are supposed to assist their students in learning to think. Edman says the same thing in different words: "The habits essential to intellectual freedom must be the central business of education. Neither information nor indoctrination, even of democratic ideals, is enough."² Indoctrination does not encourage thinking for thinking depends

² Irwin Edman, Fountainheads of Freedom, p. 89.
upon the free communication of ideas, the very thing which indoctrination does not permit.

While the threat of indoctrination by radio is still a threat and not an actuality, the students and adults should be trained to recognize attempts at indoctrination by radio when and if those attempts are made.

Advertising

The threat of indoctrination is not the only reason for students and adults to become discriminating radio listeners. Everyone is aware of the presence but perhaps not the influence of advertisers in American radio. While he did not restrict his remarks to radio, Woelfel, in 1942, wrote about the advertisers:

The American press, motion pictures, and radio, without benefit of academic wisdom, have already performed noteworthy educational service in reporting simply and artistically some of the cultural distinctions of modern America. But these great communicative media have also contributed to public confusion by popularizing false ideas and attitudes, catering to low cultural taste, and failing to report fully on all aspects of American life. There has been relatively little speculative vision about the educational service which might be rendered by these media, because during times of peace and complacency they have been under almost complete commercial domination.

In regard to the position of advertisers in radio Woelfel, again in 1942, was more specific:

The air over the United States is saturated with this insufferable balderdash concocted in exact time-fitting packages by the super-sophisticates of the advertising profession. These sales artists regard all of art and culture as their oyster. They dramatize their sponsor's product in 'human interest' sketches, they adapt or write music and songs in its name, they exploit science and the experts for testimonials, they imitate news bulletins, they use voice and sound effects according to the rule-book on how to influence people, they plead, they cajole, they tease, they warn, they slyly suggest, they threaten, they joke, they promise—all in the name of a super-headache powder, face cream or tobacco. They dictate the number and length of pauses in the show needed to make room for their 'plugs.' Their fondest ambition is probably so smoothly to weave their sales copy into the body of the radio entertainment that the listener is duped into considering himself amused. One gathers that the advertising copy writers and the announcers who handle their stuff over the air deeply resent the competition by the purely entertainment features of the sponsor's program. The music, drama, news, quiz or variety features are to them only hooks upon which to impale oozing sales bait.1

In 1946 Woelfel wrote:

Communications in the United States, except for a heavy-handed emphasis upon the theme of all of us working together to win the war, represents a most complete picture of spiritual, intellectual and ideological chaos. We, the people, allow ourselves to be fed anything and everything the profit-minded business men who control our communications industries choose to feed us. In the name of freedom of enterprise we have so far refused to meddle with the industries which in such large measure hold the key to our cultural livelihood. The American mind is being dominantly shaped toward anarchy in cultural and spiritual values by the miscellany of what it reads, sees, and hears in press, movies, and radio. Television looms over the horizon

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1 Ibid., p. 40.
According to Tyler, by making the boys and girls discriminate listeners, the result will be that:

They will be critical and intelligent with regard to their sources of information - the newspaper, the motion picture, the radio. They will not easily be led astray by propaganda. They will, in short, be our greatest bulwark against these threats to democracy because they will be able to discriminate - to discern differences.¹

Perhaps the term averting control of radio is misleading. Listener discrimination is a method which can prevent a minority group from assuming control of radio. Listener discrimination is listener control of radio, and this type of control is probably that which is most suitable for radio, provided, of course, the listeners live in a society which permits them freedom of expression and action. At the present time, however, there seems to be only a few discriminative radio listeners.

Lack of discrimination hampers many students and adults when they turn on the radio and are besieged by a variety of programs, some of which are good, many of which are not. They are bombarded with information, true and false; with appeals to buy this and contribute to that; with entertainment of good taste and poor; and with music and drama, inspiring and degrading. The tragedy is not that all these conflicting conditions exist in radio, but that the boys and girls and adults, with few conceptions, have not learned how to establish personal standards for

¹ Ibid., p. 126.
evaluation and selection of programs from the standpoint of production and content.

By Way of Summary

The American people still enjoy a free radio because they have not permitted it to pass into the hands of a minority group. It is true that much can be said for the argument which claims that the radio industry and radio advertisers exert a tremendous influence on radio to the extent that they control radio. It is likewise true that the FCC has assumed more authority over radio in recent years.

There is one important difference. The radio industry and advertisers are motivated almost exclusively by commercial ends; they are dedicated to financial gain. The FCC is set up by Congress as a representative of the people; its purpose is to see to it that the radio serves the "public interest, convenience, and necessity," not merely the interests of a small minority of money-makers. This does not mean that the people should sit back with their hands complacently folded in their laps. They must always be alert to the possibility of bureaucratic control by the FCC which, in that case, would not be representing the people.

The group which the American people now must actively resist if radio is to be their tool and in order to prevent the radio from being used as a weapon against them, is the combination of commercial broadcasters and radio advertisers.
CHAPTER III
DISCRIMINATE LISTENERS

The preceding chapters have indicated some of the many pressures which beset the American people. The first chapter dealt with the decisions which they have to make in regard to international relations. The second chapter stressed the domestic problems of the radio and showed how the solving of those problems were likely to influence their international decisions.

More specifically, it was first pointed out that the American people are in a transition zone between isolation and world citizenship. The necessity for world citizenship was indicated and it was pointed out that freedom of the means of communication such as radio is essential both for the functioning of democracy in the United States and for the development of world citizenship.

The second chapter briefly described the growth of American radio and reported on the efforts to decide whether or not American radio is free. The decision was that the radio is more free than it is controlled, but it was also pointed out that the American people have to become discriminating listeners in order to keep their radio free. A considerable portion of this chapter was given to the description of some of the pressures which threaten freedom of the air as well as to a description of some of the consequences which would result if any of the pressures were to succeed in controlling the radio.

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Why Radio Listeners Should be Discriminating

In view of what already has been said, the reasons why radio listeners should be discriminating are:

1. To keep the American radio as free as possible in a system which is supported almost entirely by advertising.

2. To keep the American radio free in order that it can best serve democracy and world citizenship.

Generally speaking, there are three ways in which radio is supported by the various countries. The three methods are by government, by private interests, and by a combination of government and private interests. Since the United States has a radio system supported primarily by advertising,¹ the American people should be discriminate listeners in order to prevent any special group such as advertisers from controlling the radio.

The reason why the American people should keep their radio free from control by any special group is to protect their democratic way of life as well as the eventual world citizenship. It is only by becoming discriminate listeners that the American people will be able to discern attempts at indoctrination and detect the use of propaganda in their radio programs. To the discriminate listener the radio is a tool designed for his use; to the indiscriminate listener the radio is a weapon which may be used against him. Tyler described the advantage of being a discriminate listener

¹ Some radio stations such as state university-owned stations may be said to be supported by the taxpayers.
as follows:

To the intelligent and discriminating listener the radio makes possible a progressive broadening and enrichment of his experience. To the uncritical it is at best, a convenient vehicle of entertainment and escape and it may result in confusion, chaos, and bewilderment.

Discriminate Listeners in the Making

What are the characteristics of a discriminate listener? How can a person become a critical listener?

Characteristics of a Discriminate Listener

In his dissertation, Robbins has answered the first question as follows:

1. He has broad and well balanced purposes for listening to radio programs.

2. He plans his radio listening.

3. He listens to a wide range of radio program types.

4. He consciously uses his standards when selecting radio programs.

5. He is critical of radio advertising.

6. He is critical of the values, information, and events expressed in the radio program.

7. He has leisure time pursuits in addition to radio listening.

8. He listens to radio programs appropriate to his intellectual status.

\[\text{References:}\]

He enjoys the aesthetic values contained in radio broadcasts.¹

The second question, namely, how one becomes a critical listener, is more difficult to answer. It is an individual and a social problem. While the process of becoming a discriminating listener is a personal one, there are several agencies in society which may be of service to the individual in assisting him to be a more critical radio listener. Before enumerating these groups and briefly indicating how they can help to promote discriminative listening, it might be well to mention that adults as well as children and young people need to become critical listeners.

Adults As Discriminate Listeners

Most adults continue their education informally; they continue to learn from all forms of communication, auditory and visual, verbal and non-verbal. One such means is the radio, a medium with which most of them have never become familiar beyond learning how to turn a few knobs on their receiving sets.

In the adult world there has been little concerted effort to give assistance in using a tool which may be of even more importance to them than to growing boys and

girls. An increasing number of children and young people have received training in the use of radio. At the Thirteenth Institute for Education by Radio, a discussion group went on record by saying that it:

\[\ldots\text{believed that the adult-listening problem is possibly the most important because unless the parents' standards are good the teacher can do little about the youngsters' listening habits. It was suggested that teachers' councils could work with parents' groups and undertake all of the specific things which have been suggested for the classroom.}\]

This group, then, has suggested one method by which adults can be trained to become discriminating listeners; there are other ways by which they can receive radio education. Three of them will be mentioned here.

First is the university-owned radio station. While it is true that there are not enough of such stations to reach all adult listeners, it is likewise probably true that many adults who would be interested in hearing programs from such stations do not know that such programs exist.

The Harvard Committee was right when it wrote:

\[\text{The museums, the parks, the town libraries, the cultural and instructional programs of radio, movie, and, in due course, television, the many existing social agencies, the men's and women's clubs, all lose many of their opportunities for service through lack of effective means of bringing to general notice what they have to offer.}\]

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Since educational radio stations do not sell radio time for revenue purposes, it would seem that they should be a good source for adults to turn to in order to learn to be discriminative listeners. Unfortunately, however, too many university programs smack too much of the fact-crammed lecture or the wandering class discussion. Before such stations can expect to gain and hold large audiences for their programs, they must be willing to experiment with new and untried techniques in order to offset the advantages of money and talent which the commercial stations have.

The educational stations' programs, if they do nothing else, should appeal more to the emotions of the listeners with this saving grace: instead of appealing to the listeners' emotions in order to sell them commercial products, the programs should stir their emotions for the purpose of simulating their thinking.

After the university stations can produce programs which compare favorably with commercial ones, they should make their offerings more widely known. This is easier said than done, but it can be done if the university stations are willing to use other than traditional means of letting the people know what they have to offer.

The second source is the commercial radio station. Many of the individual stations and the networks offer good educational and cultural programs, but not many people know about them. This fact is due to two reasons.
Most of these programs (1) are not sponsored with the result that they are not advertised as are commercial programs, and (2) they are put on the air when there are few listeners. Sustaining programs contain no advertising and are produced and paid for by the stations and networks themselves; no sponsor (advertiser) pays for the expense of putting them on the air. Because commercial stations are operated for profit, in the race between sustaining programs and sponsored ones for the good listening hours, the sustainers invariably lose.

Before very many of the discriminative radio listeners are able to take advantage of the educational and cultural programs offered by commercial stations, those stations will have to schedule such programs at more favorable listening hours and publicize them more than is now the case. This leads to the third source of radio education for adults.

The third way in which adult listeners can become discriminative listeners is to stop playing a passive role. Any institution organized to serve the public is sensitive to the criticisms of that public. Radio is no exception.

The radio listeners should find out what their local stations, privately-owned or university-owned, have to offer. Merely learning what the names of the programs are, what time they are on the air, is not enough. They must extend their efforts to corresponding with the stations
for the purpose of getting further information about the stations' programs. They must listen to the programs to see if the broadcasts have anything to offer other than just entertainment and advertising.

The radio listeners should write to the networks for the same reasons that they get in touch with their local stations. After reading the printed material furnished by the stations and networks and listening to the programs, the listeners should notify the broadcasters what they think about the programs. If they do not like the broadcasts, they should tell why and make suggestions as to how the programs could be improved. The listeners should also tell the stations and networks what other kinds of programs they would like to hear. Another important function which the listeners can perform is to insist that the programs which they want to hear are broadcast at desirable listening hours.

Another way the adults can stop playing a passive role is to band together in listening groups or councils. These councils exist for the purpose of listing, evaluating, and suggesting programs to their members. The councils may also act as agencies for the collection of opinions, suggestions, and demands from their members and forwarding them to the proper stations and networks, and sometimes, to the FCC. The councils may attempt to teach program discrimination to their members by means of lectures and
Radio program discrimination or radio education of adults depends largely upon the adults themselves. University-owned stations, privately-owned stations and networks, and radio councils can serve only as aids.

The School Can Help Make Discriminate Listeners

Radio education of youngsters is a different story. Whereas adults receive only informal, sporadic, and loosely correlated assistance in their attempts to become critical radio listeners, the students in an increasing number of schools are fortunate in having well-organized and effective teaching of the techniques essential to discriminative listening. The teachers and school facilities are aids for the students in learning to become critical radio listeners. The learning process for students, as for adults, is a personal one, but the social factors which are concerned with the learning process are better organized and, with deliberate intent, exert influence on the students.

For example, the university-owned stations have recognized the fact that programs for children must be planned in accordance with certain educational objectives such as encouraging creative expression or influencing attitudes.

1 An example of such a council is the Radio Council of Greater Cleveland which includes branches of organizations such as Parent-Teacher Associations, women's clubs, and music clubs.
In addition, they know that they must consider the age levels of the intended audiences. In other words, the stations plan programs for groups of children, not just children in general. They have done this only in a limited way in adult programs. Perhaps they have produced programs which appeal to various working groups, but they have done little in respect to education levels of the listeners or their age levels. The Thirteenth Institute discussion group which has been mentioned before was on the right track when it suggested that the specific suggestions made in regard to aiding students to become discriminative radio listeners might well be applied to adults.\(^1\)

It might have added that, since adults have problems, interests, and tastes which are different from children, more research will be needed in order to determine what factors must be present in programs to attract and maintain adult audiences, to determine the most effective means of encouraging adults to be critical program listeners.

While some of the schools and other social agencies such as the university-owned stations are organized to assist students in developing personal standards for the evaluation and selection of radio programs, there is still a large number of schools which have not, as yet, included teaching of radio discrimination in the curricula; there are teachers who, through lack of training, lack of equipment, and other reasons, are not using auditory aids in

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\(^1\) See p. 29.
their teaching. That there are schools which do not include radio in their curricula is evident by the following figures:

To summarize the data presented on the following pages: Only 55 per cent of the schools of Ohio have radio receiving sets, only 12 per cent have central radio sound systems, only 37 per cent have equipment for playing records and recordings, only 8 per cent have transcription players, and only 5 per cent have recorders.

Slightly more than half the schools of Ohio had radios in 1941, but less than half the schools of the United States had radios.¹

Perhaps if the school officials and teachers who do not use auditory aids were asked to tell why they do not provide such facilities, why they do not teach radio, they might reply with the counter-question, "Why should we be concerned with helping our students to use radio?"

Robbins, in his comprehensive study of radio discrimination in the public schools answered this question by saying that an examination of the nature of radio, of the radio industry, and of the effects of radio programs on radio audiences will reveal why the school should be concerned with developing radio program discrimination.²

According to Robbins, the radio encourages indiscriminate listening because it enters the homes when the listeners' guards, so to speak, are down. Since the industry is out to make money, it, along with the advertisers,

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¹ Seerley Reid, Radio in the Schools of Ohio, p. 6.
tends to regulate program content. In regard to the
effects of programs on listeners, he listed the following:

1. Lack of criticalness in drama.

2. Gullibility with reference to advertising.

3. Lack of breadth and depth in radio listening.¹

On this same subject, Cantril and Allport wrote:

The reasons given by radio educators for
being actively concerned with the radio
listening of students are:

1. Radio is a major leisure-time ex-
perience of students.

2. Radio programs affect the attitudes,
behavior, and skills of students.

3. Students are in need of training in
the selection and criticism of radio programs.²

Cantril and Allport also wrote:

A greater concern with the content of
radio programs as they play up or neglect
democratic values is the essential need in
the theory and practice of educators now.
using radio for teaching discrimination.

Tyler, one of the earliest and most prolific writers
on the subject of radio education, particularly radio dis-
crimination, summed up the preceding answers in the follow-
ing words:

The principal task of the teacher is to
develop on the part of the younger generation
such habits, attitudes, and dispositions as
will insure the continual extension of American

¹ Ibid. pp. 19-38.

² Hadley Cantril and Gordon W. Allport, The Psychology of
Radio, p. 70.

³ Ibid. p. 71.
democracy. He must center his teaching in realistic fashion upon the kind of world in which the boy and girl live -- a world in which the radio plays a large part. He must sensitize these citizens of the future to the threats as well as the potentialities of this medium. He must develop on the part of the children themselves such a level of discrimination as will prevent them from becoming victims of the specious persuasion of anti-democratic voices which would exploit the power of radio for their own ends. The safeguards of democracy are neither censure-ships nor rigid control of radio; rather, they lie in an intelligent and discriminating body of citizen listeners. The schools have a major responsibility in building such citizens of the future.¹

By Way of Summary

As previous writers have pointed out, young people live in a world which has many diverse groups exerting pressure upon them. Some of these groups attempt or would like to attempt to apply pressure through the medium of radio. A function of the school is not to ignore the existence of these groups and of the influence that they have on the students. Nor is it a duty of the school to decide for the students what they should believe about democracy, about world citizenship.

It is the school's responsibility to make the students aware of the influence which the various groups in society have upon their thinking, opinions, and decisions. The school must help its students to formulate their own definitions of democracy and world citizenship. The radio

¹ Joelfel and Tyler (editors), op. cit., pp. 281-292.
can be used by the school to assist it in performing these functions, but, in return, the school must work with its students to help them establish personal standards for evaluation and selection of radio programs. The school must encourage and train its students to use radio as a tool, for, if it does not, it is inviting other agencies in society to use it as a weapon. In the final analysis, the school, as much if not more than any other social agency, must decide if radio is to be a tool or a weapon.
CHAPTER IV
DISCRIMINATION -- TEACHING AIDS

Introduction

The school can help its students to develop standards of judgment in regard to what they year on the air. Previously, it was mentioned that if the school were to use radio for no other purpose than to assist the students to become critical radio listeners, this would be sufficient reason for the school to include radio in the curriculum. If the school is obligated to make its students aware of the influences in society which are bearing down upon them, then it most certainly should make the students sensitive to the pressures contained in radio.

Influences in Program Content

The school must aid the students to realize that it is not just the advertising which they must analyze, but the content of the programs as well. Undemocratic ideas can be and are being cleverly disguised and inserted into the entertainment features of broadcasts, and they are being unthinkingly accepted by the listener with the same ease with which he swallows a pill dissolved in a glass of water. Sometimes undemocratic ideas are wrapped in appeals to the listener's prejudices. This is exemplified by Senator Bilbo's recent appeal to the white voters in Mississippi to prevent voting by Negroes. Not all appeals are so crude as were Bilbo's. Radio speakers of the
Father Coughlin and Gerald K. Smith type have managed to spread their seeds of suspicion and hate by tactics very similar to those used by the Nazi party in Germany. They use racial minorities as whipping stocks to excite the listener's unreasoning prejudices.

Teaching Discrimination With Auditory Aids

Must students continue to graduate without really understanding the dangers of indiscriminate radio listening? Shall students continue to leave school without ever having heard at least one in-school broadcast so they will realize that there are reasons for listening to broadcasts other than idle entertainment alone? These questions do not imply that listening to one in-school broadcast will change the students' listening habits at home, nor that the matter of indiscriminate listening is the only reason why radio should be included in the school curriculum.

It would be possible to teach radio discrimination without once using in-school broadcasts or transcriptions. It would be possible, yes, but certainly the teaching would be more effective if the students could listen to programs while they were still in school.

As far as the school is concerned, when teachers utilize radio in order to teach discrimination, they are putting to work an auditory aid, a teaching aid. They are using radio to teach radio. The teachers can also use radio to teach other subjects. Radio is then
considered to be enriching the value of those subjects or courses. Whether used to teach discrimination or to increase the value of a course, radio is, in both cases, a teaching aid.

To sum up this introduction, effective utilization of auditory aids such as the radio encompasses two purposes. One purpose of such utilization is to make the students more discriminate in their radio listening outside the school. The second purpose of effective utilization of auditory aids is to enrich the school's curriculum. In the accomplishment of both purposes the radio and recordings are used as teaching aids just as textbooks and lectures are used as teaching aids. In other words, effective utilization of auditory aids will benefit the students by (1) making them more discriminate radio listeners or (2) enriching the contents of those courses to which radio programs can substantially contribute.

Areas of Discrimination

Many schools and colleges have added or are in the process of adding courses in radio in order to help their students become familiar with as many aspects of radio as possible so that they will be critical listeners of radio programs. In many educational institutions radio discrimination is being taught within the confines of the more traditional subjects such as English, history, literature,
and social studies.

Three Basic Areas

Regardless of where or how discrimination is taught, there are three basic areas which effective program discrimination must consider. According to Tyler and others who have written on the subject of program discrimination, the students:

1. Should learn to distinguish between good and poor production of radio programs.

2. Should learn to analyze program content and advertising.¹

3. Above all, should become alert to prevent production, program content, and advertising from unduly influencing their opinions, coloring their beliefs, and making their decisions.²

Good And Poor Production

In order to be able to distinguish between good and poor production, the students should become familiar with the techniques employed to make programs effective. These include such elements as sound effects, music bridges and background, and choice of pictorial words in the dialogue. They should learn that the effective use of these techniques arouses their emotions and influences their beliefs and attitudes. What is even more important is the recognition of when and how such techniques are used for the

¹ Advertising generally may be thought of as a part of program content, but here the two are separated in order to include spot announcements which sometimes are inserted between two programs.

purpose of making listeners favorably disposed towards the ideas espoused by the program content or advertising.

As a part of their training in recognizing the differences in good and poor program production, the students should develop standards or criteria for program selection. The criteria should be their own and not merely be duplicates of their teachers' or other adults' standards. Eventually, the development of their own standards should cause them to listen to the programs with good production most of the time.

Program Content And Advertising

It is one thing for the students to be able to know when and how effective production techniques are being used; it is something else for the students to be able to analyze the ideas contained in programs for the purpose of accepting, modifying, or rejecting them. Advertising, propaganda, and attempts at indoctrination succeed or fail according to the results of this analysis. This analysis assumes even more importance when it is realized that the most clever propaganda, the most persuasive advertising of products, and the most subtle influencing of beliefs occur in programs which have good production.

Recognition of the nature of production techniques and the purposes for which they are used is not enough to make program discrimination successful. The students must also be able to evaluate program content and advertising
correctly.

Be Alert

The students should realize that they must establish criteria both for the selection and the evaluation of radio programs. They should be conscious of the use of production techniques in every program they hear; they should carefully analyze the ideas presented during the course of each program in order to accept, modify, or reject them. At no time should they assume that good production techniques automatically make for worthwhile program content and advertising. One of the end results of establishing personal standards should be that the students will exert pressure upon the radio stations, the networks, and the FCC for the purpose of obtaining the kind of programs which they deem socially desirable. They will demand that such programs be made available at those hours which have the largest number of listeners. In order to exert pressure effectively, to secure results from their demands, the students may have to enlist the assistance of their parents and other adults.

Radio and Recordings in the School

How can the effective utilization of radio and recordings be accomplished by the school? Using such auditory aids for the purpose of assisting the students to become critical radio listeners is a part of the story. Radio
and recordings are teaching aids. Just as blackboards and books are used by teachers to convey information, to explain some phase of a course content, so radio and recordings can be used for the same purpose. Seerley Reid called radio, when used in this manner, a communicator.¹ Teachers use bulletin board poster, pictures, drawings, and field trips, and invite speakers to talk to their classes. The purpose may be to stimulate the students, to make them want to delve deeper into the course content. The radio can be used for this purpose also; Reid labeled this use of radio as a motivator.²

**Crowded Curriculum**

When radio is used as a teaching aid, it becomes part of the school experience without representing new content to be forced into an already crowded curriculum. In fact, intelligent utilization of radio adds to the values of the courses. At the same time that radio is being used as an aid in making a course more valuable for the students, the students may be learning to become discriminate listeners. Perhaps they verify the information gained from a broadcast through reading of reference books and talking to authorities. In doing so, they are, directly or indirectly, learning not to accept without question the information which they receive from radio programs. A few words from the teacher will suggest a more critical attitude should be adopted toward what they hear in out-of-school broadcasts

¹ Foelfel and Tyler (editors), op. cit., pp. 149-178.
² Ibid., pp. 149-178.
as well as in the programs which they hear in the classroom. When radio is used as a teaching aid in conjunction with subjects other than radio, the development of radio discrimination can be aided without crowding any other subject matter from the curriculum. It is not until radio becomes a specific subject matter that trouble may arise in its introduction into the curriculum.

Integration

The importance of using radio and recordings as teaching aids cannot be stressed too much. The fact that they can become a part of the curriculum without sacrificing other courses is a point in their favor. Another of their advantages is that they can be used for more than one purpose. This study has placed the emphasis on radio program discrimination; it has only briefly mentioned the matter of using radio and recordings as means of enriching courses of study, of making courses more valuable to the students. There is still a broader aspect of the utilization of radio and recordings by the school. That is the matter of the school helping the students to solve problems which face them in their daily living.

The school is an institution organized to assist young people to learn facts and skills, to develop understanding of relationships, and to develop and extend their personal and social values. It is filled with many kinds of aids which are designed to help the students in the learning
process. For example, radio and recordings may be used to help teachers to enrich their teaching in a variety of accepted subject fields, and to help them to teach radio discrimination. Radio and recordings may be used by the teachers to assist the students to interpret the experiences which they have at home, at church, and in leisure time pursuits.

The students live in a world of conflicting influences. As they circulate from one part of their daily living to another, they are beset by various forces which seek to influence their thoughts and actions. The school should serve as a place which will make the students aware of these forces in case the students are not already aware of them. The school should act as an integrating interpretative agency so the students will not only understand their daily experiences, but they will be able to develop a set of personal values by which they can coordinate their experiences for the purpose of living their own lives.¹

This study has emphasized the importance of having the American people, young and old, realize the need for accepting the conception of world citizenship in order that this nation, along with all other nations, can enjoy permanent peace. At the same time, it has been pointed out that solving the atomic energy problem will, in itself, be a step toward peace and world citizenship; and that answering the atomic question, in turn, will depend upon communication

¹ "The purpose of all education is to help students live their own lives." Report of the Harvard Committee, General Education in a Free Society, p. 43.
between peoples.

The radio is a form of communication by which the American people can reach other peoples and they, in turn, can reach the citizens of this country. Radio, in addition to being a means of linking this country with others, is a medium which can help the American people to become better acquainted among themselves. In order to serve most effectively as a tool, radio must be free from control by any one minority group; it should be controlled only by the majority of its listeners; and that majority should respect the rights of the minority groups to be heard.

Radio’s listeners should be discriminating for the purpose of preventing its control by a minority. One of the social agencies which can help to make the younger section of the population more critical radio listeners is the school. One of the ways the school can help its students to become discriminate listeners is through the effective utilization of auditory aids, particularly the radio. The most effective utilization of such aids, however, is not to be restricted to assisting the youngsters to be discriminate listeners. Auditory aids may be used by the teacher to enrich the curriculum, to help the students understand the problems confronting them in their daily living. If effectively utilized by the teacher, radio and recordings can assist the students develop personal standards, not only for radio program discrimination, but for the solution of problems now confronting them as well as those which will face them in the future. Properly used, auditory aids can be effective tools in assisting the young people to live their own lives.
CHAPTER V
THE STATUS OF RADIO AND OTHER AUDITORY AIDS
IN THE DELAWARE, OHIO, PUBLIC SCHOOLS

Introduction

Scope of the Problem

It has been stated that the school's effective utilization of radio and other auditory aids will assist the students in living their own lives. To do this, the school can use radio and recordings to accomplish two purposes. One, to help the students become discriminate radio listeners. Two, to enrich the curriculum. By enriching the curriculum is meant not only making specific subject matter more valuable, but interpreting the myriad of influences which surround the students in their daily living. Here it might be asked - what must the school do in order to accomplish these two purposes?

For the purpose of securing more definite answers to this problem, it was decided to restate it in terms of the Delaware, Ohio, public schools:

1. Are the public schools in Delaware, Ohio, utilizing radio and recordings effectively?

2. If the Delaware schools are not using such auditory aids effectively, what steps can and should be taken to remedy the situation?

3. Will these recommendations be applicable to other small city schools?
Reasons for Choosing Delaware

Studies have shown that many of the public schools in small cities with populations from 5,000 to 25,000 are not keeping pace with the public schools in many of the larger cities in regard to the utilization of teaching aids. Many large cities, too, are neglecting these aids, witness Columbus, Ohio. There are, of course, many reasons for this discrepancy. In one community it may be the lack of finances, in another it may be lack of trained teachers, and in a third it may be a disinterested school board. The reasons vary from community to community.

Whatever the reasons are, the results are the same. Students in the smaller city schools are being permitted to graduate without learning how the radio is influencing their lives; teachers are being deprived or are depriving themselves of teaching aids which can do much to assist them in their work.

In order more thoroughly to understand the problems confronting the small city schools in making effective use of auditory aids, the writer arranged to participate in a study of the schools in a small city.¹

¹ The writer was fortunate in being able to work with a group during most of the study. The other two members of the group were Murray Lockard and Bill Dixon.
Delaware was chosen because its population of 11,000\(^2\)
made it belong to the small city classification, and the
superintendent of city schools, Mr. D.R. Smith, gave the
group permission to make a study of the Delaware schools.

**Plan and Method of Study**

Not only was it taken for granted that the Delaware
schools were not using auditory aids to the fullest ex-
tent, but it was also assumed that a plan for remedying
the situation would have to be prepared. It was believed
that the plan should have as its objectives:

1. The training of students to become discriminate
radio listeners.

2. Enriching the curriculum of each school and thus
assisting the teachers in their work and providing new,
worthwhile experiences for the students.

In order to determine what methods should be used for
the accomplishment of these objectives, a survey of the
schools was made. The survey consisted of:

1. Interviews with the principals of the elementary
schools and the high school, most of the elementary
teachers, and a selected group of high school teachers.

2. A number of class discussions in all elementary
schools and in one high school class.

3. A teacher questionnaire which was sent to all
teachers, and a student questionnaire which was filled
out by high school students.

4. An examination of auditory aids such as central-sound
systems, radios, phonographs, and classroom acoustics.

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of Investments, American and Foreign*. p. 916.
Delaware

The city of Delaware is the county seat of agricultural Delaware county. It is located approximately twenty-five miles north of Columbus. While Delaware county is a farming area, the city has several small factories, owns the city water works and the local airport. Ohio Wesleyan University, a Methodist-supported institution, is located in Delaware. Here also is located a Catholic parochial school.

The public schools consist of four elementary schools and one centralized high school. The elementary schools include the first six grades, and the high school has the grades seven to twelve.

Interviews With Principals

Arrangements were made with Mr. Smith to visit each school in order to interview the principals, teachers, and students; to inspect the auditory aids equipment; and to play recordings on a transcription player for the students and teachers. The purpose of the interviews with the principals was to get an over-all picture of the amount and kind of utilization of auditory aids in each school. In addition, the interviews were of assistance in learning each principal's attitude towards using auditory aids in that school and of the plans he had in respect to future
utilization of auditory aids.

The attitude of the principal in each case was favorable toward increasing the use of auditory aids in his school. Each principal believed that radio programs had a place in the classroom. While none of them had made any special efforts to encourage teachers to use radio programs, they had always been ready to be of assistance to teachers who wanted to do so.

The plans of the principals for future use of radio programs in their schools were varied. Here mention must be made of the existing physical facilities for reception of radio programs:

1. The principal of West Elementary which has a central-sound system would like to have that system improved in order that teachers will be encouraged to have their classes listen to programs.

2. The principal of East Elementary desires to sound-condition a large room which is now being used for music classes. This room then would be used for music classes and for classes which want to listen to radio programs. The reason for using this room for radio program listening is that the classrooms have very poor acoustics and rather than improve the acoustics in each classroom it would be less expensive to sound-condition this one large room. The central-sound system in this school is obsolete to the extent that its repair would be too costly. Even if it were repaired, there still would be the problem of poor acoustics in the classrooms.

3. Due to the fact that new buildings are to be constructed for North and South Elementary schools, the principals of those two schools have not made any definite plans regarding program listening in the classrooms. The principal of North Elementary suggested that an audio-visual room be included in the plans for the new North school building.

4. The high school building is probably the best
equipped for the promotion of classroom radio listening. Even here, however, there is only occasional program listening. The reason, according to the principal, is the poor performance of the central-sound system. He believes that if the system is repaired, more radio programs will be heard in the classrooms.

Interviews with Teachers

A transcription player was transported to each school and recordings played for all of the students. One of the purposes for doing this was to afford the teachers an opportunity to become familiar with a means of overcoming such obstacles as lack of classroom receiving sets and scarcity of usable radio programs. Up to that time most of the teachers did not know that there were portable transcription players which could be used in the classrooms.

Another purpose for using the transcription player was to enable the teachers to make comparisons among classroom receiving sets, central-sound systems, and transcription units in regard to hearing programs in the classroom. While only a few of the teachers had ever heard a portable transcription player before, all of them were familiar with radios and sound systems.

Nearly all of the elementary teachers were interviewed in order to determine the amount of experience and training they had in using auditory aids, and to learn how they were using auditory aids, and to learn how they were using auditory aids in their classrooms. Due to schedule difficulties, it was not feasible to interview all of the high school
teachers. The three high school teachers who were interviewed were selected because it was known that they had previous experience in some phase of school use of radio.

The amount of training and experience the elementary teachers have had in using programs in classrooms is negligible. None of them ever had any training although most of them have had some experience with classroom listening to radio programs. They seldom use programs now because of lack of equipment or because of difficulties with receiving sets or central-sound systems. None of the elementary teachers has had any training or experience in radio production.

Except for the three teachers who were interviewed, the high school teachers have not had any more training in radio utilization than have the elementary teachers. The three who were interviewed were the social studies and journalism, the music and dramatics, and the speech teachers. Although they have had no previous training in radio production, they are concerned with the production of a weekly radio program over station WMRN, Marion, Ohio. They assist a group of senior high school students in writing and producing the program which originates in the studio of the radio department at Ohio Wesleyan University.

A summary of the teachers' suggestions for programs they now use or would like to have available for in-school and out-of-school listening is as follows:
First, second, and third grades:

1. One teacher regularly uses the program, "Music Time." She also uses phonograph records for music and rhythms.

2. One teacher definitely opposes the use of radio in her classroom. She says music and stories are too long and action too fast for her first grade pupils.

3. One teacher believes only musical programs are appropriate for the first grade.

4. One teacher says that fifteen-minute musical programs are all right, but dramatic programs should not be over ten minutes in length for pupils in the first three grades.

5. One teacher said that she would use radio programs if her room had a receiving set; that her choices are music and story-telling programs.

6. One teacher believes that stories must be about something with which the pupils are very familiar. She said that special attention must be paid to vocabulary.

7. One teacher uses radio occasionally, but at the time of the interview she did not know about programs such as "Story Time" which is designed to fit her grade.

8. Several teachers have not used radio in their classrooms during the past five to ten years because there have not been facilities available.

9. Several teachers use "Music Time" and "Story Time" when reception is good, but they add that reception is generally poor.

Fourth, fifth, and sixth grades:

10. Some teachers want science programs if accompanied by a teacher's manual or study aid.

11. Some teachers want folk music of ancient times which can be correlated with history.

12. Several teachers emphasized the need for good teacher's manuals for effective pre-broadcast work.

13. One teacher suggested having radio programs to supplement information in the textbooks as well as complement it.
High school speech teacher:

14. Would like to have programs such as dramatic sketches, panel discussions, and dramatization of historical events.

15. Believes she and others who work with students in producing radio programs should receive in-service training in radio production.

High school social studies and journalism teacher:

16. Wants radio stories on American journalism for his journalism class.

17. Does not believe students voluntarily listen to serious programs outside the school. Does not assign out-of-school listening to such programs.

18. Believes transcriptions could well be used in his social studies class.


20. Believes radio stations and networks should try to get people to listen to better radio programs.

21. Believes that more school presentation of programs will result from a better central-sound system.

High school music and dramatics teacher:

22. If central-sound system permitted, would use musical programs in the seventh and eighth grade music classes.

23. Would like to have "live" or transcribed programs featuring interpretations of stories studied by the dramatics classes.

24. Has a dramatics workshop but does not include radio work.

25. Believes there should be a radio teacher and a radio class and that the class should be open for all interested students in the high school.

26. Believes the proposed radio class should make transcriptions for grade schools; that if all the schools ever have central-sound systems, they should be connected so the radio class could produce school system-wide programs.
Information Gained from Teacher Questionnaire

Because it was not possible to interview all of the teachers, a questionnaire was sent to each of the thirty-three elementary and thirty-two high school teachers. The purpose of the questionnaire was to secure answers which could be tabulated in order to indicate more clearly what the conditions were in the schools in regard to such things as:

1. Amount of training the teachers had in respect to auditory aids.

2. Amount and kind of utilization of auditory aids.

3. Opinions and preferences the teachers had in regard to kind of facilities (auditory aids) for use in the classroom.

4. Willingness of teachers to receive training in use of auditory aids.

The questionnaire answers were similar to those gained during the interviews. On the next page is a sample copy of the questionnaire, and the pages immediately following contain a summary of the answers in table form. In the meantime, here is an analysis of the summary:

**Questions 1 & 2:**

The majority of teachers do not use the radio as a teaching aid; the principal reason for not using radio programs is the lack of facilities for good reception of programs. Only a small minority of teachers say they cannot use radio programs as a part of their classroom activities. Not one teacher claimed that the radio had no place in the
Teacher Program Evaluation

Grade (or grades) __________

1. Do you now use radio programs in your classrooms? If so, what programs?

2. If you do not use radio programs in your classroom, why not?

3. Do you recommend or assign out-of-school listening to radio programs? If so, what programs?

4. If you had your choice in regard to the method of listening to radio programs in your classroom, which one of the following would you select? (check one)

   ______(a) Classroom radio receiving set
   ______(b) Transcription player
   ______(c) Central sound system with attached radio set

5. What is the reason for your choice in Question 4?

6. Do you use phonograph records in your classroom? If so, what kinds? (musical, dramatic, etc.)

7. Have you had any training in the use of radio programs in your classroom? If so, where?

8. If your answer to Question 7 is No, would you be willing to receive such training if it did not involve any financial expense on your part?

9. What kinds of programs would you like to have available for classroom listening?

FIG. 1--SAMPLE COPY OF THE TEACHER QUESTIONNAIRE
TABLE I. REPLY TO QUESTIONNAIRE
FROM 19 Elementary AND 13 High
School Teachers

<table>
<thead>
<tr>
<th>Item</th>
<th>Number Elementary Teachers</th>
<th>Number High School Teachers</th>
<th>Total Number Teachers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Programs regularly used:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>14</td>
<td>11</td>
<td>25</td>
</tr>
<tr>
<td>Music Time</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Ohio School of Air</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Music on WOSU</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Special occasions</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Rarely</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2. Reasons for little use:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No radio</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Poor reception</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Programs on air at wrong hours</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Not practical for subj. matter</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>No answer given</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>3. Out-of-school programs which are recommended to students:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>13</td>
<td>4</td>
<td>17</td>
</tr>
<tr>
<td>News programs</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Art Appreciation</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Good music, singing games</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Cavalcade of America</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Ohio broadcasts</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>For commercials</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Practice for shorthand</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Science programs</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>One Man's Family</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No answer given</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>4. Method of listening preferred:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom receiver</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Transcription player</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Central-sound system</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>No answer given</td>
<td>4</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>5. Reasons for choice:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prefer radio because:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turn it on when wanted</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Reception is better</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Suit time and purpose better</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Better than sound system</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Prefer transcription because</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can use it when wanted</td>
<td>6</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Item</td>
<td>Number of Elementary Teachers</td>
<td>Number of High School Teachers</td>
<td>Total Number of Teachers</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td>--------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Prefer central-sound because:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Already have it</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>I prefer it</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Has capacity for administrative utilization</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6. Phonograph records used:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>10</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Musical</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Musical and dramatic</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>For shorthand and typing</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No answer given</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Training in radio utilization:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>17</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>Course in music at Ohio State</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Audited a course at Ohio State</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Short course on visual aids</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>8. Willing to receive training:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>7</td>
<td>16</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Not sure, might be</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>If given in Delaware</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>If get new equipment</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>If programs made available</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>If adapted to my students</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No answer given</td>
<td>5</td>
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<td>9. Classroom programs desired:</td>
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<td>12</td>
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<td>12</td>
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<td>Stories</td>
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<td>6</td>
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<td>Rhythms</td>
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<td>Travelogues</td>
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<td>Games</td>
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<tr>
<td>Physics</td>
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</tbody>
</table>
classroom. The conclusion is that the teachers have no
aversions against using radio programs in their classrooms
and that they would use such programs if facilities per-
mitted.

**Question 3:**

The purpose of this question was to indicate what
relationship, if any, exists between the amount of use of
radio programs in the classroom and the amount of out-of-
school listening that the teachers recommend or assign to
their students. While the answers indicate that if the
teachers do not use radio in their classrooms, they do not
recommend or assign out-of-school programs to their students,
there is no data to show that the opposite is true. Namely,
that teachers who use in-school broadcasts tend to suggest
out-of-school listening to their students.

Since the answers to the second question show that the
teachers are not hostile to the idea of classroom utiliza-
tion of radio programs, it may be concluded that improved
facilities for program reception in the schools might re-
sult in having the teachers not only use more programs in
their classes but in having them recommend or assign more
out-of-school radio programs to their students.

**Questions 4 & 5:**

Most of the teachers showed that they prefer either
the classroom radio set or the transcription player to the
central-sound system. While it is true that each method
has its advantages and disadvantages, it may well be that their answers were influenced by the unsatisfactory performances of the central-sound systems in West Elementary and the high school. However, it is interesting to note that the chief reason mentioned by the teachers for preferring the radio set or the transcription player was that each could be controlled by the teacher.

The teachers have indicated a weakness of the sound system. This means there must be careful planning in the future in order to minimize this weakness. It means that installing a central-sound system in a school building, even if the system affords perfect reception of radio programs, is not enough. Thorough planning will be required for the most efficient utilization of the system and for removing the prejudices which the teachers now have against central-sound systems.

Question 6:

In evaluating the answers to this question, some allowance must be given the part that inadequate facilities played in influencing the answers. Even after doing this, however, it is still concluded that the teachers are not familiar with the improvements which have been made in the content material as well as the manufacturing process of phonograph records during the recent years.

Questions 7 & 8:

The purpose of these questions was to find out how
many teachers have had training in the use of radio programs and to determine how many would like to receive such training. It is believed that in-service training to use radio programs will receive the support of most teachers. The answers to the eighth question are encouraging in that the teachers indicated they realize the effective use of radio programs depends on more than having adequate equipment with which to hear the programs.

**Question 9:**

The elementary teachers use the radio as a teaching aid more than the high school instructors. As a result, the elementary teachers have more ideas as to the kind of programs which they want for their classes. Every type of program the teachers asked for is available but not always during school hours. To be able to take advantage of as many programs as possible, some schools in other cities have purchased recording units which make transcriptions of programs produced during out-of-school hours. In this way out-of-school programs are available during the hours in which the classes are in session.

**Class Discussions and Student Questionnaire**

After a transcription had been played for a mixed\(^1\) class of elementary students, a class discussion was held.

---

\(^1\) Mixed refers to combining two or three grades into one large class for the purpose of hearing a recording.
in order to determine if the students understood the program and if they enjoyed it. The recordings which were selected did not pertain to any one subject matter, but they were picked according to the age and maturity levels of the students.

A recording was played for an eleventh grade English class and then the students were asked to fill out a sample questionnaire. The purpose of the sample questionnaire was to see if the students would have any difficulty in making it out. The students did have trouble so the questionnaire was changed to the one shown on page sixty-seven of this study.

The student questionnaire was filled out by students in grades 8 - 12 inclusive. Due to the fact that visiting each classroom was not feasible, it was thought that by assembling the students in the auditorium it would be possible to give all the students an opportunity to hear the same programs. The programs could not be played over the central-sound system because its turntable would not play sixteen-inch recordings, the size of the transcriptions which were played on the portable transcription unit.

The 304 students filling out the questionnaire were a part of the student body assembled in the auditorium to hear two recordings played on the transcription player.
The first recording was the one upon which the students based their answers to the questions in the questionnaire. It was Arch Oboler's "Mark Twain: Life on The Mississippi." It was a humorous account of a boat trip down the Mississippi River. The format was narration-dramatic with considerable use of vocal and instrumental music, sound effects, and dialect. All of the characters were men. The second recording was a biographical sketch of George Washington Carver with Paul Robeson and the Golden Gate Quartet in the cast. Both programs were fifteen minutes in length.

Playing the recordings in the auditorium made it possible to test the acoustics of the auditorium. By their answers to the first question, the students indicated that the acoustics, in general, were good. However, a spot check was made in the balcony, and it was found that the acoustics were very poor. The students in the balcony were not required to fill out the questionnaire.

The chief value of the questionnaire was its revelation of two facts. First, the students listen to radio programs primarily for entertainment. Second, the students are not, as a rule, used to analyzing the programs to which they listen. Here is an analysis of the summary of answers:

**Question 1:**

In addition to testing the acoustics of the auditorium, the purpose for asking this question was to be able to evaluate the answers to the other questions. It was
1. Could you hear the broadcast clearly? (check one)
   All of the time____  Some of the time____
   Most of the Time____  None of the time____

2. What did you think of today's program? (check one)
   I liked it very much____
   It was fair____
   I didn't like it____

3. Tell why you marked Question 2 as you did. Were there certain parts that you liked or didn't like? Tell about them.
   ______________________________________________________
   ______________________________________________________

   (use back of paper if necessary)

4. In which of your classes might this program help you?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

5. Did you like this program better than other radio programs you listen to at home? If you can, tell why.
   ______________________________________________________
   ______________________________________________________

6. List your three favorite radio programs.
   1. ________  2. ________  3. ________

7. State briefly what you thought this program was about.
   ______________________________________________________
   ______________________________________________________

8. In what ways could this program have been more interesting?
   ______________________________________________________

FIG. 2--SAMPLE COPY OF THE
STUDENT QUESTIONNAIRE

-67-
<table>
<thead>
<tr>
<th>Questions And Answers</th>
<th>Grade 8</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of</td>
<td>Number of</td>
<td>Number of</td>
<td>Number of</td>
<td>Number of</td>
<td>Number of</td>
</tr>
<tr>
<td></td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
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<td>0</td>
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<td>Liked very much</td>
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<td>25</td>
<td>15</td>
<td>39</td>
<td>17</td>
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<td>10</td>
<td>7</td>
<td>16</td>
<td>9</td>
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<tr>
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<td>1</td>
<td>2</td>
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<tr>
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<td></td>
<td></td>
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<td>8</td>
<td>4</td>
<td>1</td>
<td>1</td>
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<td>6</td>
<td>1</td>
<td>7</td>
<td>0</td>
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<td>Grade 8</td>
<td>Grade 9</td>
<td>Grade 10</td>
<td>Grade 11</td>
<td>Grade 12</td>
<td>Totals</td>
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<tr>
<td>-----------------------------------</td>
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<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>Number of Questions And Answers</td>
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<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
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<td>Number of Questions And Answers</td>
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4. (continued)

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<th>Subject</th>
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<th>Grade 9</th>
<th>Grade 10</th>
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<th>Grade 12</th>
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5. Comparison with out-of-school programs:

<table>
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<tr>
<th>Quality</th>
<th>Grade 8</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>11</td>
<td>3</td>
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<tr>
<td>About the same</td>
<td>8</td>
<td>0</td>
<td>13</td>
<td>11</td>
<td>11</td>
<td>3</td>
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<tr>
<td>Not as well</td>
<td>11</td>
<td>12</td>
<td>15</td>
<td>6</td>
<td>29</td>
<td>11</td>
</tr>
<tr>
<td>No answer given</td>
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<td>0</td>
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<td>4</td>
<td>14</td>
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8. Suggested changes:

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<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Totals</th>
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<td>All right as it is</td>
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<td>1</td>
<td>10</td>
<td>7</td>
<td>15</td>
<td>4</td>
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<td>9</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Less narration</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>4</td>
</tr>
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<td>Make it longer</td>
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<td>4</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>More music</td>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Add woman's voice</td>
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<td>0</td>
<td>3</td>
<td>0</td>
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</tr>
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<td>6</td>
<td>8</td>
<td>7</td>
<td>19</td>
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</table>

*Answers to questions number 3, 6, and 7 are summarized on separate pages.*
### TABLE III. ANSWERS TO QUESTION NUMBER THREE ON STUDENT QUESTIONNAIRE ACCORDING TO GRADE AND SEX

<table>
<thead>
<tr>
<th>Reasons for liking or not liking the program</th>
<th>Grade 8</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>1. Enjoyed music</td>
<td>5</td>
<td>1</td>
<td>13</td>
<td>0</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>2. Interesting</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>3. It was all good</td>
<td>5</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>4. Good gambling scene</td>
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<td>0</td>
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<td>1</td>
<td>1</td>
<td>2</td>
</tr>
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<td>5. It was humorous</td>
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<td>5</td>
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</tr>
<tr>
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<td>1</td>
<td>0</td>
<td>4</td>
</tr>
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<td>3. Too juvenile</td>
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<td>2</td>
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<td>0</td>
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</tr>
<tr>
<td>Liked parts of it</td>
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<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Some of the other reasons less frequently given by the students as to why they liked or did not like the program:

1. Easy to understand
2. Like to read Mark Twain's books
3. More interesting than reading a book
4. Could enjoy yourself while learning
5. I like history and this was history
6. Have never read Mark Twain's writings but I liked this

1. Too choppy
2. Too much noise in auditorium
3. Not interested in Mark Twain
4. Did not like the music
5. Prefer to read than listen
6. Does not compare favorably with movie of Mark Twain
7. Did not seem educational
<table>
<thead>
<tr>
<th>Favorite radio programs of students:</th>
<th>Grade 8</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
<th>Totals</th>
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<tbody>
<tr>
<td></td>
<td>Number of Girls</td>
<td>Number of Boys</td>
<td>Number of Girls</td>
<td>Number of Boys</td>
<td>Number of Girls</td>
<td>Number of Boys</td>
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<tr>
<td>1-Lux Radio Theater</td>
<td>8</td>
<td>1</td>
<td>13</td>
<td>2</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>2-Bob Hope</td>
<td>2</td>
<td>3</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>7</td>
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<td>3-Red Skelton</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>4</td>
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<td>4-Hit Parade</td>
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<td>4</td>
<td>2</td>
<td>10</td>
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<td>5-Mr. Dist. Atty.</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>6</td>
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<td>6-Supper Club</td>
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<td>0</td>
<td>1</td>
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<td>7-Fib. McGee &amp; Molly</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>3</td>
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<td>8-Bing Crosby</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>5</td>
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<td>9-Date With Judy</td>
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<td>0</td>
<td>4</td>
<td>0</td>
<td>7</td>
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<td>10-Hour of Charm</td>
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<td>2</td>
<td>1</td>
<td>4</td>
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<td>11-Mr. &amp; Mrs. North</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
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<td>12-Inner Sanctum</td>
<td>1</td>
<td>1</td>
<td>2</td>
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<td>13-Kay Kyser</td>
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<td>14-Ferry Como</td>
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<td>16-Jack Benny</td>
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<td>17-Dr. I. Q.</td>
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<td>18-Spotlight Band</td>
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<td>0</td>
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<td>19-Screen Guild</td>
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<td>0</td>
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<td>20-Henry Aldrich</td>
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<td>21-Lone Ranger</td>
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<td>2</td>
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<td>3</td>
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<td>22-Cavalcade of Am.</td>
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<td>23-Man. Merry-Go-Round</td>
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<td>4</td>
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<td>24-Hermit's Cave</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>25-Dr. Christian</td>
<td>7</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>0</td>
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<tr>
<td>26-Abbot &amp; Costello</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<td>1</td>
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<td>27-Suspense</td>
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<td>1</td>
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<td>0</td>
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<tr>
<td>28-Truth or Conseq.</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
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<tr>
<td>29-Thin Man</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>2</td>
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</tbody>
</table>
OTHER FAVORITE PROGRAMS

1. What's the Name of that Song
2. Sherlock Holmes
3. When a Girl Marries
4. Vox Pop
5. Raymond Massey
6. Melody Hour
7. Houln's Music Hall
8. Aunt Jenny
9. Ginny Simms
10. Harmonnaiers
11. Linda's First Love
12. Let's Pretend
13. Westinghouse
14. Bell Telephone Hour
15. National Barn Dance
16. Lum & Abner
17. Joan Davis
18. Columbia Record Shop
19. Radio Readers Digest
20. Family Hour
21. Take It or Leave It
22. Hildegarde Program
23. Jack Smith
24. Stradivari All String Orch.
25. Grand Ole Opery
26. Mr. Keen
27. New York Philharmonic
28. Bob Hawk Show
29. NBC Orchestra
30. Dinner Concert
31. Blondie
32. Music Shop
33. Baby Snooks
34. G.M. House Party
35. Music is Cugat
36. Philharmonic
37. Crime Doctor
38. Big Sister
39. Just Plain Bill
40. Big Town
41. Guy Lombardo
42. 20 Questions
43. Guest Orchestra
44. Ross Mulhoven
45. Bob Burns
46. Mayor of the Town
47. Camel Show
48. Gang Busters
49. Possible but not Probable
50. Editor's Daughter
51. Rogue Gallery
52. Great Gildersleeve
53. William L. Shirer
54. H. V. Kaltenborn
55. David Farro
56. Prof. Gordon Hayes
57. Coca Cola Hour
58. Bob Crosby
59. Waltz Time
60. Kate Smith Hour
61. People Are Ignorant
62. Texaco Star Theater
63. Sweethearts
64. Harry James
65. Tom Brenneman
66. One Man's Family
67. Hit Tunes
68. Friday in Broadway
69. Ned Shelton
70. Penguin Room
71. Nelson Eddy
72. Song & Dance Parade
73. Dinah Shore
74. The Shadow
75. Ellery Queen
76. Life with Riley
77. Amos & Andy
78. Corliss Archer
79. Lowell Thomas
80. We The People
81. Science of the Air
82. My Gal Sunday
83. F.B.I.
84. Tom Mix
85. Bachelors' Children
86. Molle Mystery Theater
87. Information Please
88. Andre Kostelanetz
89. Eddie Cantor
90. Fred Waring
(continued)

91. Moon River
92. Cass Daley
93. Theater of Romance
94. This Is My Best
95. Kraft Music Hall
96. People Are Funny
97. Woody Herman
98. Fannie Brice
99. My True Story
100. Dick Haymes
101. Judy Foster
102. Frank Munn
103. Nick Carter
104. The Foster Family
105. Front Page Farroll
106. Quick as a Flash
107. Bull Dog Drummond
108. House of Mystery
109. Murder Is my Hobby
110. Walter Winchell
111. Barber Shop Quartet
112. Quiz Kids
113. Exploring the Unknown
114. Fifty Club
115. Grand Central Station
116. Fitch Band Wagon
117. Stump Us
118. Rainbow House
119. Tip Top Rangers
120. Morning Matinee
121. Minnie Pearl
122. Jimmy Durante
123. Island Venture
124. Sport by Sweeney
125. Bill Stern
126. Maisie
127. Frank Sinatra
128. Charlie McCarthy
129. Fred Allen
130. Teen Timers Club
131. Superman
132. Danny Kaye

* Each program is listed by less than eight students as being one of their favorites. The programs are not ranked according to popularity as was done in Table IV.
believed that if the majority of the students could not hear clearly, their answers would be apt to reflect prejudices against the recording. Since most of the students answering the questionnaire did not have any difficulty in hearing the transcription, there probably is little, if any, prejudices against the recording being revealed in the answers.

**Question 2:**

Although there were no women's voices in the program (as was pointed out by several girls), fifty-nine per cent of the girls liked the program very much while the boys were less enthusiastic; they polled fifty-three per cent as liking it very much.

**Question 3:**

This question was linked to the eighth one in that it was desired to have the students exhibit attempts at analyzing program production and program content. The conclusion to be drawn from the answers to this question, as well as to the eighth, is that the students need more practice at analyzing radio programs.

**Question 4:**

The "Big Three" were history, English, and literature, in that order, both for the boys and the girls. The objective of this question was to discover if the students could see how this program might fit into one or more of their courses of study. Actually, the program does not belong to
any one subject field in that it is a program which cuts across all subject matters. It has something of history, music, geography, and, of course, English or literature, in it.

Question 5:

As in the case of the answers to the third and eighth questions, the answers reveal lack of training in program analysis. It is interesting to notice, however, that of those students who said they liked this program better than the ones they listen to at home, the main reason being offered was the lack of advertising.

Of the reasons why the students preferred the home programs more, three were mentioned most often. The students preferred:

1. More action and excitement as in mysteries.
2. More humor as in comedy shows or variety programs.
3. Programs with more music.

Question 6:

If the boys' and girls' first ten choices of favorite programs were to be arranged according to the order of preference, the result would be as follows:

Girls

1. Lux Radio Theater
2. Hit Parade
3. Bob Hope
4. Chesterfield Supper Club
5. Red Skelton
6. Date with Judy
7. Bing Crosby
8. Fibber McGee & Molly
9. Hour of Charm
10. Mr. District Attorney

Boys

1. Bob Hope
2. Red Skelton
3. Fibber McGee & Molly
4. Mr. District Attorney
5. Jack Benny
6. Lux Radio Theater
7. Inner Sanctum
8. Ernie the Milkman
9. Lone Ranger
10. Fred Allen
Question 7:
The students had no difficulty in understanding the program. It was rather simple; in fact, several students indicated that they considered it too simple for them.

Question 8:
More students left this question unanswered than any other. It would seem to indicate that the students are not in the habit of analyzing the programs to which they listen. Most of the suggestions which were made centered around the ideas of:

1. More action is needed.
2. Reduce the amount of narration.
3. Make the program longer.

Auditory Aids Equipment

An important part of the survey was the examining of all auditory aids equipment in the schools. There are three central-sound systems. The one in East Elementary does not work and has not been used for several years. The other two, one in West Elementary and one in the high school, are still being used. The West Elementary sound system formerly belonged to the high school. It is seldom used because of poor reception. The high school sound system is used every day for administrative purposes when it is in working condition. However, it has certain defects, presumably due to poor wiring, which cause it to go out of
commission quite often. Also, it has poor frequency response which makes intelligible hearing difficult for the students and teachers. In other words, the high school sound system is the only one being used with any degree of regularity, and it is restricted to administrative use only.

The number and condition of radio receivers vary from school to school. There are seven sets in the entire school system. Of that seven, five are in working order. The radio tuner in the sound in the sound systems of West Elementary and the high school are practically worthless because of the unsatisfactory operations of the systems. In those schools, then, there are really no radio facilities available for classroom use. The radios in the other elementary schools are portable and are capable of being used for classroom listening.

The schools fare better in respect to phonograph players and records. There are ten in the elementary schools and two in the high school. Again, however, the central-sound systems prove to be a handicap. The phonograph players in the two sound systems are not being used for classroom listening. Fortunately, West Elementary does not have to depend on the sound system phonograph player; it has others. There is no record library in the elementary schools, but several teachers have purchased records for their classes. The high school speech class is building a phonograph record library.
The schools have no other auditory aids. There are no sound-recording units, no transcription players (the turntables in the central-sound systems play phonograph records only), and no transcription libraries. Although the high school has a weekly radio broadcast, it has no studio and no studio equipment. The high school does have, however, a room which could easily be made into a studio. The room is now being used for dramatics and music classes.

Mention should be made of classroom acoustics. With a few exceptions, all of the classrooms in all schools could profitably use sound-conditioning for reception of radio programs. It might be pointed out that improvement of the rooms for radio reception will also mean improved acoustics for class discussions. Classroom acoustics is a problem yet to be solved in most schools. It is encouraging to note that many of the recently built school buildings throughout the country include acoustic-treated ceilings in classrooms.

By Way of Summary

It will be remembered that the problem with which the study is now concerned has three parts. First, are the public schools in Delaware, Ohio utilizing auditory aids effectively? The answer is no; the Delaware schools are not using auditory aids very effectively. This fact is evident when the following is considered:
1. Most of the teachers have had little or no experience with using radio programs in their classrooms.

2. Only three teachers have had experience in putting programs on the air, and they have had no previous training in program production.

3. There is no existing organization in the school system to give the teachers in-service training either for using radio programs in the classrooms or for producing radio broadcasts.

4. In their answers to the questionnaire, many of the students indicated a lack of experience in analyzing programs which they hear.

5. The schools have limited facilities for reception of radio programs. Only the high school and one of the four elementary schools have central-sound systems in operating condition, and their use is restricted by mechanical difficulties. In the three elementary schools which do not have central-sound systems there is a total of three radio receiving sets in working condition.

6. Most of the classrooms need sound-conditioning to improve radio program reception.

7. Although the high school produces a weekly radio program, there are no production facilities for the students' assistance in rehearsals or in the actual broadcasting except at Ohio Wesleyan University.

Since the Delaware schools are not effectively utilizing auditory aids, it might be well to consider the second part of the problem, namely, what steps can and should be taken to remedy the situation?
CHAPTER VI

A PROPOSED PLAN FOR THE EFFECTIVE UTILIZATION
OF RADIO AND OTHER AUDITORY AIDS IN
THE DELAWARE, OHIO, PUBLIC SCHOOLS

The proposed plan for the effective utilization of
auditory aids in the Delaware Public Schools has as its
objectives:

1. Auditory aids should be used to assist the students
in becoming discriminate radio listeners.

2. Auditory aids should be used to enrich the curric-
ulum and thus assist the teachers in their work and the
students to gain new, worthwhile experiences.

How can these objectives be realized? The principal
of the West Elementary School and the Willis High School
principal suggest that one needed step would be to repair
the sound systems in their schools. They say that if this
were done, their teachers would be encouraged to make more
use of radio programs. But this is not enough. This still
does not guarantee effective utilization of the radio in
the classroom. The teachers will have to be trained if
they are to use radio programs more effectively. Improve-
ment of facilities and the training of teachers are two
needed steps in the accomplishment of the state objectives,
but there are other steps, too.

Even though the mere improvement of the central-sound
systems is not enough, it is assumed that the first step,
so far as the Delaware schools are concerned, is to improve
the sound systems in West Elementary School and the high
school.
The services of a competent radio repair and service man should be engaged.

The effective use of the central-sound systems in the Delaware schools has been made difficult by the dependence upon local repairmen. This is not to imply that these men do not know their jobs. What is needed, however, is someone who is familiar with the engineering aspects of central-sound systems and who also is acquainted with the educational potentialities and limitations of sound systems. Possibly the services of a well-qualified radio director of a school or a school system, who also knows the engineering phases of radio and sound, could be secured. For example, such a person is Ellis V. Miracle, Director of Radio, Zanesville Public Schools, Zanesville, Ohio. Zanesville is credited with having one of the finest central-sound systems in a public school system in the United States. Dr. R. R. Lowdermilk, United States Office of Education, stated in a conversation with the writer that Zanesville is two to three years ahead of any other school system using central-sound systems. Another qualified person is Edwin Stouffer, teacher of physics and supervisor of the technical aspects of auditory and visual equipment in the South High School, Columbus, Ohio. This school has made an unusually thorough utilization of its central-sound system.

In the event that it is not possible to find one person who is familiar with both the engineering and educational aspects of sound systems, it is suggested that the combination
of a radio engineer and a radio educator be engaged. Rather than to secure an engineer from a commercial equipment company, it is better to hire an independent expert such as Robert Higby, Director of station WOSU, the Ohio State University radio station, who is an outstanding radio engineer. The second member of the team might well be Dr. I. Keith Tyler, Director of Radio Education, Ohio State University. Dr. Tyler has assisted in the development of programs for the effective utilization of auditory aids for various school systems. He has recently assisted in such plans for the Oklahoma City Public Schools.

Here are a few things which the "expert" will do:

a. He will not restrict his efforts to patching up defects in the sound systems. He will suggest what should be done to make them workable and render estimates on the length of time they will remain in satisfactory working condition as well as estimates on the costs of improvements and operation.

b. As a basis for recommending either complete new installations or repair of the present systems, he will consider expanded uses. For example, at the present time, the central-sound system in the high school is used almost entirely by the principal for administrative purposes. The expert will not only recommend what should be done to make the system operate satisfactorily for this purpose, but he will also suggest what should be done in order that the system may handle radio programs, records and transcriptions,
and perhaps production of in-school programs from a school studio.

c. The expert will look over the plans for the two new elementary school buildings in order to make suggestions regarding the type of sound equipment the schools should have and the location of that equipment in the schools. The writer happens to know that the plans have not been completed at the time this is being written.¹ For that reason, he would like to point out some of the things which the superintendent of schools and the school board might consider before completing the plans.

**Installing a new central-sound system:**

If the plans include a central-sound system for each of the new schools, the first step is to decide the uses to which the sound system will be put. If an administrative tool only is wanted, a two-way communication system may be satisfactory. This system generally has one channel and thus can be used for only one purpose at a time. The system will permit: (1) one radio program to be used; (2) announcements to be made to all rooms; (3) use of phonograph records; and (4) two-way conversation between the principal and a teacher without either leaving his office or classroom.

¹ A check was made at the Bureau of Educational Research, Ohio State University, before this was written to determine how far along the plans were. The Bureau, which is acting as an unofficial adviser, had not, at that time, made definite suggestions in regard to the kind and amount of auditory aids the new school buildings should have.
The one-channel system is not very satisfactory. The chief criticism is that it permits the principal and others to listen in to classrooms without the teacher's knowledge. This fact is often ruinous to the morale of the teachers. If a two-way communication system is desired, it is best to install telephones. Another criticism of this system is that it is not flexible because it can be used for only one purpose at a time with the result it is most often used only for announcements.

Perhaps a system which can be used both for administrative purposes and for the transmission of radio programs and transcriptions may be desired. In that case, the school will best be served by a sound system which has at least two channels. While a radio program is being sent to one classroom or group of classrooms on one channel, the principal can talk to another classroom or group of classrooms on the second channel. Or two programs can be heard simultaneously, or a radio program and a transcription. The school may want three channels if there are many rooms and many educational uses. Here, the matter of costs enters the picture. The equipment cost of each extra channel (cost of installation not included) is approximately $100.

Before going on to a third purpose of central-sound systems, it may be well to caution the school against purchasing a sound system which plays records only. The school should buy a system which has a turntable capable of
playing sixteen-inch recordings at 33 1/3 r.p.m. as well as
ten-inch and twelve-inch records at 78 r.p.m.

A third use to which a central-sound system may be put
is the production of programs in the school studio by mem-
bers of the student body. Such an installation can feed its
program through one of the channels of the sound system.
The studio should have its own amplifier and mixer with, say,
three microphones, one for voices of the cast, one for music
used for background, and one for sound effects. The separate
amplifier and mixer must be able to synchronize these various
kinds of sound in order for the listeners to be able to under-
stand the program. Without a separate studio installation, a
sound system can seldom perform this function of synchroniza-
tion.

The purchase of just any sound system will not ensure
the effective serving of all three purposes - administrative,
radio and recording reception, and program production. A
sound system built to handle the frequency range of the
human voice may not be flexible enough for the greater fre-
quency range of instrumental music or sound effects. Sound
systems are built to serve definite purposes. Before im-
proving a sound system or buying a new one, the purposes
for which it is to be used, should be decided.

The panel board of a central-sound system:
The panel board is the heart of the sound system and
should be placed in that part of the school building where
the largest number of people who use it are located. In the two new elementary schools, this may be a small room adjoining the principal's office since the principal may be the only person to use the microphone. Studies of other schools' experiences with central-sound systems have shown that the panel board should never be located in the principal's office, either in an elementary school or in a high school. The studies also indicate that in many schools there have been increases in the number of people who can utilize the equipment effectively in the education of children.

The writer is of the opinion that the more people there are in a school who use the central-sound system, the more useful and the more valuable that sound system is. It has been found in other schools that no matter what the original purpose of the installation of a sound system may have been, the system is invariably used for additional purposes. This can be illustrated by what happened in the Upper Arlington High School when a central-sound system was installed. The panel board was placed in the principal's office because it was believed that the purpose of the system was solely as an administrative tool and as a means for distributing radio programs into the classrooms. Then the uses were expanded to include students presenting programs to their schoolmates over the sound system. The result of more and more such use of the panel board by more and more people was that the principal moved to another
room and his former office was transformed into a studio.

Another reason in favor of having the panel board located somewhere else than in the principal's office is to facilitate the use of the sound system when the principal is busy or absent. There should be at least one teacher in the school who knows how to operate the entire sound system. This includes the radio, turntable, and switches for each classroom. By having one or more teachers trained to operate the system, the principal will be saved from becoming a switchboard operator. Some schools have found it worthwhile to have students operate the sound system under teacher supervision.

Loudspeakers and acoustics:

The location of loudspeakers is a problem of acoustics. The matter of acoustics in regard to classroom teaching has been considered in the plans for the two new elementary schools.1 Perhaps, however, attention has not been given to the location of the sound system loudspeakers in the various classrooms. The traditional location of classroom loudspeakers, namely, in the center of the wall at the front of the room, is not always the best for good hearing. The best location varies from room to room. Such factors as the number of students, size of the classroom, including the height of the ceiling, amount of hard surface which reflects

1 The Bureau of Educational Research has recommended that the ceilings of the classrooms be acoustically treated.
rather than absorbs sound waves such as blackboards and windows, and the amount of previous sound-conditioning, must be taken into account in placement of the classroom loudspeaker.

If it will be remembered, this section began by suggesting what a qualified person can do in regard to improving the present sound systems in the West Elementary School and the high school. Then there was stressed the need for careful planning in the purchasing of central-sound systems for the coming new school buildings. Now the study will turn to the matter of improving radio program reception facilities in all of the existing school buildings.

2. The West Elementary School should install a radio-equipped and acoustically treated listening and music room.

The large room which the principal would like to sound-condition has the capacity to hold three classes without overcrowding. It is now being used as a music room. By sound-conditioning that room for the purpose of using it as a listening room, it would become more suitable as a music room. In this room at present there is a phonograph player with several records which are used during music classes. When the machine was played, it was discovered that the acoustics of the room are very poor. Even if the room were never to be used as a listening room, the money spent in improving the acoustics for the music classes
would be money well spent.

There are at least two ways by which the room could be sound-conditioned. One is by means of draperies on the walls. The draperies could be suspended from rods which might be attached to the windows as well as to the walls so that they could be slid over the windows if so desired. The draperies could be made out of material such as monks cloth.

The second method is to place fiber board on the walls and ceiling. Fiber board is capable of absorbing sixty to seventy per cent of the sound striking it. The cost of this material varies according to the company it is purchased from and whether the company or the school does the necessary work in installing the boards.¹ In order to keep costs to a minimum, it would be possible to install the fiber boards on the ceiling and draperies on the walls.

In addition to improving the acoustics of the music room, it is suggested that a console radio, including both AM and FM,² be purchased and placed in this room. After the new school buildings are constructed, East Elementary will be the only school without a central-sound system. Because of the unusually poor acoustics in the classroom,

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¹ See Bibliography for list of Columbus Firms which sell acoustic material.

² AM pertains to amplitude modulation; FM to frequency modulation.
it is believed that the school would benefit more from a sound-conditioned music-listening room than it would from the installation of a central-sound system. Since the school will have no facilities for playing large transcriptions if a sound system is not installed, it is recommended that a good quality transcription player be purchased. A portable transcription player can be secured for as low as $100, but it is better to plan on a price between $150 and $175.

3. Portable table model radios and portable transcription players should be purchased for North and South Elementary Schools.

These two schools would benefit from having one or more table model radios and at least one transcription player for each school. Each table model radio should be capable of being moved from room to room; that is, it should not have an outside aerial. However, if aerials are needed for good reception, they should be installed in each room. The radio selected should have a speaker of at least eight and preferably ten inches in diameter in order to secure good quality reception. The radios would be a temporary measure until the new school buildings are constructed.

4. Adequate central-sound systems are necessary at both the West Elementary School and the Willis High School.

Both schools have the same problem; either the present
sound systems must be improved or new ones must be purchased. The points mentioned in regard to the purchasing of sound systems for the new elementary buildings apply to the problems confronting these two schools. The present sound systems may be in better condition than they are generally considered to be. Perhaps new wiring in places, new amplifiers, rearrangement of loudspeakers in the classrooms, and use of sound-conditioning will be sufficient to enable the schools to make satisfactory use of their existing sound systems.

If the present sound systems are repaired, it is recommended that new turntables be installed. The new ones should be capable of playing sixteen-inch recordings at 33 1/3 r.p.m. as well as the smaller record at 78 r.p.m. The trend in recordings is toward the large transcriptions. Much research and experimentation has been done in the past few years in regard to records and transcriptions. Better educational records and transcriptions are now being made; more companies are entering the relatively undeveloped field of educational recordings.

In summary:

The schools need to improve the physical facilities for radio program reception before the teachers can use radio programs regularly as part of their classroom work. The steps which should be taken are: (1) improvement of the
central-sound systems either through repairs or purchasing of new equipment; (2) improvement of classroom acoustics by such means as fiber boards or draperies; (3) purchase of one console radio for West Elementary; (4) at least one table radio each for North and South Elementary; and (5) purchase of one portable transcription player each for East, South, and North Elementary Schools. However, giving the teachers better program reception does not mean they will increase their use of radio programs; there still remains the problem of utilizing the programs effectively.

5. A cooperative plan for securing effective use of the equipment must be inaugurated.

Improving the facilities in the schools for radio program reception can be the first step toward increasing the use of radio in the Delaware schools. If it is the first step, encouraging and training the teachers to get the most out of the improved facilities is the next one. But buying a new radio and training a teacher to use that radio is not all which needs to be done. These are temporary measures. For example, after the equipment has been purchased, someone has to learn to operate it, someone has to take care of it. After the teachers are trained, someone must keep them informed of new programs being put on the air, someone must be available to offer the teachers help on bothersome questions which are bound to arise no matter how
well they are trained. The superintendent and his administrative staff cannot hope to do all these things. A comprehensive plan is needed; one which will coordinate the improvement of facilities and the training of teachers with all the other aspects of radio work being carried on or to be carried on in the schools. The plan should depend not upon one individual or upon a small group of teachers, principals, and students. The writer believes that if radio and other auditory aids are to be utilized effectively in the Delaware schools, they must become an integral part of the school life.

The ways are unlimited in which the radio can be used as a teaching aid, as a vehicle of new experiences for the students, and as a means of encouraging the students to be discriminate radio listeners. The effectiveness of the utilization of auditory aids depends more upon the classroom teachers than any other one group in the school. However, it cannot be stressed too much that auditory aids are aids and nothing more. They will not reduce the amount of work the teachers have to do; they are teaching tools just as are the textbooks and blackboards. There are two ways in which students can become familiar with the radio. One is to use it in the classroom or at home just as they use textbooks - for learning subject matter. The second is to engage in radio program production either in dramatics classes or in extra-curricular activity.
If teachers are to use the radio and other auditory aids most effectively as teaching aids, they must receive training in their use. If teachers are to use auditory aids as teaching tools, and if students are to use them in order to become discriminate listeners, the schools will have to provide the necessary equipment. The schools will need a comprehensive plan if these purposes are to be accomplished. The writer believes that such a plan must center about the following:

1. In-service training of teachers for the effective utilization of radio programs and recordings in their classrooms.

2. Training of teachers and students in the production of radio programs.

3. Improving and increasing the facilities of the schools for the reception and production of radio programs.

4. Coordinating all radio activities in the schools.

The Delaware schools should set up an organization which will work with the superintendent in formulating and carrying out the details of the plan.

6. A coordinating radio committee should be set up to study, advise and administer the over-all radio plan.

On the next page will be found a diagram of such an organization. In order that the superintendent will not be bothered by many unfamiliar details of radio work, it is suggested that he appoint a qualified teacher to act as Radio Director. The director will be the chairman of the
FIG. 3—ORGANIZATIONAL DIAGRAM
FOR RADIO COMMITTEES
coordinating committee, the chairman of the production sub-committee, and will represent the particular school from which he comes on the coordinating committee. The director will be responsible for all radio activities being carried on in the schools. The success of the auditory aids program will not depend upon any one individual since no one person can hope to do everything that should be done. However, the Radio Director, in order that the program will succeed, must be a person who can perform several different duties. It is suggested that the person appointed:

1. Should have had experience in radio production and thus be able to serve in the capacity of chairman of the production sub-committee.

2. Should have background in dramatics, music, and both elementary and secondary education, if possible.

3. Should be skilled in working with people, especially teachers and pupils.

4. Should be bright, industrious and know radio education.

The coordinating committee, with the Radio Director as its chairman, will work with the superintendent in formulating the comprehensive plan mentioned earlier, and it will assist him by putting the details of the plan into operation. This committee will be composed of representatives from the five schools, chairman of the script, production, and technical sub-committees, the principals of the five schools, and a representative from the PTA. The PTA representative is not to be a teacher. A breakdown of the coordinating committee is as follows:
1. One teacher from each of the elementary schools. Each teacher will, in effect, be radio director for a school and by being on the committee will be able to coordinate the radio work in that school with radio work going on in all the schools. Each such teacher will learn to operate central-sound systems and other auditory aids just as the principals are required to know how.

2. The chairman of the script sub-committee will represent that group on the coordinating committee. The chairman may well be either the journalism teacher or a high school English teacher.

3. The technical sub-committee is the group in charge of operation and maintenance of all auditory aids in all the schools. Its chairman may be a high school science or physics teacher.

4. The principal of each school will cooperate with the representative from his school in regard to coordinating the radio work in his school with that in other schools. In their work on the coordinating committee, the principals will serve as additional representatives from the schools.

5. The purpose of a PTA member on the coordinating committee is to enlist the assistance of that organization in solving the many problems concerned with increasing the use of radio and recordings in the schools. In other communities, the PTA has been instrumental in raising funds with which to purchase auditory equipment for the schools.

7. In-service training of teachers in utilization must be provided.

The survey revealed that the teachers in the Delaware schools had not received training in the effective utilization of radio and recordings, nor had they had extensive experience in using auditory aids in their classrooms. At the present time they cannot use radio programs or transcriptions because of equipment shortages. Even if the facilities for using radio programs and transcriptions were improved, the teachers still would require adequate training in the use of such equipment. There are no provisions,
locally, for helping them to learn the techniques involved in effective auditory aids utilization. That local in-service training must be provided should be clear from the survey. The teachers, in the course of the interviews and on the questionnaire, indicated that they would be willing to receive training if it did not involve any financial expense on their part and if they did not have to leave Delaware.

Perhaps the ideal way to train teachers in the effective utilization of auditory aids would be to require every teacher to attend such courses and workshops as are designed to give teachers insights about the opportunities and limitations of auditory aids as supplementary teaching material. However, the fact remains that few teachers feel that they are able to afford the necessary time and money which such attendance requires. While it may not be feasible to require every teacher to attend radio courses and radio workshops, it may be possible to have a few teachers do so. It is believed that the members of the coordinating committee should be encouraged to enroll in radio courses and workshops. This encouragement might be in the form of increasing their salaries in order to cover the expenses which they would incur during the training. The radio director should get an over-all picture of radio education as well as specializing in radio production. The chairman of the script sub-committee should specialize in script writing.
while the chairman of the technical sub-committee should specialize in maintenance of auditory aids equipment. The representatives from the elementary schools should be concerned primarily with those phases of radio education which deal with radio in the elementary grades; this also applies to those elementary school principals who may care to enroll for training in radio education. The high school principal, of course, will prefer to be concerned with radio education on the high school level.

After it has received some training, the coordinating committee might attack the problem of in-service training of all the teachers on two fronts. First, it might make a list of reading material which the teachers can read for the purpose of training themselves. In addition, the committee might purchase reading material and start a library on radio education. This library would be at the disposal of all teachers. Second, the committee might prepare an after-school course which would have as its objective the assisting of teachers to utilize radio programs and recordings effectively. The course should enable the teachers to realize that auditory aids can be used as teaching tools in order to make their courses more valuable for the students, that radio, in addition to being a tool for teachers, can become a tool which the students can use in becoming discriminate radio listeners. The course should be organized so that it will take advantage of all available resources
in Delaware and near Delaware. For the purpose of assisting the Delaware schools to provide for in-service training of teachers, a selective bibliography has been prepared.¹

8. Training of teachers and students in the production of radio programs must be provided.

It is believed that, as more auditory aids equipment is added to the schools' facilities, students and teachers will want more training in radio production than is now available in connection with the weekly radio program over station WMRN. Not only would they like to have their own studio for rehearsals of the weekly broadcast, but they would like to present programs over the central-sound systems. Such expansion in radio production is educationally worthwhile. One of the chief values is that the students and teachers become more familiar with radio, its possibilities and its limitations. However, to expand the present efforts in radio production, the students and teachers would need more training than they have had.

Those who will be most concerned with program production in the near future are the radio director who is to be in charge of all school radio program production and the chairmen of the script and technical sub-committees. It has already been mentioned that these three people should

¹ "A Selective and Annotated Bibliography for the Delaware Plan." It is the second section of the Bibliography of this study. It is designed especially for the radio director and the coordinating committee.
attend college and radio workshop courses in order to receive the training they will need in fulfilling the requirements of those positions. If more teachers eventually need to receive production training, this group of three teachers might logically be in charge of the training.

After the coordinating committee is trained, the radio director will assume responsibility for the continuing instruction of students in production. Likewise, the script chairman would be responsible for training students in writing scripts, and the technical chairman for the students' instruction in equipment operation.

Students might well be included on the various subcommittees in order to provide them with more opportunities for becoming familiar with radio. Also, by putting them on the sub-committees, the students will be given a voice in regard to the policies of those groups. A third benefit from this plan is that the teachers will not have to do all the work with which the sub-committees are concerned. In the case of the script sub-committee, the chairman will not attempt to write all the scripts but will train the student members on the sub-committee to write scripts. At first, the script sub-committee will need to write only one script each week, namely, for the weekly program over station WMRN. Later, when facilities permit, the group may write scripts for school programs which are presented over central-sound systems. The chairman may be able to conduct a brief course
in script writing as part of a course in English or journalism and not have to depend entirely on having the scripts written after school hours.

The script sub-committee can write scripts regardless of the facilities the schools may have. The production sub-committee, however, is more dependent on the status of facilities. It cannot produce radio programs over the central-sound systems of the schools until the schools either improve what equipment they now have or purchase and install new sound systems. The production sub-committee cannot make transcriptions until the schools purchase a recording unit, and it will do no good to make transcriptions unless the schools have turntables which can play the sixteen-inch-discs.

Just as increasing the facilities for radio program reception will assist the teachers in making more effective use of broadcasts in their classrooms, so will increasing the facilities for radio program production help the students and teachers in producing better radio programs. If it is anticipated that the high school students will be presenting programs over the school's central-sound system, then the school should have a studio and control room. In addition to being used for school programs, the studio could be used for rehearsals of the WMRN broadcasts. Also, if the school should ever buy a recording unit, the students would be able to make transcriptions, provided a studio is
available. The high school music-dramatics studio could easily be transformed into a radio studio and control room. If this transformation should be accomplished, it is suggested that the central-sound system's control panel be placed in the control room in order that it may be more accessible to all authorized personnel. This arrangement would necessitate a person on duty in the control room during school hours, but such a location would not limit the use of the central-sound system as it does when the controls and microphones are located in the principal's office.

9. The physical facilities and training of teacher-student personnel must be coordinated.

The technical sub-committee is the group which will be particularly concerned as to the equipment to be purchased for it will be in charge of operation and maintenance of such equipment. It may be that the superintendent will desire to have the coordinating committee decide what equipment should be purchased. This implies that the committee will need to decide the purposes for which the equipment is to be used. In other words, the coordinating committee will need to decide whether the central-sound systems in West Elementary School and the high school should be repaired or replaced. It will need to decide if the sound systems in these two schools and the anticipated new ones should be of such type as to serve merely as
administrative tools or be capable of distributing radio programs, recordings, and programs originating in the schools. The coordinating committee will need to decide whether or not to sound-condition the music room in East Elementary; whether to purchase portable transcription players; whether to purchase studio equipment for a studio to be built in the high school.

The outside radio expert, the hiring of which was suggested in the first recommendation, will report his findings to the coordinating committee. After the committee accepts, rejects, or modifies the proposals of the expert in regard to the improvement of auditory aids equipment, it will consult with the superintendent for the purpose of determining whether or not part or all of the necessary money will come from the school board or if an appeal will be made to the community for the necessary funds. It is at this point that the PTA representative may be extremely helpful.

After the coordinating committee has been trained, the necessary equipment has been purchased, the teachers have learned to use the auditory aids, and the students have received radio production training, there still exists a vital need for the coordinating committee. In-service training of teachers will never stop for new techniques are being developed all the time and which the teachers will want to learn about. Also, there is the continuous turnover of teachers with the new ones to require training. Production training never stops for students come and go,
and eventually the elementary grade students will want to produce programs, and this will mean training of elementary teachers in program production. Auditory aids equipment wears out, breaks down, and money will have to be raised to purchase new equipment and replace broken parts. The coordinating committee will never lack for work to do.

By Way of Summary

Three questions were asked at the beginning of the preceding chapter:

1. Are the public schools in Delaware, Ohio, utilizing auditory aids effectively?

2. If the Delaware schools are not using auditory aids effectively, what steps can and should be taken to remedy the situation?

3. Will the recommendations for the improvement of utilization of auditory aids in the Delaware Public Schools be applicable to other small city schools?

In answer to the first question, it was found that the schools are not utilizing auditory aids effectively. There are two main reasons. One is that the schools lack adequate facilities such as good central-sound systems and receiving sets. The second reason is that the teachers have had little, if any, training in using auditory aids.

The solution to the second question considered two objectives:

1. Auditory aids should be used to assist the students in becoming discriminate radio listeners.

2. Auditory aids should be used to enrich the curriculum and thus assist the teachers in their work and the students to gain new, worthwhile experiences.
It was decided that these objectives could best be achieved by the creation of an organization which would work with the superintendent in formulating a plan based on the following four aspects of auditory aids utilization:

1. In-service training of teachers for the effective utilization of radio programs and recordings in their classrooms.

2. Training of teachers and students in the production of radio programs.

3. Improving and increasing the facilities of the schools for the reception and production of radio programs.

4. Coordination of all radio activities in the schools.

There are three central ideas in the proposed Delaware plan. (1) Teachers, to use auditory aids effectively, must become familiar with them. This can be done by reading, by in-service training courses, by actually using radio programs and transcriptions, and by helping students to produce school radio broadcasts. (2) Students, if they are to become discriminate radio listeners, must also become familiar with radio. This can be done indirectly when teachers use auditory aids as teaching tools or directly when radio becomes part of a course or even an entire course in itself. Another way for students to become familiar with radio is through participation in production of school radio programs. Not only can students use auditory aids in order to become discriminate listeners, but they can utilize the radio and recordings as learning tools in their courses just as they use textbooks. (3) If teachers are to use auditory aids as
teaching tools, if students are to use them as learning aids, there must be a plan to coordinate their efforts. In addition, that plan should be prepared and put into operation by the students and teachers themselves.

Nine recommendations to the superintendent of schools and the Board of Education of Delaware were made. These were:

1. The services of a competent radio repair and service man should be engaged.

2. The East Elementary School should install a radio-equipped and acoustically treated listening and music room.

3. Portable table model radios and portable transcription players should be purchased for North and South Elementary Schools.

4. Adequate central-sound systems are necessary at both the West Elementary School and the Willis High School.

5. A cooperative plan for securing effective use of the equipment must be inaugurated.

6. A coordinating radio committee should be set up to study, advise and administer the over-all plan.

7. In-service training of teachers in utilization must be provided.

8. Training of teachers and students in the production of radio programs must be provided.

9. The physical facilities and training of teacher-student personnel must be coordinated.
CHAPTER VII
CONCLUSIONS AND SUMMARY

Implications for Other Cities

The study has revealed that the Delaware schools are not utilizing auditory aids effectively; a plan for the promotion of effective utilization has been proposed; the final question yet remains to be answered - is the plan applicable to other small city schools? Since the plan was devised to overcome certain limitations, it would seem that if the same limitations exist in other schools, then the plan would be applicable to those schools as well as to the ones in Delaware.

It will be remembered that the two main factors responsible for the ineffective use of radio and recordings in the Delaware schools are (1) inadequate facilities and (2) teachers who are inexperienced in the use of auditory aids. Studies by Seerley Reid and others have shown that other small city schools (and some big city schools, for that matter) also have a limited amount of auditory equipment. Most graduates of teacher training institutions have had little, if any, training in the use of radio broadcasts and recordings. Only a small percentage of teachers have made special efforts to gain familiarity with auditory aids by studying at those places where radio utilization is being taught. In other words, the two main reasons why most small city schools do not make effective use of auditory aids are the same as for the schools in
Delaware. The plan which has been prepared for the Delaware schools is capable of being used to make auditory aids utilization more effective in other schools.

This does not mean that the entire Delaware plan will apply to other schools for the plan was designed to accommodate specific conditions which exist in the Delaware schools. The central ideas in the plan are applicable to other schools. They are:

1. The schools must prepare a comprehensive plan which stresses coordination of radio activities. A radio director and a coordinating committee will be necessary.

2. Students, teachers, and principals must participate in preparing the comprehensive plan and carrying out the policies and details of the plan. Only through participation can effective cooperation be secured.

3. Effective utilization of auditory aids requires time; time for preparation of the comprehensive plan, for details of the plan to be put into operation. Time will be required for:

   a. In-service training of teachers for the effective utilization of radio programs and recordings in their classrooms.

   b. Training of teachers and students in the production of radio programs.

   c. Improving and increasing the facilities of the schools for the reception and production of radio programs.

   d. Coordination of all radio activities in the schools.

Conclusions

No plan can be a cure-all for the problems which it professes to solve. The success or failure of a plan depends upon the individuals who attempt to put the plan to work. The true value of a plan cannot be determined
until after it has been tested. However, the writer believes that the Delaware plan, if used, will promote more effective utilization of auditory aids in the Delaware schools because:

1. The plan is feasible. The details of the plan are based on the actual conditions in the Delaware schools as revealed by a thorough survey. In the case of specific recommendations such as the advocating of sound-conditioning the music room in the East Elementary School, the recommendations can be followed without too much difficulty; they are practical.

2. The plan is inexpensive. One way in which the plan is practical is the matter of expense. It is true that the schools will need to pay out money if they are to secure the improvements in physical facilities which are suggested. However, the recommendations favor systematic expenditures which are based on a comprehensive plan that considers future needs as well as current ones. The emphasis is on the schools getting the most for the money which they invest in auditory aids. The evaluation is not to be based on the amount of equipment which can be purchased for the smallest amount of money, but rather on the amount of satisfactory service which can be obtained from the equipment.

3. The plan is democratic. It provides opportunities for everyone in the schools - students, teachers, and principals - to participate. As a matter of fact, effective utilization cannot be accomplished by one person; it requires the concerted efforts of several people. The plan not only provides for the coordination of several people's efforts, namely, the coordinating committee, but it encourages participation by all of the students, teachers, and principals.

4. The plan allows for a transitional period. The plan allows for the fact that time will be needed before effective utilization can be accomplished. It provides for a gradual transition from the present stage of ineffective utilization of auditory aids to the proposed plan of activity in which the schools effectively utilize radio and other auditory aids.

5. The plan is flexible. It can be used as a guide, particularly by the radio director and the coordinating committee; it encourages initiative upon their part. In addition to being flexible as far as the Delaware schools are concerned, the plan is capable of being used by other schools.
Summary

This study has endeavored to stress the importance of young people and adults becoming critical radio listeners. It attempted to show that the problems of the atomic bomb, world citizenship, and democracy in this country, are not only related, but that their solutions can be aided or discouraged by freedom of restrictions upon the radio as a means of communication. Not only is the freedom of radio bound up with national and international problems, but it becomes a factor which influences the daily living, the personal problems of everyone. Since the radio does play a large part in the lives of people, it should be free from the control of any small group of persons. The radio should express the will of the majority. In a democratic way of life such as that enjoyed by the American people, one of the ways, if not the best, for the people to keep their radio free is to be discriminating radio listeners.

The school is one place where the young people can learn to be discriminating listeners. However, the school is fortunate in that not only can it use the radio as a means of teaching the students to be critical listeners, but it can use the radio and other auditory aids as teaching devices for the purpose of making the curriculum more valuable for the students. The teachers can use auditory aids as teaching tools; the students can use them as learning aids. Effective utilization of radio and recordings depends upon the teachers becoming experienced with
auditory aids, upon the students becoming familiar with the aids. In order that teachers and students can use auditory aids effectively, there must be developed a plan, prepared and promoted by students, teachers, and principals, which will coordinate the efforts of teachers and students in gaining experience and familiarity with such aids to teaching and learning. By effective utilization of auditory aids, the school can not only help the students in becoming discriminate radio listeners, but also assist them in learning to live their own lives.
BIBLIOGRAPHY

1. General


2. A Selective and Annotated Bibliography for the Delaware Plan

The purpose of this bibliography is to list the sources of information which are easily available to the coordinating committee and the radio director.

Ohio State University

1. Bureau of Educational Research, Arps Hall. It served as the headquarters for the Evaluation of School Broadcasts project. The bureau is available to the schools on such matters as sound equipment for classroom use.

2. Teaching Aids Laboratory, Page Hall. It is a storehouse of information regarding audio-visual aids. It has a large file of recordings and transcription players which may be borrowed by schools. Some of the publications distributed by this office include The Newsletter, a monthly periodical dealing with current news about audio-visual aids, and the Evaluation of School Broadcasts bulletins. For a fee of twenty-five cents teachers can have their names put on the mailing list for the Newsletter. The bulletins vary from ten to fifty cents in price.

A mimeographed list of the bulletins and other publications of the Evaluation of School Broadcasts project can be secured free of charge from this office. Some of the material which the coordinating committee and radio director might purchase are:

Bulletin Number 41, Transcription Players for School Use, R.R. Lowdermilk.
Bulletin Number 42, How Teachers Use School Broadcasts, Norman Woelfel and M. Kimball Wiles.
Bulletin Number 44, Why Teachers Don't Use School Broadcasts, Seerley Reid.
Bulletin Number 40, Criteria for Children's Radio Programs, Howard Rowland, I. Keith Tyler, and Norman Woelfel.
Pamphlet Series Number 2, How to Judge a School Broadcast, Seerley Reid and Norman Woelfel.

In regard to the recordings library operated by this office, it is suggested that the coordinating committee and radio director get a copy of the publication, A Recordings Library, by Alice W. Manchester and a copy of the various lists of recordings.

3. Office of the Director of Radio Education, Brown Hall. I. Keith Tyler, the director, teaches a late afternoon course (Education 601) on radio education. Members of the coordinating committee and the radio director will be able to take advantage of this course. This office coordinates the radio education activities on the campus and is in charge of the annual Institute for Education by Radio.

4. Station WOSU produces educational programs and, upon request, sends printed material about the programs. The Ohio School of the Air, sponsored by the College of Education, Ohio State University, presents in-school programs which are especially prepared for the various grade levels. The School has gained national recognition for its educational broadcasts. WOSU can also serve as a source of information for those who are interested in radio production.

Public Schools

1. South High School (Columbus) and Upper Arlington High School are examples of what individual schools can do with auditory aids.

2. The Zanesville, Ohio, Public Schools demonstrate what an entire school system can do with auditory aids.

United States Office of Education

The address is: Radio Division
United States Office of Education
Federal Security Agency
Washington, 25, D.C.
This office distributes free and low cost material pertaining to radio education. It cooperates with the Federal Radio Education Committee, an organization supported by the radio industry and foundation funds. The Radio Division of the Office of Education serves as a clearinghouse of information on nationwide activities in radio education. Rather than attempt to make a detailed list of the publications put out by the Office of Education and the FRBC, there will be mentioned some of the basic sources which tell what the two offices have to offer.


2. **What FRBC Offers You.** This is a small folder which describes the activities of the FRBC and lists the free and low cost publications which it has available such as the free monthly FRBC Service Bulletin. This bulletin is a good supplement to the Radio Bibliography. Some of the low cost material sponsored by the FRBC includes:

- **Handbook of Sound Effects - Script Exchange**
- **Radio Glossary**
- **Radio Manual**
- **Educational Script Exchange and Supplement**
- **Reference Script Library**

**Radio in the Schools of Ohio**
**The School Radio-Sound System**
**School-wide Use of Radio**

**Radio Stations and Networks**

The Columbus Radio stations, WENS, WHKC, WCOL, and WELD, are easily available for field trips and for securing information about programs. In regard to the networks:

1. **NBC publishes a monthly bulletin entitled "This is the National Broadcasting Company."** The address is Room 217, 30 Rockefeller Plaza, New York, 20, N.Y.

2. **CBS publishes a monthly bulletin entitled**
"Listener's Guide." The address 435 Madison Avenue, New York, 22, N.Y.

3. MBS publishes a weekly folder entitled "Program Folio." The address is 1440 Broadway, New York, 18, N.Y.

The NBC and CBS publications, in addition to giving a time schedule of programs, contain considerable information about certain programs. All publications listed above are free of charge.

CBS also published a pamphlet entitled "American School of the Air" which is to be used in conjunction with the series by that same name. During the past school year the series was broadcast every school day at 5:00 PM (EST). The series was directed to students, not adults. This pamphlet is also free of charge.

Other Organizations

Association for Education by Radio
Room 701, 228 North LaSalle Street
Chicago, 1, Illinois

The AER is a professional organization of radio educators in schools, colleges, universities, associations, and radio stations. In addition to publishing a monthly journal (AER Journal) on all phases of education by radio, the association provides information service on program and utilization ideas, scripts, handbooks, program bulletins, and research. It is organized at the national, state, and community levels. Membership fee of $2 per year includes the information service and the monthly publication.

Committee on Scientific aids to Learning
New York, N.Y.

This organization has ceased to exist and its publications have been given to the FASC for distribution. One of its publications which may be of special interest is Central-Sound Systems by Stewart Irwin.

Educational Department
National Association of Broadcasters
National Press Building
Washington, D.C.

This organization represents the radio industry. It,
as well as the United States Office of Education, distributes the material published by the FRBG. In addition to circulating literature through the FRBG, the NAB distributes publications on its own accord such as The ABC of Radio and How to Use Radio in the Classroom. These are free of charge.

Other organizations which publish literature on radio education are:

1. National Association of Educational Broadcasters
   Executive Secretary, Station WILL
   Urbana, Illinois

2. Association of the Junior Leagues of America, Inc.
   Waldorf-Astoria Hotel
   New York, N.Y.

3. Women’s National Radio Committee
   113 West 57th
   New York, N.Y.

4. Office of Radio Research
   Columbia University
   15 Amsterdam Avenue
   New York, N.Y.

5. Radio Council of Greater Cleveland
   (Write to Mrs. L. Rueh, Chairman
   Evaluation Committee
   1308 Hathaway Avenue, Lakewood
   Cleveland, Ohio)

References

These references may be found in the College of Education library or in the Bureau of Educational Research library, Ohio State University:


   A very good source of material concerning educational broadcasting prior to 1942.


   Suggests references on radio in education prior to 1936.

A list of references prepared by I. Keith Tyler.


A yearly publication covering each annual session of the Institute for Education by Radio. One publication each year since 1930. One exception: due to wartime restrictions, there was no meeting in 1945. The description of the 1935 meeting was included in McLatchy, Josephine and Tyson, Levering (editors). Education on the Air and Radio and Education. Chicago: University of Chicago Press, 1935. (Proceedings of the Sixth Annual Institute for Education by Radio combined with Fifth General Assembly of the National Advisory Council on Radio in Education).


A monthly publication dealing specifically with radio in education. Published during the years 1931-1941.


A monthly publication containing articles on radio education. It always includes the information contained in the AER publication, Selected Radio Programs for School Listening. Has been published since 1941.


A yearly publication of the annual sessions of the General Assembly of the National Advisory Council on Radio in Education. Published during the years 1931-1935. The last publication appeared in Education on the Air and Radio and Education.

Other References:


This book might be called the culmination and summation of the Evaluation of School Broadcasts project. While it is
a textbook on radio education, it may well be used as a reference source.


This publication touches upon two phases of the Delaware plan in that it is a guide for effective utilization of radio programs in the classroom and serves as an aid for school production of radio programs.


This is a recent publication. It represents the efforts of auditory aids equipment manufacturers and educators in trying to establish standards for selection of such equipment by large and small schools.

4. The Newsletter. Published by the Bureau of Educational Research, Ohio State University. Distributed by Teaching Aids Laboratory, Ohio State University.

It is published monthly during the school year. A bound copy of the publications for the years, 1935-1943, can be purchased at the Teaching Aids Laboratory for $3.


This edition is devoted to a description of the scope of radio education activities in the St. Louis schools. To secure a copy, write to the superintendent of schools.

Periodicals

1. Broadcasting
   870 National Press Building
   Washington, 4, D.C.

   Weekly - 15¢
   Yearly - $5

This magazine is sometimes called the "Bible" of the radio industry. In addition to a weekly publication, there is a Broadcasting Yearbook. The Magazines and yearbook
contain information on programs, stations, radio equipment, and lists of places where teachers can study radio.

2. **Billboard**  
   25 Opera Place  
   Cincinnati, 1, Ohio  
   Weekly - 20¢  
   Yearly - $7.50

A good source of information on radio programs.

3. **Variety**  
   154 West 46th St.  
   New York, 19, N.Y.  
   Weekly - 25¢  
   Yearly - $10

Contains information on all forms of entertainment, including radio. There also is a yearbook.

4. **Radio Daily**  
   1501 Broadway  
   New York, 18, N.Y.  
   Daily - 10¢  
   Yearly - $10

Contains up-to-date information on the entire field of radio. It publishes an annual *(Radio Annual, 1946)*.

5. **Tune In**  
   D. S. Publishing Company, Inc.  
   Monthly - 15¢  
   30 Rockefeller Plaza  
   Radio City, 20, New York

A fan magazine similar to the well-known movie magazines. Tells about radio programs and radio actors. It also rates the programs from the standpoint of entertainment.

**Columbus Firms Which Sell Sound-Conditioning Materials**

1. General Maintenance and Engineering Company  
   529 South High Street  
   phone AD 2833

2. B & T Carpet & Linoleum Company  
   135 N. Front Street  
   phone MA 4418

3. Johns-Manville Sales Corporation  
   12 N. 3rd Street  
   phone AD 3263

4. Wilson Floors Company  
   (Acousti-Celotex Products)  
   The Union Acoustical Company  
   337 E. Town Street  
   phone MA 5105