



RADIO
The Assistant Teacher

by
B. H. BARROW



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The Assistant Teacher

By

BEN H. DARROW

Founder and Director of the
Ohio School of the Air



R. G. ADAMS & COMPANY

Columbus, Ohio

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1932

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DEDICATED

To those who made possible the
Ohio School of the Air

- GIFFORD PINCHOT
who gave the first financial assistance
 - THE PAYNE FUND
which continued the support
 - DR. JOHN L. CLIFTON
*who gave the professional support of The
Ohio Department of Education*
 - POWELL CROSLEY, JR.
*who proffered the free services of Radio
Station WLW*
- and
- MARY FRANCES DARROW—*My Wife*
*who shared the hazards and the burden of
its promotion.*



DR. RAY LYMAN WILBUR, *Secretary of the Interior*
Steadfast friend and patron of the growing art of education
by radio.

FOREWORD

ONE of the educational questions for which we are seeking an answer is: What are the possibilities of radio in education? At first thought, the radio seems to make it possible to turn the whole world into a single schoolroom and to make it possible for all the pupils of the nation to listen to one message at any one time. Its scope seems unlimited, its possibilities beyond our present conception. There are certain technical difficulties which undoubtedly can and will be overcome by experience and adequate finance. For the time being, it is most important that a variety of experiments should be carried on with careful checking as to results so that we may ascertain the dependability of the radio as an educational instrument. Mr. Darrow, of the State Department of Education of Ohio, has approached these questions with enthusiasm and an inquiring mind. He has done much more than theorize as to what might or might not happen. He has gone right into the field of experiment and has brought back much information of value. This present book is of a pioneer sort. No one can speak with finality in this field. More work needs to be done in every direction. Mr. Darrow tells us what has been done and how it has been done, and points the way to those further experiments upon which the future of radio in education must depend.

(signed) RAY LYMAN WILBUR,
Secretary of the Interior.



THE OHIO SCHOOL OF THE AIR BROADCASTS
from N. E. A. Headquarters in Washington.

Left to right: U. S. Commissioner of Education William John Cooper, Charles Stauffer, Virginia Pope, John Cooper and Dr. J. W. Crabtree.

INTRODUCTION

TO THE teacher in the fifteenth century, using crude methods of oral instruction, the invention of printing from movable type and the coming of the book made little immediate difference. Perhaps a few teachers gifted with imagination dared to hope that some day this new and costly tool might enrich their teaching. Between that day and this, civilization has leapt forward. Processes of printing have been perfected and wealth has increased until a school without books would seem most unusual.

To the teacher of today talkies, radio, and television may seem costly, cumbersome, and strange as instruments of instruction, but tomorrow they will be as common as the book and powerful in their effect on learning and teaching. The human mind will rise to an entirely new level of precision and efficiency and there will be such an enlargement of consciousness that the common man will be familiar with matters which today only a few can understand. Mind is a master factor and every improvement in its cultivation lifts the whole level of human life. By the wise use of his mental and spiritual resources, man may create a civilization of increasing excellence and happiness. Radio, television, and air travel will eventually create a world community of culture. Meantime, we must creep before we can walk.

What about radio in the schools today? It is still embryonic but it is growing. Our best educators no longer call it a fad or brand as mere enthusiasts persons who advocate its use. Experience in other countries, where the educational significance of this new tool is better appreciated than here is convincing. Master teaching in Cleveland has established results on a scientific basis. The Ohio School of the Air, supported by legislative appropriation, has established itself and has been able to go on in spite of depression and disaster on all sides. Universities which have satisfactory channels of their own are learning how to use this method of teaching with increasing success. The radio has a place in the school. If it can add as much as five percent to the effectiveness of our schools—and that is a most conservative estimate—it is worth \$100,000,000 a year to the educational enterprises of our various states and communities.

JOY ELMER MORGAN
Editor N. E. A. Publications.

BROADCAST

A voice spake from the burning bush;
A man named Moses heard and saw,
And in the intermittent hush,
He wrote the Letter and the Law.
What matter if this be a sign,
A symbol for an olden race?
In the evolving world design,
It finds its portent and its place.

A musty book, a legal scroll;
A lad named Lincoln found and read.
Its pages poured into his soul,
Its logic ripened in his head.
What matter that his life was hard
And every cup was tinged with gall?
His labor was its own reward;
He knew the Impulse, which is all.

The lark leaped up to meet the sky,
A man named Shelley paused and heard;
He tossed his heavenly song on high,
Which soon outsang the soaring bird.
What matter that his bones are clay,
That breath is brief and death is long?
Each lark that trills its note today
Sings of the poet and his song.

The bush still flames against the hills,
The book lies open to the day;
The song is sent across the sills
of Rome, or Rio, or Cathay,
What though we cannot know the goal,
Nor how the Eternal Purpose runs?
Man strides his world from pole to pole
And lifts his brow beyond the suns.

EDMUND VANCE COOKE

PREFACE

THE CENTRAL purpose of this volume is to afford a groundwork in radio education. The field and the function of educational broadcasting are not yet determined. In fact, there is no likelihood that agreement on such matters will ever exist. It would be foolish, indeed, to expect much finality in the philosophy developed by so embryonic an art.

Nevertheless, I have dared to set down my own analysis of the various elements to be considered, knowing that if true my findings will have value and if false they will at leastt be provocative of clearer thinking and sounder conclusions on the part of others. To do this hurriedly in the midst of the stress that attends nearly all promotive endeavors, may betoken temerity. Yet, even as "the thots of youth are long, long thots," mayhap the thots of a youthful enterprise may have pith and portent.

I realize that several chapters might have been included in this volume. In fact, others were written. But the desire for brevity caused their exclusion as well as the abridgment of all remaining chapters. The goal was to provoke thinking rather than to attempt a complete exposition.

Corrections, counter arguments, suggestions and comments are solicited. Just as teamwork of broadcasting teacher and classroom teacher brings improvement, so may the users of this volume cooperate with me in further developing the new art of education by radio.

In addition to those friends to whom this book is dedicated there are many who have rendered valuable assistance. Chief of these is Mr. B. O. Skinner, Director of Education of the State of Ohio. His growing interest in radio education and his kindly cooperation in my efforts have expedited the publication of this volume.

I am indebted to Radio Station WLW, Alice Keith of the American School of the Air, Judith Waller, Director of WMAQ,

R. C. Higgy, director and Gwendolyn Jenkins, dramatist of WEAO, Virgil Dickson and the Pacific Coast School of the Air, Joy Elmer Morgan of the National Committee on Education by Radio, Superintendent Robinson G. Jones of Cleveland, H. L. Ewbank of the University of Wisconsin, Hattie L. Parrott of the North Carolina School of the Air, Herman Daake, cartoonist of Rochester, Indiana, several members of The National Broadcasting Company, Margaret Harrison, Director of Radio Research at Columbia University, The Crosley Radio Corporation, the Atwater Kent Manufacturing Company, the Magnaphone Co., The Simplex Company, The Educator Company, The Operadio Manufacturing Company, and the Baritone Manufacturing Company for the permission to reproduce certain photographs and lesson leaflet material.

I am grateful to Dr. Edgar Dale, L. W. Reese, Effie Bathurst, Ida M. Baker, Ruth Young White, Harry E. Eswine, Harrison M. Sayre, William H. Vogel, and Dr. W. R. McConnell for allowing pictures of their lessons to be reprinted.

Especially am I indebted to Armstrong Perry and Cline M. Koon for certain data used in chapters one, two and seven, and to Roy Reichelderfer, Margaret Learned and Ruth Carter for services in preparing the manuscript.

Among the considerable number of people to whom I gratefully give acknowledgement are scores of superintendents and hundreds of teachers in Ohio and adjoining states. The daily reports, annual reports from schools and a rich body of helpful letters from teachers has given a certainty of judgment that could not otherwise have been ours. We pass the cumulative benefit of this counsel direct to the reader.

And lastly, I am indebted to the home listeners who have written us thousands of letters of help and encouragement. They are to a great extent the authors of chapter eight.

May, 1932

BEN H. DARROW

CONTENTS

CHAPTER I

	PAGE
THE ORIGIN AND GROWTH OF EDUCATIONAL BROADCASTING	17-62
Introduction. New York. California. Chicago. Kansas. Georgia. No Support From Organized Education. Connecticut. Reasons for Inconclusive Results. Cleveland. Chicago. A New Source of Support. The Educators Speak. The Payne Fund Survey. The Damrosch Series. Radio Guild. The Ohio School of the Air. The American School of the Air. An Important Experiment. (Wisconsin). North Carolina. The Advisory Committee. The National Committee. The National Advisory Council. The U. S. Office of Education. Conferences and Institutes. Research. Poem. Chronological Chart. References.	

CHAPTER II

THE PURPOSES OF EDUCATIONAL BROADCASTING	63-82
A Pertinent Question. An Inclusive Objective. Objective Not Yet Reached. Objectives Vary. Viewpoint of (A) Educational Leader. (B) Classroom Teacher. (C) Pupil. (D) Parents and the Public. (E) The Radio Industry. Parable of the Powerful Penny. References.	

CHAPTER III

THE PREPARATION OF EDUCATIONAL BROADCASTS	83-112
Choosing the Curricula. Determining the Most Wanted Subjects and Courses. Determining the Adaptability. Music Ideally Fitted. Determining Availability of Talent. Grade Placement. Fixing Length of Lessons. Time of Day. Listing of Talent. Training of Talent. Teaching Method. The Preparation of the Lesson. Picturization. Sample Manuscript. Measuring the Broadcaster's Ability. Obtaining Cooperation of Classroom. Advance Schedule. Rehearsals. References.	

CHAPTER IV

PRESENTATION OF EDUCATIONAL BROADCASTS	112-146
Preparation for the Broadcast. A Sample Day's Broadcast (A) Opening Exercise. (B) Current Events. (C) Geography (D) Nature. (E) Closing Announcements. A Radio Dramalog. A Radio Arithmetic Lesson. A Health Lesson by Radio. The Follow Up. References.	

CHAPTER V

- CLASSROOM USE—EQUIPMENT AND LESSON LEAFLETS** 147-176
 An Easy Task. A Real Hazard. Central Receiving Equipment. A Local Broadcasting Station. Radio Score-Card. Use of Miscellaneous Broadcasts. N. B. C. Educational Lists. Columbia University Lists. A Useful Method. Right Conditions of Participation. Excerpts from Lesson Leaflets. (A) Courier Foreword. (B) Getting the Most from Broadcasts. (C) Educational Broadcasts WMAQ. (D) American School of the Air. (E) Instructions on Current Events Broadcasts. Nature. Geography. Literature. References.

CHAPTER VI

- CLASSROOM USE—RECEPTION AND FOLLOW-UP** 177-202
 Laying the Groundwork. Attitude of Teacher. Enthusiasm Indispensable. Types of Classroom Participation. Bridging the Gap. Reprints. Examples of Advance Preparation in Literature. Story Plays and Rhythmics. Fixing and Retaining Values of the Broadcast. Sample of Physics Leaflet. Sample Damrosch Leaflet. Sample Health Leaflet. Class Discussion. Voluntary Pursuit of Knowledge. Examinations. Students Work. (A) Phrase Pictures. (B) Germany. (C) "Brushes." (D) A Pupil's Testimony. Poem.

CHAPTER VII

- MEASURING THE EFFECTIVENESS OF EDUCATIONAL BROADCASTS TO SCHOOLS** 203-222
 Introduction. Reprint of Daily Lesson Report Blank. An Example of Motivation. Summary of Teacher's Report on a History Dramalog. Reprint of Annual Report Blank. Report on Radio Equipment. How Radio Equipment was Obtained. Relative Number of Classes. Relative Value of Different Features. Characteristics of a Successful Broadcasting Teacher. A Controlled Experiment. Conclusion.

CHAPTER VIII

- THE REUNION OF HOME AND SCHOOL** 223-238
 Introduction. The Home and Shop Listener to the Rescue Press Releases. Letters from Superintendents. How Cities Equip. Home Audience Outnumbers School Group. The Taste of the Home Audience (*Quotations from Home Listeners*) . A Special Gift from God. The Magic Link.

CHAPTER IX

- THE FUTURE OF BROADCASTING TO SCHOOLS** 239-266
 Introduction. What Factors Determine the Future. A Difficult Task. Continued Avoidance of Propaganda. The Paramount Issue. The Problem of Financing. Sponsorship. A Most Important Question. Learning from Established Customs. Building on Present Foundations. Direct Improvement on the Part of the Educational Broadcaster. A Wonderful By-product. Improvement in Classroom Participation. Field Service Needed. Improvement Through Home Users of Broadcasts. Television.

ILLUSTRATIONS

	PAGE
DR. RAY LYMAN WILBUR	VI
OHIO SCHOOL OF THE AIR BROADCASTS FROM N. E. A. HEADQUARTERS	VIII
A LISTENING GEOGRAPHY CLASS	XVI
TRAIL BLAZERS— <i>Wm. Armstrong Perry, Dr. W. A. Sutton, Dr. R. J. Condon, Alice Keith</i>	24
PIONEERS— <i>Joy Elmer Morgan, Robinson G. Jones</i>	25
PIONEERS— <i>Judith Waller, Dr. W. C. Bagley</i>	26
DR. WALTER DAMROSCH	36
DR. J. L. CLIFTON, GOV. MYERS Y. COOPER	48
CHRONOLOGICAL CHART	60
A SWITCHBOARD ON PRINCIPAL'S DESK CONNECTS HIS CLASSROOM WITH THE WORLD	61
CARTOON	62
HON. WILLIAM N. DOAK AND AUTHOR	69
THE CROSLEY PLAYERS; THE WEAO PLAYERS	80
CARTOON— <i>Authority on History</i>	82
DRAWING— <i>The Determining Factors</i>	84
GRAPH— <i>Grade Placement</i>	93
C. FRANCIS JENKINS, HAMLIN GARLAND, GRACE ABBOT, VILHJALMUR STEFANSSON	94
C. A. BEARD, W. R. McCONNELL, W. H. VOGEL, BESSIE GABBARD	95
A LARGE SCHOOL LISTENS; A ONE ROOM SCHOOL LISTENS	99
A PRESIDENT BROADCASTS; A SUPERINTENDENT AT A CONTROL PANEL	112
BROADCASTING OF OHIO SENATE AND HOUSE OF REPRESENTATIVES	114
A TYPICAL INSTALLATION	116
VACHEL LINDSAY, EDMUND VANCE COOKE, ORGAN AND ORGANIST, W. A. WALLS	122
A RATHER LARGE GROUP	145
CARTOON	146
A WIDE VARIETY OF EQUIPMENT	150
PLAYING INDIAN	165
HARRISON SAYRE	168
A PET GROUNDHOG	172
PRINCIPAL WHEAT REGIONS	173

DOROTHY CANFIELD FISHER, EDWIN MARKHAM	174
JOHN CLARK, JOSEPH RIES	175
SEVENTH GRADE— <i>Fairview School, Cin.; DEVOTED LISTENERS—Erie County Ohio</i>	176
THE MINUET STEP	180
A LISTENING CLASS	183
DOUGLAS MALLOCH	184
MRS. ALMA RUHMSCHUSSEL	185
INDIAN LIFE; CLOSE ATTENTION IS NECESSARY	187
RECEIVING A LESSON IN RHYTHMICS	188
CHART OF LIGHT WAVES	190
TOO CROWDED FOR BEST RESULTS	191
PUPILS AT THE BLACKBOARD; DRAMALOGS DEMAND ATTENTIVE LISTENING ..	192
STORIES BY RADIO	196
2000 STUDENTS LISTENING TO PRESIDENT HOOVER	202
COLUMBUS FEDERATION OF WOMEN'S CLUBS; A SMALL BUT SIGNIFICANT GATHERING	204
AN EXAMPLE OF MOTIVATION	207
R. C. HIGGY	222
A BLIND LISTENER; AN AGED LISTENER	227
A CLASS OF CRIPPLED CHILDREN LISTENING	230
A HOME-BOUND CHILD HEARS JACKIE COOGAN; JACKIE COOGAN BROADCASTING	233
A PROPER USE OF AN AUDITORIUM; A TOO CROWDED CLASSROOM	238
PAROCHIAL SCHOOLS ENJOY LISTENING; PUPILS HEARD BY ENTIRE SCHOOL ..	248
A STORY CIRCLE	266



A RADIO LESSON IN GEOGRAPHY
Enon, O.

CHAPTER I

THE ORIGIN AND GROWTH OF EDUCATIONAL BROADCASTING

A New Influence. When radio ceased to be the plaything of amateurs and organized broadcasting began in the early 1920's, a new day dawned for the American home. At that time it was not apparent that radio would also bring a new day in formal education. Carrying music and other features intended primarily as entertainment seemed to be the main object of the radio. But talks and dramalogues were soon so numerous that it may be said that education by radio originated with broadcasting itself. In fact, the pioneers may claim that all broadcasting is educational. For the purposes of this book, however, we shall limit ourselves to radio education of a formal nature. In fact, we shall give almost exclusive attention to broadcasting for the classrooms of American schools.

Rapid Advance. From the beginning of organized broadcasting until recently, the cause of education by radio has had a checkered career. The indifference and opposition which normally hold back all movements have been encountered, but they have been routed more quickly than is usually possible. The growth of listening with its increasing regularity binds the Nation into one huge audience. It has forced the educator to accept radio as one more demand which must be dealt with even though he has not yet caught the vision of it as an assistant teacher.

A Pioneer. As early as 1921, the radio counsel for the Payne Fund, Mr. Armstrong Perry, sought to interest the United States Office of Education. In 1922, Mr. J. J. Tigert, United States Commissioner of Education, evinced

active interest. Colleges and universities were among the most enthusiastic builders of stations. They began broadcasting a variety of educational features, calling upon the members of college faculties as speakers. The number of stations located at educational institutions grew to one hundred five. At present there are less than half this number. To seek the reason for the decrease discloses a tragedy which will be discussed in the closing chapter of this book.

In a single chapter it is not possible to do more than to relate the most significant facts concerning the principal experiments. The accounts of the several broadcast series are brief because it is the purpose of this book to stress the present and the future, rather than the too embryonic past.

Listening by Schools. Here and there over the nation during this period of origins of radio broadcasting were educators who hailed radio as a wonderful new educational device that should be set to work along with books, blackboards and buildings. Thus we find New Jersey schools as early as 1922, building scores of sets in Manual Training and Science classes. These sets were hopefully put into use.

The building of these sets taught the students some valuable science in a practical way. But the use of the sets was not so successful. Both transmitting and receiving devices were inferior as yet. The most distinct handicap was the absence of a regular supply of broadcast programs suitable for school use. The listening was unorganized and untimed. But even when the feature to be heard was satisfactory, it occasioned too much confusion to be often repeated. It must be remembered that in those days there were not so many broadcasts of real worth as we have today. Schools must have a definite supply of programs to tune in if radio is to prove itself useful.

BROADCASTING FOR SCHOOLS

NEW YORK

The Haaren High School Experiments. Among the early schools to be equipped with radio was Haaren High School in New York. The faculty broadcast lessons in

accountancy as an experiment in 1923. Special broadcasts prepared by the Board of Education and transmitted by WJZ were heard in the classrooms over loud speakers, from February to May, 1924, and were considered so successful that they were continued for a time. The experiment was apparently premature. Reception at that time had not attained sufficient perfection nor was there adequate administration or financing provided. It, however, proved that radio might be successful as soon as certain problems were solved. This school was the pioneer of all Schools of the Air.

CALIFORNIA

A More Varied Experiment. In 1924, Oakland City, California experimented with some twenty minute broadcasts over KGO and followed in 1924-25 with an enlarged program. Included among the features were: English, Geography, Literature, History, Arithmetic, Penmanship, Guidance, Drawing, Science, Thrift, Music, Composition and Manual Art. The work was well organized. Committees assisted in planning the broadcasts and in checking results. A training school for broadcasting and listening teachers was conducted which was, perhaps, the first of its kind.

The broadcasts were considered very successful by the majority of the teachers and during 1925-26 thirty-six lessons were taught. The work was nevertheless discontinued when the promotor of the broadcasts accepted a position in another city. This attempt located the difficulties to be met and proved that most of them were surmountable. It pointed to the necessity of more and better preparation, especially with regard to teamwork between the broadcasting teacher and the classroom teacher.

CHICAGO

The Little Red Schoolhouse of Radio. In 1924-25, the Little Red Schoolhouse radio programs were broadcast over WLS, Chicago, by the author. Separate periods were presented for high schools, country schools and grade schools. The participation of several committees of Chicago and

Cook County educators was enlisted. Noted men and women addressed the high school pupils. Lessons in Art and Music Appreciation and Geography were offered the grade pupils in the city schools whom it was thought would not be interested in the programs planned for country schools. Experience proved that the city schools were as fully appreciative of the country school broadcasts as of the others. The latter were not only broadcast for country schools, but also by country schools. Teachers and pupils of Cook County, under the leadership of the County Superintendent of Schools and his seven Country Life Directors, broadcast every week.

Children Broadcast Successfully. They built each program around a chosen subject, such as the Dairy Cow, the Country Home, and other farm topics. They wove in dialog, dramalog, readings, recitations and vocal and instrumental music—all by pupils and teachers. The casts of pupils and teachers were rehearsed in the studio and then continued their rehearsals at school with dummy microphones. The pupils, even some in the lowest grades, proved to be natural and effective broadcasters. These programs proved to be quite feasible, due no doubt to the splendid training passed from the radio studio to the teachers and by them to the pupils. Even to the present writing no one has again attempted so ambitious a set of school broadcasts by young children as this series in 1924-25, despite the fact that listening pupils prefer them.

A Success. Some broadcasts were in the forenoon and others in the afternoon. The known audience had soon reached 27,000 school-room listeners and an apparently larger number of home listeners. But when the Director of the Little Red Schoolhouse of the Air left WLS for another field, there was no member of the station staff willing or able to continue it without funds being made available. It had been carried forward by the author as a member of the staff and no funds had been asked or given. So, like Oakland, California, the effort was discontinued, having been a rather successful experiment as far as its central

purpose was concerned but not having attracted any group of educators or laymen sufficiently interested to make it financially secure.

KANSAS

Sam Pickard's Pioneering. In 1925, a few months after the Little Red Schoolhouse of the Air was born, station KSAC began a series of broadcasts for country schools. Boys were given assistance in building sets and some fifty schools were equipped and listened for a while. But according to Sam Pickard, the organizer of the effort, it was discontinued because of the smallness of the audience. It was a bit too ambitious at the low stage of development which radio had reached in 1925, especially when we take note that even today the one-room schools are slowest to equip. Therefore, we may consider it as must the others be, an inconclusive experiment and not a failure.

GEORGIA

Atlanta Succeeds. In 1926, a manufacturer of radio sets presented each of the schools of Atlanta, Georgia, with a receiving set. Then followed, under the direction of Dr. Willis A. Sutton, a well organized set of broadcasts of Atlanta Schools for Atlanta Schools. A weekly radio period for each class was arranged. Broadcasts were made over station WSB, from 10:30 to 11:00 A. M. and from 6:00 to 6:20 P. M. each school day. A wide variety of subjects and presentations resulted and a large measure of usefulness was reported for each. Teachers' meetings were held over the air and special broadcasts for Parent-Teacher Associations included. The broadcasts were discontinued in 1929. The chief difficulty encountered was that the batteries (being early type sets), were in many cases ruined by lack of care during the summer. Further, auditorium listening, as is generally true, proved to be too difficult, bothersome and unsatisfactory. The sets are now so obsolete and out of repair that few of the original number are in use. The Atlanta authorities declare themselves unequivocally in favor of radio education and say that they will resume a

thorough series of broadcasts as soon as they can obtain funds to install up-to-date equipment in their buildings.

NO SUPPORT FROM ORGANIZED EDUCATION

Reasons for Inactivity. A number of attempts were made during these same years to persuade various teachers' groups to take active part in fostering the use of broadcasts by schools. This, of course, included the providing of programs fitted to classroom use. But little progress was made. The advisability of appointing a committee on Radio was presented in 1925 at the Indianapolis meeting of the National Education Association but no action resulted. There was an apparent distrust of the broadcasting fraternity. Propaganda was feared. The further burdening of overcrowded curriculums and over-worked teachers was naturally to be avoided.

CONNECTICUT

Lack of Support. Yet another abortive effort was to be made to establish broadcasts for schools. The State Department of Education of Connecticut organized a music appreciation course in the fall of 1926 and broadcast it very successfully throughout that school year. During the following year, 1927-28, a program of talks was substituted for the music, and attendance (listening) fell off 50 percent. No doubt part of the loss was due to the novelty wearing off. But still more was due to the fact that the music broadcast was a single concerted and highly organized one while the second years' effort was spread too widely and dealt with subjects more difficult to present and to hear than is the case with music. No funds had been attracted for the continuing of the venture and it ended as an inconclusive experiment in the spring of 1928.

REASONS FOR INCONCLUSIVE RESULTS

The Hazards. We have seen a number of school broadcasts "picked green." The time was not ripe. In general their promoters had either underestimated the difficulties of the task or their enthusiasm had led them to make the attempt too woefully understaffed and underfinanced.

Nothing but supreme promotional skill could have saved them. Ability to raise money was probably the prime need. Also it must be remembered that perhaps not one of these efforts was made with any knowledge of similar broadcasts having failed or being then in existence. Each effort was a pioneering one—blazing a lonesome trail.

Accomplishments. But schools had listened in school time. Some radio teachers had been splendidly successful. Some subjects had proved fully adaptable to teaching by radio. Teachers' meetings and Parent Teacher Association meetings by radio had been conducted. Newspapers had cooperated. Radio stations had shown their real interest but had not set aside adequate funds for supporting the administrative effort even though the broadcasting talent had almost all served without pay. Lesson leaflets had been virtually a minus quantity and to provide them demanded funds. People with other duties exacting first attention had attempted radio education as a side line. Not one experiment had been backed by sufficient funds or administered by a sufficient staff of trained men and women. A new movement had merely arisen, as usual, without the active interest or the promotional help of the educationalist who should have originated it. Of course the leaders of each of these efforts which we have considered was either a school man or was wise enough to counsel with educators concerning the broadcasting. But they were small separate groups of the profession. To the rank and file of teachers, radio education was either a fad or non-existent. They had given it no serious consideration.

In Retrospect. When we review the year 1926, we know that all school broadcasts begun before that date, with one exception which we shall consider, had either died or would not long continue. We except the broadcasts which grew out of demonstrations already made in Cleveland. The year 1926 was to see the Cleveland experiment more ambitiously launched and witness the origin of another effort, both of which were destined to a longer ex-

TRAIL BLAZERS



WM. ARMSTRONG PERRY

The pioneer of pioneers in radio education. Now Director of the Service Bureau of the National Committee on Education by Radio.



DR. WILLIS A. SUTTON

Superintendent of Schools of Atlanta, Georgia. A pioneer in the use of radio in the schools of a large city.



The late **DR. RANDALL J. CONDON** who as superintendent of the Cincinnati schools gave splendid help in the founding of the Ohio School of the Air.



ALICE KEITH

Director of Cleveland's earliest broadcasts and author of the first radio textbook ever published. Now Broadcasting Director of the American School of the Air.

PIONEERS



JOY ELMER MORGAN

Editor of the N. E. A. publications and Chairman of the National Committee on Education by Radio. An enthusiastic promoter.



ROBINSON G. JONES

Superintendent of Cleveland, Ohio schools and sponsor of the first formal instruction in arithmetic ever broadcast in the United States.

istence. Cleveland began organized broadcasting and Chicago renewed its attempt, but under entirely new auspices.

CLEVELAND

Music. In Cleveland the subject of Music Appreciation was the sole interest. Under the leadership of Miss Alice Keith, broadcasts were made over WTAM twice each week during the period between 1926 and 1928. The Cleveland Symphony Concerts had been used for the delight and the teaching of listening Cleveland schools. Now the work was more definitely organized. Listening lessons were planned for primary and intermediate grades as well as for junior and senior high schools.

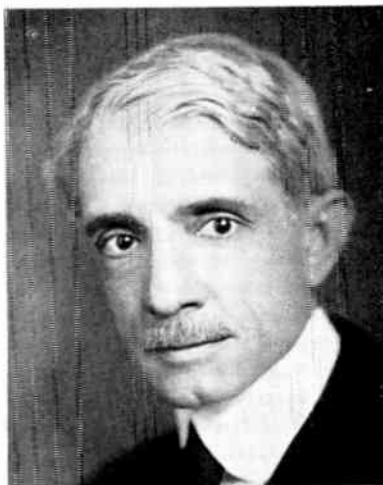
The Coming of the Radio Textbook. A text book called *Listening In on the Masters* was compiled and used by the teachers in preparation for the program. Each Sunday the Cleveland Plain Dealer carried an illustrated article on the coming radio concerts. The results were classed as excellent by the majority of teachers and observers. Unanimity of opinion is not found in regard to any portion of

PIONEERS



JUDITH WALLER

Director of Station WMAQ and the founder of the Chicago Public School Broadcasts.



DR. WM. C. BAGLEY

Professor of Education in Teachers College, Columbia, and Chairman of Advisors for the American School of the air.

the task of education and most certainly should not be expected in the case of radio.

A Change. The Music Appreciation broadcasts were discontinued in 1928 when their Director was called to take charge of the Educational Department of the Radio Corporation of America. Thereupon the attention of Cleveland teachers was centered upon the teaching of Arithmetic by radio, the Superintendent of Schools being particularly desirous of transmitting the best educational practice and material to all classrooms by means of radio. However, there was an interim, the new series not beginning until 1929.

Arithmetic. Ida M. Baker conducted the experiment and it is in progress as this is written. The lesson materials, largely drill sheets, were first issued in mimeographed form and were later published as work books. These and Listening In On the Masters are among the earliest definite radio

texts. The course had been considered quite successful by the majority of observers, although there are voices in disagreement as is to be expected. Many educational leaders interested in education by radio consider Arithmetic as a subject not readily adaptable to radio use and especially as regards mere drill. The Cleveland educators differ, claiming that the expert teacher of arithmetic is more needed at the microphone than the teachers of other subjects. Cleveland has also tried Geography travelogs, synchronizing them with motion picture films shown in the classrooms. This, of course, limits the successful listening by the radio audience to those to whom the film can be simultaneously shown. Lessons in music and in social science are meeting approval. The Cleveland effort, while not continuous, has been so nearly so that we may classify it as a successful demonstration. (See Chapter IV for sample of an arithmetic broadcast.)

BACK TO CHICAGO

The WMAQ Broadcasts. We have already seen how one Chicago broadcast was begun and discontinued. Now we consider another which has been in successful operation for six years. Beginning in the fall of 1926, three half-hour programs per week were broadcast by WMAQ. The director of the station, Judith Waller, planned the broadcasts with the aid of some women principals, at first. By 1928, the audience of schools had increased until it was feasible to broadcast a more ambitious list of features. It was then increased to five days a week with two features each day. Lesson suggestions, at first issued in mimeograph form are now being published at regular periods. Not until 1929 did the school officials of Chicago lend their definite support to the venture.

Following is the most recently available schedule of the Chicago Public School broadcasts of Station WMAQ.

Monday

A. M. 9:55-10:15 Music Appreciation

P. M. 2:30-2:45 Music Appreciation

Tuesday

- A. M. 10:00-10:15 Geography and Social Studies
- P. M. 2:30-2:45 Geography and Social Studies

Wednesday

- A. M. 10:00-10:15 Science
- P. M. 2:30-2:45 Science

Thursday

- A. M. 10:00-10:15 Mathematics, Literature, Poetry
- P. M. 2:30-2:45 Primary Story Hour, Book Club

Friday

- A. M. 10:00-10:15 Art, History, Current Events
- P. M. 2:30-2:45 Art, History

A copy of a page of their loose-leaf lessons will be found in Chapter V and will serve to complete our remarks on this very valuable pioneer broadcast.

A NEW SOURCE OF SUPPORT

The Need. All the Schools of the Air which we have considered depended upon free broadcasting by radio stations and free service of program talent. Their administration was by individuals having other sources of salary or at least none by virtue of their broadcasting. Administrative staffs were needed. Funds for lesson leaflets, publicity and a variety of promotional efforts were in demand. Certainly the purpose was worthy of better support.

The Problem. When the author, in September of 1927, set out to establish a National School of the Air, he found radio stations willing to give their time but demanding that all other costs be assured from other sources. Many educators were friendly to the plan for a National School of the Air, financed by contributions and governed by a School Board, composed of illustrious men and women, the most loved and respected individuals available. But none of them were wealthy or had access to wealth.

Temporary Support. After months of disappointment, the sponsor of the plan approached Gifford Pinchot, who

quickly lent temporary financial support (October, 1928). Thereupon the broadcasting chains were asked if they were willing to broadcast educational programs at their own cost, but with the sponsorship of the School Board of a projected National School of the Air. Both responded that they were intensely interested. One demanded that the broadcasts be brought to them, educator-sponsored and without cost. The other insisted that the sponsors represent the entire educational system and intimated that the costs were quite secondary. Both chains indicated that they would carry the broadcasts free of charge.

Educators Blamed. However they challenged that the educators had not yet spoken. In fact, they had every reason, due to numerous surveys they had made, to believe that comparatively few of that profession shared their conviction that the classroom should open its doors to radio broadcasts. They declared that the majority of educators were either uninterested or definitely opposed. Apparently the next task was to prove that educators did respond favorably when the matter was properly presented.

THE EDUCATORS SPEAK

The Payne Fund to the Rescue. The Payne Fund of New York furnished the funds for a survey. A Preliminary Committee on Educational Broadcasting was formed. Its chairman was Olive Jones, past President of the National Education Association. On it were forty educators representing all sections of the nation. This survey appears to have been a turning point in the history of educational broadcasting. It convincingly disproved the conception that educators were, as one man put it, "riding around in buggies yet." Others cited the fate of motion pictures for classroom use as proof of the educators' fatal slowness in welcoming new educational mediums.

Why the Survey Succeeded. Knowing that the former unfavorable results of radio surveys had been caused by the educator's fear of propaganda, his fear of a flood of jazz and of pseudo-educational broadcasts conceived with

a Broadway flavor, his lack of serious thought on what radio could do, a letter accompanying the questionnaire was so written as to attempt to dispel his fears. He was first made to realize that the discussion was of broadcasts to be educator-sponsored and free from propaganda. Further, in the body of the questionnaire were included in a matter-of-fact way, the principal arguments in favor of the use of radio.

The teacher who had never given serious attention to the matter was afforded a favorable opportunity. The letter was sent to three thousand educators including state, county and city superintendents, principals in various types of schools, and classroom teachers. A cross-section of the field was sought and the results were more significant than anticipated. On the following pages are reproduced a portion of the report which was presented to the Boston meeting of the Department of Superintendence in February, 1928.

REPORT OF THE PRELIMINARY COMMITTEE ON EDUCATIONAL BROADCASTING

Olive M. Jones,

Temporary Chairman

B. H. Darrow,

Temporary Secretary

"The Public School of the Air" has been the dream of many, but has needed united action on the part of several groups that have had little understanding of each other. I believe these various agencies can now move forward toward a co-ordination of the factors necessary for its establishment.

A survey of such possibilities has just been made. Its findings are so encouraging that I am sure you will want to know of it, and, I hope, appoint a permanent Committee on Radio. Educators can yet control the development of Educational Broadcasting and keep it from the confusion prevailing in the field of Educational Motion Pictures. I am firmly convinced, also, that if they do not take their rightful place of leadership with the commercial forces, the latter will go ahead alone and much harm will result. The educators are being challenged to direct the development of Educational Radio Service. If they seize this opportunity promptly they can prevent it from becoming the carrier of commercial and other propaganda, preserving it to become an assistant to the teachers of America.

Teachers want it. It is coming, in one way or another. The time is ripe.

May I give you a bit of history as introduction to the report I am about to make regarding the recent survey? After some months of independent preliminary effort by Mr. B. H. Darrow, former teacher, specialist in rural sociology, leader in Boys' and Girls' Work, and radio program manager, and by Mr. Armstrong Perry, writer and radio specialist, funds and cooperation were secured from the Payne Study and Experiment Fund for the purpose of organizing a preliminary committee to study in collaboration with the National Education Association; and of presenting its findings for consideration to the Executive Committee of that association at its 1928 meeting in Boston.

In lending its support for a limited period preceding this meeting, the Payne Study and Experiment Fund acted upon its conviction that a curriculum for a school of the air which is intended to be an effective factor in education must be prepared by educators and actively supported by the National Education Association; also, any plan evolved should insure that the school radio program be unhampered by the necessity of carrying propaganda for any commercial, political, social, or other group."

(Signed) OLIVE M. JONES.

SUGGESTED SCHEDULE FOR THE NATIONAL SCHOOL OF THE AIR

To include only the best — Master Teachers — Artists in each subject. To be broadcast nationally — through chain systems.

**GRADED SCHOOLS — Monday, Wednesday and Friday
Half Hour Periods**

Music Appreciation (Instructor and musicians to Illustrate)

Dramatics — Plays, Dialogues, etc.

Geography (Travelogues)

History Dramalogues

Health Talks

Holiday Talks

Miscellaneous

HIGH SCHOOLS — Tuesday and Thursday

Music Appreciation

Dramatics—Shakespeare and others

Talks by Great Men and Women — 20 minute talks
and 10 minute interviews

President of U. S.

Vice-President

Speaker of House

Cabinet

Chief Justice

Governor of State

Diplomatic Service

Senator

Representative

Authors

Educators

Statesmen

Musicians

Physicians

Naturalists

Inventors

Explorers

Painters

Sculptors

Botanists

Chemists

Physicists

Business Men

SUPPLEMENTAL LIST OF SCHOOL RADIO MATERIAL

Opening Exercises

Public Speaking and Parliamentary Practice

Nature Study

Programs for Parent-Teacher Associations

Current Events and Civil Government

Spelling

Art Appreciation

Boys' and Girls' Clubs

Games for School and Playground

Foreign Languages

Lesson leaflets to be sent to schools two weeks previous to broad-

cast.

QUESTIONNAIRE

To be filled out and mailed to the Preliminary Committee on Educational Broadcasting, Room 371, One Madison Avenue, New York City.

1. Would you like your schools to have the opportunity of listening to educator-sponsored broadcasts such as we suggest?
2. What subjects would you like to have stressed? List in the order of their importance.

1.....	4.....	7.....
2.....	5.....	8.....
3.....	6.....	9.....
3. What is the greatest difficulty you would have to overcome to avail yourself of such a broadcast?

- 4. Which ones of the following benefits of school radio are most attractive to you?
 - (a) The supplementing of the teachers' efforts by those of teachers expert in subject presented?
 - (b) The inspiration of hearing great national leaders?
 - (3) The providing of features which most schools cannot have because of lack of equipment — especially music appreciation courses?.....
 - (d) Giving parents greater understanding of and interest in their schools?.....
- 5. How many schools under your supervision?.....
 How many teachers?.....

Granting that the equipping of schools with receiving sets were promoted.

- (1) By your personal recommendation
- (2) By educators, generally, through educational meetings and publications
- (3) By articles in newspapers and magazines
- (4) By announcements over radio stations
- (5) By set manufacturers and dealers offering special prices, terms, etc.
- (6) By gifts from Chambers of Commerce, Rotary Clubs, etc., and from interested individuals
- (7) By the loan of a set while money is raised to buy one

How many of the above schools do you estimate would equip?.....

Do you wish to be kept informed of developments in the Educational Broadcast field?.....

Name _____
 Position _____
 Address _____

PARTIAL SUMMARY OF ANALYSIS

3,000 Questionnaires sent — 525 Replies received

First Question:

Number who would like to have a School of the Air 490
 Number doubtful 19
 Number who give no answer to this question..... 16

Note: Although doubts are expressed and criticisms advanced throughout the questionnaires on one point or another, the response to this question indicates an almost unanimously favorable enthusiastic attitude in many cases and at least receptive in all but a minimum.

SUBJECT MATTER DESIRED IN PROGRAMS AS INDICATED BY ANALYSIS OF REPLIES

Music Appreciation....	195.27	Art Appreciation.....	14.18
Geography and		Parent Teachers	
Travel	115.51	Programs	9.60
Literature and English	83.68	Games and Physical	
Health and Hygiene..	78.74	Education	7.09
History	73.63	Safety	4.70
Current Events.....	55.24	Vocational Guidance	4.01
Civics and		Spelling and Grammar	3.27
Citizenship	39.15	Opening Exercises.....	2.34
Talks by Prominent		Clubs for Boys	
People	33.51	and Girls	2.90
Dramatics	33.25	Public Speaking and	
Holiday Programs.....	26.47	Parliamentary Prac-	
Nature Study and		tice	1.97
Science	25.01	Domestic Science.....	1.08
Character Building....	19.52		

Fifth Question:

Total number of schools reported.....	14,083
Total number of teachers reported	46,342
Number failing to answer this question.....	13

Sixth Question:

Estimate of number of schools that will equip 5714 or 44%	
Estimated number of classrooms in above schools 25-28 thousand	
Number returned questionnaires that give no estimate	74

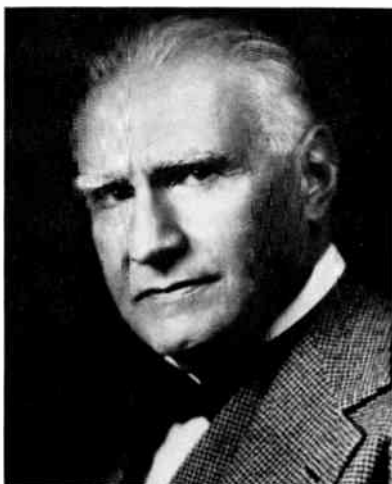
Delay. The report of the Preliminary Committee on Educational Broadcasting was presented to the Executive Committee of the National Educational Association at Boston in February, 1928, but action was deferred. It was then presented to the Department of Superintendence and a resolution was passed counselling the next president to appoint a Committee on Radio with power to co-operate with other forces interested in educational broadcasting. The new President deferred action and in June referred

the matter to a Lay Relations Committee. In October the Committee met, expressed their own favorable attitude but decided to study the matter further before acting. This delay meant defeat of the plan to launch a National School of the Air, as it was deemed advisable to proceed no farther than organized education was willing to share in the responsibility. Nevertheless, it gave encouragement to the National Broadcasting Company in their desire to broadcast the Damrosch Lessons in Music.

THE DAMROSCH SERIES

A Worthy Ambition Realized. In October of 1928 the National Broadcasting Company launched the first nationwide broadcast conceived and conducted for the especial use of the classroom. Dr. Walter Damrosch's life-long ambition of carrying music to the masses was to be achieved and in a most auspicious manner. By appealing to the classroom with superlative instruction in music and in music appreciation he could reach an organized group, the most teachable part of the nation, regularly. Once each week he became an assistant to every teacher of music in America who cared to welcome his help. And many did. Lesson leaflets were issued carrying ample instructions to the teachers. Alice Keith, who had successfully broadcast a music series for the Cleveland Schools, assisted in the promotion.

The first year's series was a half hour in length and offered lessons for various age groups. The music of the Damrosch symphony orchestra, with masterly explanations and interpretations by its leader met instant favor. Schools all over the nation began to equip. National broadcasts for schools had been successfully launched. The Damrosch lessons have been and continue to be a splendid example of the service which radio can render. The success achieved was the fitting beginning of nation-wide programs in school time for school use. (Samples of the Damrosch lesson leaflets will be given in the chapter on Preparation).



DR. WALTER DAMROSCH

1930 - 1931 - 1932

Music Appreciation was continued in four series, a half hour on alternate Fridays.

A. For grades three and four (or grades four, five and six)

B. For grades five and six (or grades seven, eight and nine)

C. For grades seven, eight and nine (or grades ten, eleven and twelve)

D. For high schools, colleges and music clubs.

The Radio Guild. During this season a series was initiated by the Radio Guild at 4:15 to 5:15 E. S. T. on Fridays. Masterpieces of all time were presented by leading actors. During 1931 and 1932 the following were made available to American classrooms:

Agamemnon

Faustus

A Midsummer Night's Dream

Julius Ceasar

Hamlet (in two parts)

Merchant of Venice

Le Bourgeois Gentilhomme

She Stoops to Conquer

School for Scandal

The Rivals

Servant in the House

Importance of Being Earnest

Peer Gynt

Man of Destiny	Cyrano de Bergerac
Dear Brutus	The Dover Road
Prunella	A Great Divide
Milestones	The Terrible Meek
Paolo and Francesca	The Truth
Second Mrs. Tanqueray	The Doll's House
King Argimenes and the	The Melting Pot
1. Unknown Warrior	The Jest
2. The Queen's Enemies	Beggars on Horseback
3. The Lost Silk Hat	

THE OHIO SCHOOL OF THE AIR

Ohio Educators Become Interested. In the meantime, Dr. John L. Clifton, Director of Education of Ohio, who had been a member of the Preliminary Committee, admitted his interest in the possible organization of an Ohio School of the Air. Since the delay of the official action by the National groups had made a nationwide broadcast impossible that fall (1928) the author had returned to Ohio.

The First State Director of Broadcasting. First, a radio station was enlisted to carry the school free of charge. Then, after delay, limited funds for administration were secured from the Payne Fund, of New York, whose directors consented to pay the organizer's salary until the State legislature could consider and accept or reject the financing of the venture. Dr. Clifton then added to his staff the first Director of Educational Broadcasting ever to serve a state. Then the radio station was lost and the venture started disaster in the face. Yet a larger victory was the result. Station WLW, Cincinnati, a super-power station with an enormous audience, promised to carry a daily broadcast free of charge.

Joining WLW and WEAO. Then followed the raising of funds to connect Ohio State University with WLW by telephone for a part of each week. Hundreds of dollars

were easily raised and the tapping of that large reservoir of learning and the carrying of it to Cincinnati was assured.

Difficult Days. During November and December many feverish days and nights were spent in determining the curriculum, listing and enlisting radio teachers, determining the number of broadcasts and the length of each feature, providing for shifting of classes, the time of day, the formation of the first draft of the program, the choice of theme and signature for the hour, the issuance of lesson leaflets, the writing of press releases, the gathering of lesson materials, the circularizing of Superintendents of Schools, the preparation of manuscripts, and finally, the rehearsals for the first broadcast. On January 7, 1928, the first broadcast went on the air. The following schedule was observed each week:

WEEKLY SCHEDULE

- Monday:** Story Plays and Rhythmics and Health Talks alternating.
Current Events.
History Dramalogs.
- Tuesday:** Special Features, Question and Answer Periods.
Art Appreciation.
Civil Government by Those Who Govern.
- Wednesday:** Stories for younger pupils.
Stories for intermediate grades.
Stories for upper grades.
- Thursday:** Dramatization of Literature for High Schools.
Geography.
- Friday:** No program in deference to the Damrosch Lessons in Music.

Lesson Leaflets. Knowing that the closest possible cooperation of the listening teachers should be developed, mimeographed sets of suggestions were furnished. Instructions were given on the preparation for the broadcast,

on how to receive the broadcast and on how to follow it up in order to make the benefits permanent. References to publications in commonest use, were made. Outlines of the coming talks and questions were oftentimes given. The matter of lesson leaflets will be considered at length in a later chapter.

Publicity. Considerable effort was spent in insuring that newspapers and other publications gave constant publicity. Many promotive efforts fail because they do not build up a clientele. The assistance of many different organizations was asked for and received. The Ohio Congress of Parent-Teacher Associations, the Ohio Federation of Women's Clubs and many other groups gave splendid cooperation.

Sources of Broadcasting Talent. The method by which the curriculum had been determined and the possible teachers listed and enlisted will be included in Chapter III. Suffice it to note at this point that the broadcasting talent was taken from many sources. Thus the teacher of the Story Plays and Rhythmics was a Director of Physical Education of the Dayton, Ohio, schools. The story-tellers were from the Cincinnati Public Library and Cincinnati schools. The teachers of Geography were from the University of Cincinnati and Miami University. The teacher of Current Events was the managing editor of the American Education Press. The teacher of Art was the nationally famous Director of the Cleveland Art Museum, assisted by the Director of art work for the Ohio Federation of Women's Clubs. The dramatizations of Literature were prepared and presented by the Schuster-Martin School of Drama and the Stuart Walker Players. The History Dramatizations were presented by a cast of players from the student body of Ohio State University. The Health series was offered by the State Department of Health. The series on Civil Government by Those Who Govern was, as the title indicates, given by the Governor, Lieutenant Governor, mem-

bers of the Governor's Cabinet, Chief Justice of the Supreme Court, and other state officials.

The Broadcast. The program was opened and closed with "America, The Beautiful" played on the Master Organ. After the opening strains at the beginning of each program, the announcer called upon the pupils to arise and sing a stanza of the anthem. Also, music was introduced between the features of the program so that the schools lacking loud speakers in every classroom could march out one listening group and march in another. Schools were advised to never allow any one class to listen to more than two periods and to rather make a practice of listening to but one period of the entire hour. On this account, every effort was made to schedule the features so that within any program one would be for younger children, one for intermediate grades and one for upper grades or high school.

History-Making Broadcasts. In addition to the items noted above the pupils heard the inauguration of President Hoover and the inauguration of the Governor of Ohio. And for the first time, pupils and adults heard broadcasts of the Ohio Senate and of the House of Representatives. Never before had important legislative bodies passed bills in the hearing of all the people.

The Broadcasts Met Instant Favor. Many schools listened on borrowed sets at first, while others purchased sets immediately. The sets were obtained and bought in every conceivable manner (see data in Chapter VII). Before the end of the first half-year's broadcasting the school had attracted a known audience of more than 100,000 boys and girls and gave every promise of growing rapidly as soon as the schools could be assured that it was no longer an experiment.

Legislature Appropriates Funds. In the meantime, the Legislature, at the request of the State Department of Education, appropriated \$40,000 toward the expense of administering the School of the Air for a two year period. This fund was sufficient only because the broadcasting was

done without charge by the Crosley Station WLW, and because of the free service of station WEAO and of the free assistance given by educational institutions. This made it possible for the State of Ohio to have the benefit of broadcasts which really cost a total of \$85,000 a year, although the State was furnishing but \$20,000 a year.

THE SECOND YEAR

Reasons for Growth. When the second period of the School of the Air began in September, 1929, it soon had an audience of nearly 200,000 boys and girls and the home listeners were continuing to promote its success. The majority of the school men, being in unequipped schools, did not have opportunity to listen and to be convinced of the value of the School of the Air. The housewife had ample opportunity and availed herself of it. While many school men did make opportunity for themselves to listen, it was largely their wives and other home listeners who stirred them to the point of getting first-hand experience as to the value of the new experiment.

Varying Initiative. Thus in the field as a whole there was the widest variety of situation. In some cases the school men availed themselves of radio without being urged by their communities. In other cases the initiative was taken by school board members and others who had listened and who had been convinced that their schools were missing a valuable opportunity. Apparently very few communities applied the brakes on any plan toward the equipping of the schools.

The Common Procedure. One school in the community would equip and then after a short while, a number of additional schools would equip. After a second period of consideration, the equipping was often made complete. All types of equipment, old, new, good, atrocious, indifferent, single sets, centralized sets, and all other possible types were represented. At an early date the management of the School of the Air began counselling against auditorium listening. Nearly all reports of poor results were from

that type of effort. Increasingly the reports from schools indicated that the miserable, old, discarded sets that some schools used at first were being superceded by better equipment. Central sets with radio receiver, phonograph, microphone and switchboard gradually grew in number.

The Second Period (1929-1930). Listening improved and general results were much better, due in part at least, to the provision of better lesson leaflets. A loose-leaf Courier was issued and an illustrated cardboard cover provided so that each teacher might build up her own volume throughout the year. Samples of the Courier are afforded in later chapters.

THE SCHEDULE FOR 1929-1930

Monday:	2:00 Current Events—Upper grades.
	2:20 Nature Study—Intermediate grades.
	2:40 Story Plays and Rhythmics—Lower grades.
Tuesday	2:00 French, alternating with Chemistry—High school.
	2:20 History Dramalogs—Upper grades.
	2:40 Constitution and Citizenship—Upper grades.
Wednesday:	2:00 Literature by Living Writers—High school.
	2:20 Literature by Living Writers—Upper grades.
	2:40 Health (Intermediate grades) Physics (High school) alternating.
Thursday:	2:00 Stories for Lower grades.
	2:20 Geography—Grades 4, 5 and 6.
	2:40 Geography—Grades 7 and 8.
Friday:	2:00 Music—Lower Grades
	2:30 Drama—High School.

1929-1930 Results. Hundreds of daily reports were received from listening teachers (see Chapter VII). These

in some cases gave to certain teachers at the microphone a higher rating than they were at first realized to possess. Others met with less favor. But in the main it was found that the directors of the School could rather accurately determine the effectiveness of a broadcast and could prophesy in advance what reports would come from the field, both good and bad. In other words, the results of sober, good judgment, based on experience, are well-nigh as reliable as the objective tests. Schools were visited and their listening observed. Conferences of superintendents and teachers gave concrete and useful help. Correspondence with adults and with home listeners in every conceivable walk of life led to rather definite conclusions. These conclusions were used as a basis for all changes in the program.

The Spring of 1930. The program for the following year was drawn up with the cooperation of a group of the superintendents who had made outstanding use of the Ohio School of the Air. To assist them they had annual reports from hundreds of schools (see Chapter VII).

Costs. During this second period it was found advisable to pay the regular talent a small fee. It increased their zeal a bit and served as an encouragement in the efforts which many of them had at first made without expectation of pay. By far the heaviest item of expense was the series on Literature by Living Writers. A much larger fee, of course, was paid to them and they were allowed traveling expenses from their homes to Columbus or Cincinnati. Further, the expense for the lesson leaflets gradually mounted as more and more engravings were introduced and as the number of each issue increased from 8,000 to 10,000 copies. Teachers expressed their willingness to pay for the leaflets but the Ohio Department of Education preferred to continue the free distribution to prospective users.

THE YEAR 1930-1931

The Audience Continued to Grow. The listening continued to improve. The reports by teachers increased in number and in helpfulness. Circulation of the Courier

reached 12,000 copies. And there was a growing number of educators who declared they would be loathe to think of the School of the Air ever being discontinued. They hoped instead that it would be enlarged and improved.

N. E. A. Building Becomes Point of Origin. On January 19, 1931, a temporary studio was established in the headquarters of the National Education Association in Washington, D. C. Throughout the balance of the school year the Ohio School of the Air presented on one day each week choice features which the East possessed. The United States Office of Education, the National Education Association and other teacher groups gave splendid counsel and assistance. Members of the President's Cabinet and their assistants told of the work of every Cabinet department, and the Vice-President, a Senator and a Representative completed the series on government.

First-hand Accounts. A series on Modern Adventure by the adventurers in person met with enthusiastic approval. The following were included: Gifford Bryce Pinchot, David S. Ingalls, C. Francis Jenkins, Gene Lamb, Earl Hanson, Grace Abbot and Malcolm Hanson.

Living Writers Teach Literature. The third feature originating in the Capital City was Literature by Living Writers, introducing illustrious men and women of letters, such as: Edmund Vance Cooke, Tramp Starr, Meredith Nicholson, Anne Campbell, Larry Flint, Lawrence Reinhardt, Vachel Lindsay, Dorothy Canfield Fisher, Edwin Markham, Strickland Gillilan, Armstrong Perry, Albert Bushnell Hart, Charles Austin Beard, Zona Gale, Wallace Irwin, Carl Sandburg, William Atherton DuPuy and Hamlin Garland. Among the leaders in education were: William J. Cooper, Walter Raleigh Siders, Joy Elmer Morgan and J. W. Crabtree.

Special Features. Among the special Ohio broadcasts were: The George Rogers Clark Sesqui-Centennial, the Inauguration of the Governor of Ohio, The Governor's mes-

sage to House and Senate, his special Arbor Day message and sessions of the Senate and House of Representatives.

MASS MEETINGS ON THE AIR

A New Type of Teachers Meeting. A highly successful new feature was the 'Teachers' Radio Forum held once each month from 3:30 to 4:15 P. M. These forums were well attended. One, led by Dr. Ned Dearborn of New York University was participated in by more than six thousand teachers. For the most part they listened at the call of their superintendents and principals. Teacher training institutions listened in considerable number. Many teachers sent in questions to be asked of the leader of the forum during the last half of the broadcast.

Night-Time Meetings. Parent-Teacher forums, arranged with the cooperation of that organization, were put on the air once each month in the early evening. The known response was quite large and no doubt the number of incidental listeners made the total audience truly a great mass meeting—a meeting of mind and spirit under expert and worthy guidance. Further, there are planned for the year 1932 some broadcasts by national Parent-Teacher leaders, to be heard by hundreds of parent-teacher groups meeting simultaneously. Each local group conducts its own program up to the appointed moment, when the radio is turned on. The message is all the more effective because of the fact that each group is impressed by the knowledge that so many other groups are listening.

NIGHT SCHOOL

An Adult Audience. The courses in Civil Government by Those Who Govern had demonstrated the ability of the state's official family in radio talks. They had told of the work, each man of his own department, so clearly that a special fifteen minute evening broadcast was arranged for two evenings each week. The Governor, the Lieutenant-Governor, Secretary of State, Treasurer, Attorney General and each of the Directors of departments on the Governor's

Cabinet offered to the citizens of Ohio the first clear-cut idea of government many of them had ever received. Special commissions explained their functions and the Chief Justice of the Supreme Court conducted a series on "Understanding our Courts."

By common report, the listener was interested in getting such intimate first-hand accounts and asked that radio offer an increasing number of such broadcasts.

1930 - 1931 SCHEDULE

- Monday:** *Broadcast originating in Washington, D. C.*
 Literature by Living Writers (for high schools).
 Modern Adventure by Modern Adventurers (grades 4, 5 and 6).
 Our Federal Government at Work (grades 7 and 8).
- Tuesday** *Broadcast originating at Ohio State University.*
 Current Events (grade 8 and high schools).
 Citizenship and Guidance (upper grades).
 Nature Studies (intermediate grades).
- Wednesday:** *Broadcasts originating in Crosley Studios, Cincinnati.*
 Botany and Physics (alternating, for high schools).
 History Dramalogs (high schools).
 Art Appreciation (lower grades).
- Thursday:** Geography of Our Own Country (grades 5 and 6).
 Geography of Other Lands (grades 7 and 8).
 Stories (lower grades).
- Friday:** General Science (grade 9).
 Health (grades 5 and 6).
 Story Plays and Rhythmics (lower grades).

DANGEROUS DAYS

The Depression Makes Itself Felt. The first two-year appropriation for the Ohio School of the Air ended on January 1, 1931. According to legislative procedure, the state

government was provided funds by the passing of a preliminary budget to cover the six months period. In this budget, the School of the Air was willingly given the sum it requested. But when the depression began to be realized by the Legislature while it was working on the two-year appropriation, the budget slashing started. The state budget was hammered down from 85 million to 58 million and many departments of government were crippled. Education fared quite badly and several well established positions were abolished.

Radio Escapes the Axe. Even though the School of the Air was the youngest department, the law-makers were so thoroughly convinced of its unusual merit that they let it live, albeit with a severely limited budget—it being allowed but \$25,000 for two years' expenditures.

Voluntary Contributions. This of course occasioned a marked change in policy. Funds were solicited from outside agencies and the broadcasting went on as usual. The lesson leaflets were sold instead of being furnished free. A dozen schools voluntarily proffered assistance in cash and personnel. The Columbus Federation of Women's Clubs volunteered to pay the cost of an Art Appreciation series. Ohio State University gave the time and expenses of a professor to conduct a series in Nature. The National Committee on Education by Radio contributed \$2,000 to help through the crisis. The use of telephone lines was dispensed with and a less expensive feature substituted in place of the series, Literature by Living Writers. The Bureau of Educational Research at Ohio State University was called upon to give added assistance in checking on the results of the broadcasts.

WLW Increases its Generous Support. And last, but perhaps greatest of all, the Crosley Radio Corporation not only contributed time over WLW and W8XAL, but gave increased services of its dramatic and music staffs. So all in all, the hard times were bridged in such manner that there was no let-down in the work of the School of the

Air. The schedule for 1931-1932 was in a large measure a continuation of that of the previous year. The listening teachers and pupils had spoken so clearly in the case of 70 percent of the previous features that there was no question about the wisdom of their continuance.

Neighboring States Assist. One new feature was provided by each of the states surrounding Ohio furnishing three speakers telling of the causes of their pride in their respective states. Another new feature was a biographical series for intermediate and upper grades. In place of the Living Writers there was presented a series of Shakesperian and other dramatizations by the Crosley Players. This met with great approval in the classrooms.

SOME GENERAL CONCLUSIONS

1. Teaching can be done successfully by radio.
2. Results depend upon team work of broadcaster and teacher.



Director of Education JOHN L. CLIFTON and Governor MYERS Y. COOPER listening to Ohio School of the Air.

3. Radio has much to offer in the teaching of some subjects and apparently but little in the teaching of others.

4. The home listening (see Chapter VIII) makes of the School of the Air a masterful influence in adult education.

5. The outstanding problem is to do as complete a job as is demanded with the small amount of funds which are available. (See parable "Powerful Penny," Chapter II).

6. Adequate financing is the critical problem.

Many other conclusions will be set down in Chapter IX.

THE AMERICAN SCHOOL OF THE AIR

A Second Nation-wide Broadcast. The Columbia Broadcasting System offered use of its facilities (1929) to any responsible group of educators which could bring a well prepared series of lessons to its microphones. At first no such group responded. None as yet had a fund with which to administer the effort, even though the distribution of the programs was to be free. A manufacturer of radio equipment then offered to sponsor a series over the Columbia Broadcasting System, a series to be known as the American School of the Air.

The Launching. On February 4, 1930, the American School of the Air presented the first of their sponsored educational programs, which were given each Tuesday and Thursday for the intermediate and Junior high school grades. The Tuesday programs were devoted entirely to historical radio dramas, while the Thursday programs were more varied. The following list of Tuesday broadcasts entitled "Men Who Made America" will serve to give the reader an idea of these programs:

Columbus	La Salle	Lewis and Clark
Raleigh	Junipero Serra	Sam Houston
John Smith	Washington	Abraham Lincoln
Brewster	Jefferson	Robert E. Lee
Boone	Fulton	Heroes of the Air

The programs were arranged by the committee of which William C. Bagley, of Columbia University was Chairman.

The Teachers Manual and Classroom Guide. A book of some thirty pages was issued to assist classroom teachers in making the most effective use of the broadcasts. The broadcasts for that term were concluded on May 15, 1930.

The Year 1930-31. The radio manufacturer withdrew his support and the Columbia Broadcasting System took over the American School of the Air. The schedule for 1930-31 follows:

- Monday:** Historic episodes dramatized. (Junior and senior high schools).
- Tuesday** Story-telling and Music for the primary grades, alternating with Story-telling and Music for the intermediate grades.
- Wednesday:** Literature dramatized. (Fifth and sixth grades, alternating with junior and senior high schools).
- Thursday:** Music of Many Lands (upper grades, high schools, colleges and adult clubs).
- Friday:** Current Events and Vocational Guidance (junior and senior high schools).

SCHEDULE FOR 1931-32

- Monday:** History Drama (upper grades and high schools).
- Tuesday** Geography and Music (upper grades and high schools).
- Wednesday:** Art Appreciation (upper grades and high schools).
- Thursday:** Radio Picture Book Series (primary grades).
Children's Plays (primary grades).
Radio Journeys to Musicland (intermediate grades).
Elementary Science (intermediate grades).
- Friday:** Vocational Guidance (high schools).
Current Events (high schools).

AN IMPORTANT EXPERIMENT

Wisconsin. At this point, mention should be made of broadcasts conducted over station WHA, University of Wisconsin, during the spring months of 1930. The experiment was financed by the Payne Fund and had as its objective the measuring of effectiveness of radio teaching. Current Events were broadcast on Mondays, Wednesdays and Fridays from 1:00 to 1:15 P. M. and Music Lessons on Tuesdays and Thursdays from 1:00 to 1:20 P. M.

A Success. Since the purpose was experimental and not intended to result at once in a school of the air, it is not included in the chart showing the chronological rise of education by radio. The experiment was considered a success and Wisconsin educators began looking forward to establishing a well organized School of the Air. Further mention will be made of the findings of the Wisconsin study in the chapter on "Measuring the Effectiveness."

The Wisconsin School of the Air programs are sponsored by state, county and city educational agencies and broadcast over state owned Station WHA. It presents ten broadcasts each week for the schools of the state. Each school day at 9:35 A. M. and 2:10 P. M. a different subject is taken up. Included are government and parliamentary law, guidance, stories, Wisconsin history, music, art, nature study, health and safety and literature.

These are planned and presented by university people and Madison school teachers, under the direction of Harold B. McCarty of WHA.

ANOTHER STATE DEPARTMENT BROADCASTS

North Carolina. The State Department of Public Instruction of North Carolina inaugurated the North Carolina Radio School, February 23, 1931. Radio Station WPTF of Raleigh, carried the broadcasts free of charge.

THE SCHEDULE

Monday—Citizenship

- | | |
|-------------|--------------------|
| 11:30—11:40 | Current Events |
| 11:40—11:50 | Recreatory Reading |
| 11:50—12:00 | Character Training |

Tuesday—Science

11:30—11:45 Studies in Science

11:45—12:00 Health and Physical Education

Wednesday—Social Studies

11:30—11:45 Geography and Travel

11:45—12:00 History and Social Development

Thursday—Music, Art and Literature

11:30—11:45 Fine Arts, Music Appreciation

11:45—12:00 Literature, Industrial Arts

There were no broadcasts on Friday out of deference to The Damrosch Music Appreciation Hour broadcast by the National Broadcasting Company.

The results of the first period of broadcasting (concluding May 7, 1931) were deemed decidedly worthwhile and the following broadcasts were carried during 1931-32.

Monday: 11:30—11:45 Current Events
11:46—12:00 Geography and Travel

Tuesday: 11:30—11:45 History
11:45—12:00 Health and Physical Education.

Wednesday: 11:30—11:45 History
11:45—12:00 Recreational Reading

Thursday: 11:30—11:45 History
11:45—12:00 Music.

IN THE MEANTIME

Professional Sanction Delayed. Many other events had transpired during the period in which the Ohio School of the Air was making its phenomenal growth. As already mentioned, the President of the Department of Superintendence in 1928 had deferred the matter of an official committee on radio to represent his organization to a Lay Relations Committee which met in October of that year. It decided that the responsibility of taking the step was too weighty and delayed action until the members had more definite convictions on the matter. Thus at the time the

Ohio School of the Air was getting under way in January of 1929, there was as yet no definite committee of educators who could aid in organizing a National School of the Air.

February, 1929. But a course of action was soon afterwards begun that led step by step to the final consummation of the long dominant desire. The State Director of Education of Ohio, Dr. John L. Clifton, called a meeting of members of the one time Preliminary Committee on Educational Broadcasting, and more recent converts, to meet during the conference of the Department of Superintendence in Cleveland, February, 1929. The unanimous decision of the group was that the new President of the organization be urged to take immediate action and appoint a Committee on Radio without waiting on the Lay Relations Committee.

Real Progress. Two men, whose names occur often in the story of radio education, called upon the President of the Department of Superintendence. He appointed the desired Radio Committee subject to the approval of his Executive Committee, whose members were already known to be favorable.

The Advisory Committee on Education by Radio. However, at the time of the meeting of the Executive Committee in Atlantic City, in May, 1929, it was known that the Department of Interior might accede if it were requested to appoint a Radio Committee. The plans were thereupon changed and the request made of the Secretary of the Interior that he appoint the committee. Secretary Ray Lyman Wilbur did so on June 6, 1929. U. S. Commissioner of Education, William J. Cooper, became chairman of the Advisory Committee on Education by Radio. Sub-committees on Ways and Means, Factfinding and Research were chosen. Their report, made in December, 1929, contains 246 pages of valuable information on educational broadcasting at home and abroad. The committee, having served its purpose, disbanded.

In October, 1930, U. S. Commissioner of Education, William J. Cooper, appointed a very significant committee.

The following is a reprint of the first page of the first issue of "Education by Radio."

"The National Committee on Education by Radio. The National Committee on Education by Radio was organized on December 30, 1930, as the result of a series of events and conferences which took place during 1930 and which indicated the clear need for a more active interest in radio on the part of educational workers. The purpose of the Committee is to secure to the people of the United States the use of radio for educational purposes by protecting the rights of educational broadcasting, by promoting and coordinating experiments in the use of radio in school and adult education, by maintaining a Service Bureau to assist educational stations in securing licenses and in other technical procedures, by exchange of information through a weekly bulletin, by encouragement of research in education by radio, and by serving as a clearinghouse for research.

"The members of this Committee and the groups with which they are associated are as follows:

"*J. L. Clifton, Director of Education, Columbus, Ohio, National Council of State Superintendents.

"Arthur G. Crane, President, the University of Wyoming, Laramie, Wyoming, National Association of State University Presidents.

"R. C. Higgy, Director, Radio Station WEAO of Ohio State University, Columbus, Ohio, Association of College and University Broadcasting Stations.

"J. O. Keller, Head of Engineering Extension, Pennsylvania State College, State College, Pennsylvania, National University Extension Association.

"Charles N. Lischka. 1312 Massachusetts Avenue, Washington, D. C., National Catholic Educational Association.

"John Henry MacCracken, 744 Jackson Place, Washington, D. C., American Council on Education.

*Charles A. Robinson, St. Louis University, St. Louis, Missouri, The Jesuit Education Association.

*Dr. James N. Rule of Pennsylvania has since replaced Dr. Clifton and Thurber M. Smith has replaced Charles A. Robinson.

“H. Umberger, Kansas State Agricultural College, Manhattan, Kansas, Association of Land Grant Colleges and Universities.

“Joy Elmer Morgan, Chairman, 1201 Sixteenth Street, N. W., Washington, D. C., National Education Association.

“The activities of the Committee are financed by a five-year grant from the Payne Fund. The members serve without pay. The Committee will maintain a general office at 1201 16th Street, N. W. and a Service Bureau in Room 997, National Press Building, Washington, D. C. This is the first number of a weekly bulletin which will seek to spread information relating to education by radio. Every one who receives a copy is invited to make suggestions for the improvement of this bulletin. Save these bulletins for reference.”

Present Objectives. The National Committee on Radio is at the present leading the forces of those who demand that the Federal Radio Commission set aside 15 percent of the nation's radio facilities for the use of the educational forces. The commercial stations are fighting this quite strenuously. Also injected into the struggle is the attempt to cause Congress to severely limit or forbid all advertising by radio. Some of the elements involved are given consideration in the closing chapter of the book.

NATIONAL ADVISORY COUNCIL ON EDUCATION BY RADIO

Another New Agency. In the words of its executive secretary, “The National Advisory Council on Education by Radio was organized in 1930 to further the art of radio broadcasting in American education. At the present stage of its history it is attempting to do two things: First, to assemble and disseminate facts about radio in education; second, to induce qualified educators and authorities in various fields to devise radio programs that will be notable contributions to educational broadcasting.”

“In publishing the proceedings of the first annual assembly, the Council offers a contribution in the direction of its first objective, which is, indeed, one of its major rea-

sons for existence. The officers of the Council are: Robert A. Millikan, President; Livingston Farrand, vice-President; Norman H. Davis, Chairman of the Board; Walter Dill Scott, vice-chairman of the Board; Ralph Hayes, Treasurer; Meta Glass, secretary; and Levering Tyson, Director."

Relationship to Other Agencies. The work of the National Council is financed by monies from the Carnegie Fund and the Rockefeller Foundation. At the present writing, the Council, leaning as it does, toward the commercial broadcasters and their contentions, is considered as having a quite different purpose than has the National Committee on Education by Radio.

THE U. S. OFFICE OF EDUCATION

Radio Specialist. During 1930, the U. S. Office of Education accepted the services of a radio specialist as proffered to them by the Payne Fund, of New York. Armstrong Perry, whose name appears again and again in this story of the origin of educational broadcasting, became the first radio specialist of this department of national government.

Washington Drafts Ohio Man. In July, 1931, Dr. C. M. Koon became the first senior radio specialist on the payroll of the Office of Education. He had spent two years in the study of the work of the Ohio School of the Air and had received at Ohio State University, one of the first Doctor's degrees ever granted in radio education. His service for nearly two years as Assistant Director of the Ohio broadcasts gave him a practical training. As senior radio specialist, his duties are to collect and make available all possible materials on radio education. His office is in the Department of Interior Building, Washington, D. C.

RADIO CONFERENCES AND INSTITUTES

Exchange of Ideas. A new movement must always face the problem of being misunderstood. The various people who first discuss it, use certain words or phrases to express entirely different meanings. So the matter of definition is of immediate importance. The separately pro-

duced philosophy and technique must be pooled to form a foundation for the new art. The first few years have seen all this happen in the field of radio education.

An Early Radio Institute. The counselling of microphone teachers and classroom teachers has already been mentioned in the remarks on the Oakland and the Atlanta experiments. Next comes Ohio. In November of 1929, about sixty superintendents, teachers, and officials of the Ohio School of the Air met in Columbus, Ohio, for a two-day conference. The evaluations of the field, through the hundreds of daily and annual reports, were spread before the group for discussion. The results were highly satisfactory and more comprehensive plans for the future were evolved. Radio education was presented at many teachers' institutes and parent-teacher meetings, as well as in a more concerted fashion on the air.

A Regular College Course. In the summer of 1930, a course in radio education was, for the first time, offered at a university (Ohio State). This course is now a yearly fixture and many other educational institutions are considering the adding of such courses. Formal instruction will be a valuable service to the movement.

Institutes of National Interest. In June, 1930 and 1931, radio institutes were held at Ohio State University, with an attendance of approximately two hundred during each conference. College radio stations, commercial stations, educational officials, and even home listeners to the School of the Air joined in an exchange of experiences and viewpoints in such fashion as to develop solidarity of the movement. In May, 1931, the National Advisory Council of Radio in Education held a similar conference in New York. Its attendance was quite similar to that of the Ohio conferences and included as they did, a large number of visiting radio educationalists from foreign countries. Both the Ohio and New York conferences are to be continued.

They have a real purpose to serve in the exchange of ideas in regard to aims and methods.

OTHER RESEARCH

Teachers College. One of the older projects in research is that conducted under the Rural Research Bureau of Teachers College, Columbia University, by Margaret Harrison. It has been an outstanding study of the use of incidental broadcasts other than those of schools of the air. A bulletin is supplied to teachers, listing all broadcasts that might be of special benefit to them and their pupils. Reports on the results have been made available.

Ohio State University. Among the research projects in process during 1932 is the five-year program directed by Dr. W. W. Charters of the Bureau of Educational Research, Ohio State University and being conducted by Dr. Hillis Lumley. The work is being financed by the Payne Fund of New York. Its most significant study at the present time is an evaluation of the teaching of Geography on the Ohio School of the Air.

A POPULAR NAME

The Name "School of the Air" has met with great approval and some stations, both college and commercial, are using the term although their objective is not to reach the classroom but merely to broadcast educational material for home listening. There is likelihood, however, that the name "School of the Air" may eventually be limited to broadcasts made for classroom use, in a formal definite way and welcomed by the schools as an integral part of their teaching.

WHAT IS ESTABLISHED

Present Status. With the school year 1932-33 already planned, a rapid survey of the field indicates that the Damosch Lessons in Music, the American School of the Air, the Ohio School of the Air, the Pacific Coast School of the Air, the WMAQ School Broadcasts and the Wisconsin and the North Carolina radio schools will each not only con-

tinue but will reach materially increased audiences of school children and adults.

Developments. A number of new and comprehensive developments are in the making. The steady progress made by the movement establishes the fact that radio education is successfully passing through the novelty stage, that it is becoming increasingly useful and that it may finally be considered indispensable. How this is true, and why, will be presented in the following chapters on: Purposes, Preparation, Presentation, Classroom Use, Measuring the Effectiveness, the Reunion of the Home and the School, and the Future of Educational Broadcasting.

TO THE SCHOOL OF THE AIR

The little schoolhouse sits there still
And in the spring the robins come
And perch upon the window sill,
Inside there is the busy hum
Of children learning A. B. C.'s
Outside are nature's harmonies.

The stove is in the selfsame place;
The shelf for lunch pails in the back.
The teacher has a pleasant face.
She puts the books in one neat stack.
And—different from long ago—
She calls her class to Radio!

What magic for each lad and lass
To hear the world come rushing in!
Who would not gladly come to class
And long for lessons to begin!
If I could be a child again
I'd go to school to Uncle Ben!

I learned my numbers! I can write!
But in the days of the Three R's
There were no moments of delight
No high communion with the stars!
No flight upon a magic stair!
No joyous Schoolhouse of the Air!

— Anne Campbell.

CHRONOLOGICAL CHART OF THE RISE OF EDUCATION BY RADIO

	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932
Haaren, N. Y. High School		<u>WJZ</u>								
					Intended as experiment—lacked promotion and financing					
Oakland City, Calif.		<u>KGO</u>								
					Discontinued due to loss of director and lack of funds					
Little Red Schoolhouse of the Air, Chicago, Ill.		<u>WLS</u>								
					Discontinued due to loss of director and lack of funds					
Kansas State Agricultural Col.			<u>KSAC</u>							
					Discontinued because of smallness of audience					
Cleveland Schools					<u>WHK</u>					
Atlanta, Ga. City Schools					<u>WSB</u>					
						Discontinued—lack of funds				
Conn. State Board of Education					<u>WTIC</u>					
						Discontinued—lack of funds				
WMAQ—City of Chicago						<u>WMAQ</u>				
Standard School Broadcasts										
1929 Calif. School of the Air										
1930 Pacific Coast School of the Air						<u>KPO</u>				
							Pacific Coast Chain			
Damrosch Music Series							<u>NBC</u>			
								Chain		
Ohio School of the Air							<u>WLW</u>			
American School of the Air								Columbia Chain		
No. Carolina School of the Air								<u>WPTF</u>		
Wisconsin School of the Air									<u>WHA</u>	

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Education by Radio Vol. I. December 31, 1931.

The Bulletin of the National Committee on Education by Radio. Numbers 1 to 40 inclusive.

Education on the Air Vol. I and Vol. II.

First Year Book (1930) and Second Year Book (1931) of the Institute for Education by Radio, conducted by Ohio State Department of Education, Ohio State University, and the Payne Fund. 400 pages and 300 pages. Issued by Ohio State University.

Education Tunes In

A study of radio broadcasting in adult education. 119 pages. Book by Levering Tyson, issued by the American Association for Adult Education.

Radio in Education. Perry, Armstrong.

Published by the Payne Fund, One Madison Avenue, New York city. 130 pages. A compiled report of radio education in the United States. The Ohio School of the Air and other Experiments.

Radio and Education

Proceedings of the first assembly of the National Advisory Council on Radio in Education, 1931. 271 pages. Issued by the University of Chicago Press.

Report of the Advisory Committee on Education by Radio.

Fact-finding Sub-Committee Chairman, Dr. H. Robinson Shipherd, 41 E. 42nd St. New York City. 150 pages. Portrays the attitudes of some educational leaders. Submitted December 30, 1929.



—Courtesy A. Atwater Kent

A switchboard for the principal's desk connects his classrooms with the rest of the world.



CHAPTER TWO

THE PURPOSES OF EDUCATIONAL BROADCASTING

A Pertinent Question. Many leading educators have been skeptical. They quite properly ask, "What purposes will be served by admitting radio to the classroom?" These questions will be answered in the remaining chapters of this book, especially in this chapter and in Chapters V and VI, on "The Classroom Use of Radio" and Chapter VII on "Measuring the Effectiveness." When they ask, "What improvement in the educational process will result?" they ask a very pertinent question. We shall attempt to answer this fundamental inquiry here and now.

The Central Theme. The aim of educational broadcasts is, first of all, to assist in the general process of education. Few of its proponents will offer broadcasting as a substitute for regular classroom instruction. Perhaps exception need be made to this in the case of evening school or home study courses by radio. However, within the terms of this book, radio education is confined to formal classroom use. Manifestly, it cannot be substituted for the teacher, the school house, and the regular routine of formal school study. Radio programs as conducted at present are in no sense substitutional. They are merely complementary. Whatever may be the future, the author is convinced that radio's present field is that of an assistant teacher.

Limitation of Aim. In the second place, it is the aim to have radio, at least for the present, do only those things which it can do in a fashion superior to other modes of instruction. As was shown in Chapter I, radio has not yet attempted to give more than a small percentage of a full

curriculum. It is therefore, logically chosen to do those things in which it can be of the greatest assistance to the teacher.

A Marvelous Instrument. Radio provides the speediest method ever devised for the dissemination of ideas. It builds an acoustic bridge over widely separated terrestrial spaces, permitting people to remain in their homes and still be ear-witnesses to great events, or by the turn of a dial, to listen to the living voices of a noted lecturer, or to enjoy a grand opera. Through the radio the throbbing present may be brought home to us and the dead past be made to live again. One marvels at its tremendous possibilities.

“What though we cannot know the goal
Nor how the Eternal Purpose runs?
Man strides his world from pole to pole
And lifts his brow beyond the suns.”*

Fundamental Importance. This new giant of communication which can multiply the human voice many, many million times and can reach vast multitudes inexpensively, has almost unlimited possibilities. No one can estimate the full power of this new device which science has placed in the hands of civilization. Even the very civilization of the future may depend largely upon the control and the direction of this power.

AN INCLUSIVE OBJECTIVE

Mass Infusion. America's leading educational philosopher, John Dewey, in a **Critique of American Civilization** maintains that there is only one way to 'attain the higher values by which civilization is to be ultimately measured.' This, he says, 'will be by mass achievement.' That is to say, the answer to what the future holds is with the man in the street. The outcome of problems of government, of industry, of public health, of the status of the family, of religion, of education, of crime, of immigration, of international relations and peace or war are to be determined by the common people, the masses. While in no way

*Edmund Vance Cooke

denying the imperative need for fresh leadership, Dr. Dewey urges the cultivation and use of the leadership available at the moment which is often prevented from establishing any effective relationships with large sections of the public.

The Problem of Civilization. Radio affords opportunity for this available leadership to leave its impress both on those who read and on those who do not. In fact, radio offers the first effective method of reaching a large group of people who have not thoroughly informed themselves because of a lack of interest in reading, a lack of good reading material, or, in other cases, illiteracy. It is vastly important that we reach all these groups. To continue the words of Dewey: "If we ask which forces are to win — those that are organized, that know what they are after and that take systematic means to accomplish their end, or those which are indefinite, irresolute and ineffective we have, I think, the problem of our civilization before us." Organized education faces a golden opportunity.

Value Depends On Use. Its contributions to education must be determined by the content of the broadcasts and their utilization in advancing education. Roger W. Babson, the statician said, "The radio offers as great an opportunity for a new era of religious and educational renaissance as did the printing press three centuries ago." Being simply a vehicle for carrying sound, the radio itself cannot educate. But if the broadcasts are prepared under direction of educationists, to fulfill known needs, it is possible for the radio to be used to contribute to practically all of the commonly accepted objectives of education.

Thus among the purposes of education by radio is mass infusion — the carrying to all people of the most valuable training which has hitherto been the sole possession of the few.

A New Appreciation of Hearing. But it is not alone in diffusion that a benefit is enjoyed. The individual himself is rising to a fuller use of his native equipment. Historically the human race has used its ears more than its eyes in receiving messages. Perhaps that helps to ac-

count for the widespread 'ear-mindedness' which the use of the radio is bringing to light. The extensive use of spectacles bears witness to the great number of overworked eyes. The invention of printing, which is largely responsible for our system of gathering impressions through symbols is a comparatively recent event. The use of the human voice in conveying messages is an exceedingly ancient practice. The young child gains a lot from the world during the first six years of his life before he learns to read and this knowledge is practical and valuable. Yet the school is so organized as to depend very largely upon the printed page as the source from which impressions are gathered. Routine, very necessary in itself, is never worthy of becoming master and the best teachers are always alert to use every possible source of help and are ready to amend old customs and procedures in order to welcome such a new tool as radio.

OBJECTIVE NOT YET REACHED

Appreciation Not Yet General. However, at the present writing, not all teachers have been convinced. The following quotation from Will Rogers presents in his own inimitable fashion the fact that radio is not yet assimilated into the educational system. Its aims and objectives either have not been accepted as sufficiently worthy to merit immediate acceptance or the difficulties of assimilating it into the already over-crowded school curriculum are such as to cause delay.

"This must have happened to thousands of school children all over our country; my three came dragging in from three different schools, and I immediately asked 'em if they had heard Bernard Shaw's great speech over the radio.

They all said, 'No,' their teachers had 'em listening to them.'

Now here was perhaps the most brilliant and wittiest speech of our times, brought right to us by this great invention. Yet teachers give their own lecturers instead of Shaw's.

Even the newspapers only published extracts of it, but they published all their own editorials,

they were improving on Shaw, too, so what good does it do to have a brilliant man tell you something?"

OBJECTIVES VARY

Five Viewpoints. When one inquires about the purposes or aims of almost any movement there are likely to be several answers. These replies will represent the differing viewpoints of the various portions of our population which are interested in the matter. Thus in regard to radio education there are at least five main viewpoints. There is the viewpoint of the administrator; that of the classroom teacher; that of the pupil; that of the parents and the general public; and that of the radio industry. In this particular instance, the aims and objectives of these five groups are essentially harmonious. The central aim, of course, is the welfare of His Majesty, American Youth.

Some Common Objectives. The main objective of the administrator, of the classroom teacher, and of the parent is the welfare of the pupil. In a large measure the public is interested in radio education because of its interest in the pupil; also the members of the radio industry would claim to be sincerely interested in his welfare, even though they frankly admit their desire for commercial gain.

The Administrator. Nevertheless, the emphasis of these groups varies with their viewpoint. Thus the administrator thinks of radio largely in terms of its value in enriching the curriculum, in unifying educational forces in state and nation and as a vehicle for the initiating and speeding of new and necessary movements in education.

The Classroom Teacher. The teacher's objectives include the adding of variety to her classroom schedule and of direct assistance in teaching. The attainment of these aims not only benefits the pupil, but also encourages the teacher because of the manner in which it brings about the motivation of the pupil's own activities. She is also conscious of radio's desirability on the score of its furnishing demonstration lessons in teaching. She wants it to

furnish practical opportunities to foster in her pupils the fine art of listening attentively and purposefully.

The Pupil. The pupil knows but little about the desire of the administrator in regard to curriculum and cares but little sometimes about the teacher's objectives. Unless he merely parrots what the teacher has said, he is rather likely to admit that the aim of radio programs as far as he is concerned should be to add entertainment and zest to the school day. He wants the radio because of the additional variety and novelty it affords. He likes it because it presents a touch of excitement and because it adds freshness. He likes it because it introduces some of the living heroes. Later on, he develops a more thoughtful appreciation of the fact that it does help to open up a more interesting world to his view. He wants it to vitalize instruction by making it less humdrum and at least a wee bit more like a show or a circus.

The Home. Parents want the radio to bring them closer to the school, which institution after all is but one of their servants. They want the unique opportunity of hearing the teaching done day after day, in modern fashion. This has hitherto been impossible without visiting the school in person, a practice which has been sparingly followed. The public also desires the opportunity of more clearly understanding modern school needs. Perhaps only a rather small minority vote blindly against school bond issues. The majority have felt a desire for understanding their schools, a desire which has been inarticulate but nevertheless highly worthy of satisfaction. Many of the more thoughtful citizens desire that school radio programs serve as appetizers to all listeners for the more meaty and worthwhile of the radio broadcasts during the entire twenty-four hours. Manifestly this latter objective is confined largely to the more serious thinkers but is not held by them in any missionarizing attitude. No one likes to be the subject of missionary effort. The group mentioned are themselves enthusiastic listeners to the school broadcasts.

The Radio Industry. From the standpoint of the radio industry, the objective of radio education is to stabilize a



The author presenting the HONORABLE WILLIAM N. DOAK, *Secretary of Labor* from the N. E. A. Headquarters in Washington, D. C.

great enterprise. This industry includes both equipment manufacturers and broadcasters. They want education by radio to dignify and justify radio to the sober-minded folk whose enthusiasm is being dampened. They want more listeners and better listeners. Further, they hope that education may eventually accept a part of the burden of broadcasting.

In the ensuing pages, we shall present the purposes of these five groups in order. In the following outline on the objectives assigned to radio by the school administrator the first three items might apply also to the teacher. Numbers 4 and 5 are specifically his own.

(A) OBJECTIVES OF RADIO FROM THE VIEWPOINT OF THE EDUCATIONAL LEADER.

1. To extend the benefits of the teaching of exceptional teachers to all schools in the only way it can be done so effectively and so economically—by radio.
2. To add to the teaching staff of every school the leaders in many lines of human progress — artists, scientists, authors, statesmen, business leaders, and so on — the teachers of all of us.
3. To bring to the schoolroom the instruction and inspiration of participating in great history-making events, at home and abroad.
 - (a) International broadcasts.
 - (b) Addresses by the President and other officers of the national government.
 - (c) Special exercises such as the opening of Parliament, Light's Golden Jubilee, the messages of Hindenburg, Jusserand, and other international leaders.
4. To more effectively initiate new movements:
 - (a) By making the new leadership and material available.
 - (b) By enabling all to profit by expert introduction of the movement.

- (c) By carefully experimenting with new ideas and new plans to be evaluated by the cooperating teachers.
5. To unify educational forces of the state and nation:
- (a) By enabling administrators, teachers and pupils to acquire common experiences more effectively than in any other way, thus breaking down artificial barriers and making for homogeneity.
 - (b) By effectively promoting the ideals of the State and National officers of education.
 - (c) By increasing professional training and fellowship through special teacher's conventions over the radio — programs and forums heard by teachers meeting officially at the call of their superintendents and principals.

Ablest Teachers Show Most Interest. When we consider the classroom teacher, we discover a wealth of specific aims. Experience indicates that in radio as elsewhere, the ablest teachers are the most anxious to receive help. The most alert are also the keenest for this direct touch with the out-of-the-classroom world. The smug and the complacent teachers are most often the skeptical ones. It will be unusual if the latter group gains any enthusiasm for radio. However, since they are followers they will eventually be listeners.

The following outline is by no means inclusive. The perusal of the daily reports of the Ohio School of the Air, for example, affords statements of additional objectives but the list is limited for clarity's sake.

(B) THE OBJECTIVES OF RADIO FROM THE VIEW-POINT OF THE CLASSROOM TEACHER.

1. To obtain the help and encouragement which comes with the addition of expert professional and non-professional teachers and contact with world events. (Mentioned under A).

- (a) Especially by substituting first-hand enthusiasm and mastery for second-hand interest and half digested information.
2. To enrich classroom instruction:
- (a) By obtaining current material.
 - (b) By obtaining collateral material not otherwise available.
 - (c) By obtaining unique or new and other desirable material.
 - (d) By supplying material too difficult for the average teacher to present interestingly and effectively.
 - (e) By giving scientifically reliable data on subjects taught in which the regular teacher is poorly informed, but for which she can do the follow-up work.
 - (f) By giving new angles not afforded locally.
3. To assist in teaching the pupils to listen attentively:
- (a) By adding convincing testimony on the worthwhileness of the goal and thus inspiring teachers and pupils to good, honest school work.
 - (b) By fixing the individual responsibility of listening, comprehending and retaining the central facts presented or issues raised.
 - (c) By having greater opportunity to foster the pupil's ability to follow given directions promptly and exactly.
 - (d) By allowing the classroom teacher freedom and opportunity to center on the problem. (Made easier by having the assistant at the microphone)
 - (e) By requiring pupils to learn how to hold queries in their minds until the discussion period following the broadcast.
4. To stimulate thinking and pupil activity.
- (a) By broadening the pupil's outlook and consciousness through more interesting and more vital contact with the world.
 - (b) By using living leaders instead of textbooks, giving pupils the idea that education is a dramatic

- and a changing, growing process and not a fixed and humdrum thing.
- (c) By enabling pupils to assemble information with a quickness and sureness they could not accomplish with books alone.
 - (d) By the broadcasting teacher raising questions, inviting comments and correspondence, stimulating thinking and activity that will lead to further effort.
5. To serve as demonstration lessons for the teacher, thus offering training while in service:
- (a) By revealing the teacher's unconscious teaching defects such as vagueness, useless repetition, volubility, harshness of voice, and so on — this through the mastery shown by the teacher at the microphone.
 - (b) By presenting lessons that have been completely organized to fulfill a definite purpose.
 - (c) By bringing into the school work, refreshment of teaching power.
 - (d) By suggesting new ideas, new lesson schemes, and new forms for exercises.
 - (e) By demonstrating correct methods of presenting material.
 - (f) By affording object lessons in the creating of attitudes and the development of appreciations.

The Glib and the Inarticulate. When we approach the matter of the objectives of radio education as seen by the boy and the girl, we must further sub-divide. We should differentiate between articulate and inarticulate aims, between initial concepts and the ones that come through experience, and between those held by the backward and by the alert pupil. Many children, especially in the lower grades, can express themselves only falteringly and others are well nigh inarticulate. Surveys and studies of the verbal and the written statements of pupils on any subject bear this out.

The Actual Situation. Many pupils stress the manner in which radio should accomplish the serious aims of edu-

cation. It may be doubted whether much of this opinion is first-hand thinking, or whether it is a repetition of the great game of saying what they think the inquirer wants them to say. The older pupils and the more thoughtful of any group do, however, appreciate radio programs for their strictly cultural values. Such pupils have already been sold on the great importance of acquiring an education and welcome radio programs as an added source of inspiration and help.

Radio Can Satisfy Special Desires. The younger pupil and the more harum-scarum of all ages are more or less unwilling sacrifices on the altar of school routine. They are not necessarily duller than the other group but they like school less than the serious pupil does, and likewise they enjoy talkies and vaudeville even more. They especially yearn for amusement, novelty, variety and fun. Radio can serve a great purpose in respect to them. It can do many of the things they want done. It can dramatize history and other subjects; make a travelogue out of geography; add music and dramatic presentation to literature and in many ways delight them while giving both information and inspiration.

Motivation Results. The arousing of curiosity, the inspiration to increased activity and the expanding of interests result very definitely in pupil motivation. Some pupils are introspective enough to at least partially realize these values. Accordingly, the following outline presents not only the objectives of which the pupil is immediately aware but also adds some of the objectives for which only the administrator and the teacher have developed terse descriptive terms.

(C) THE OBJECTIVES FROM THE VIEWPOINT OF THE PUPIL.

1. To make schools more enjoyable:
 - (a) By adding variety in subject matter, methods, viewpoint and personality of the teachers.
 - (b) By adding novelty.
 - (c) By removing the need for at least a part of the uninteresting drill work.

- (d) By adding more of the arts which have made the theatre attractive. (Note 3-a, b)
- 2. To make school work more interesting — to vitalize instruction:
 - (a) By adding new and attractive personalities.
 - (b) By substituting fresh, first-hand accounts for out-dated book accounts desiccated by repetition.
 - (c) By affording "ears long enough" to listen in on all manner of exciting and significant world events — thus ending isolation and broadening the outlook.
 - (d) By firing the imagination on the wealth of opportunity for accomplishment.
- 3. To make instruction easier to remember. (Already partly assured by making it enjoyable and interesting):
 - (a) By making it more vivid and compelling.
 - (x) through the voice being a more effective instrument than type.
 - (y) through complete mastery of his subject by the radio teacher.
 - (b) By substitution of dramatic for didactic teaching.
 - (x) Recreating atmospheres of historic times.
 - (y) Exchanging a feeling of actuality for the haze of unreality which oftentimes invests historical personages and events that for some have existed only in type.
 - (z) Arousing and schooling the emotions.
 - (c) By interesting one to the point of unconscious motivation to collateral readings and studies.
 - (x) Through more often having direct bearing upon the regular daily conversation and upon magazines and newspapers, e. g. "Literature by Living Writers," "Current Events," "Civil Government by Those Who Govern."

Parents and the Public. The objectives of educational broadcasting as they would be stated by certain parents and others of the general public are quite clear and definite.

The data comes in the form of appreciation of schools of the air because they are accomplishing ends which are considered desirable, rather than as purposes stated in advance.

A Significant Union. The linking of the home and the school, the parent, the teacher, the pupil and all other home, shop and factory listeners is indeed so significant that only time can demonstrate how valuable it may be in the "mass infusion" already quoted from Dewey. The mothers, especially, may make of this a truly **magic link**. They outnumber fathers in this home listening but many night-working fathers participate, as do numerous relatives and others in the home.

In the following outline, it is taken for granted that the parents and the public share in the objectives already stated but especially emphasize the ones now added.

(D) THE OBJECTIVES FROM THE VIEWPOINT OF PARENTS AND THE PUBLIC.

1. To afford a feasible plan of re-uniting parent and teacher in educating the child.
 - (a) By permitting the busy housewives to listen at home while teachers and children listen at school.
 - (b) By refreshing mothers' knowledge and zeal in the educative process.
 - (c) By furnishing her with samples of modern teaching objectives and methods.
 - (d) By keeping mother and child "in step" in the study of various subjects presented.
2. To increase the public appreciation of the work of the schools, especially of groups not directly reached except through the radio:
 - (a) By directing their attention to educational matters and re-awakening their interest in them.
 - (b) By affording them a new appreciation and understanding of present-day school work.
 - (c) By making the interest a daily one instead of an occasional one, thus engendering an abiding interest in the work of the public schools.

- (d) By enlightening the tax payers so that they become willing to pay for better schools.
 - (e) By building a bridge across the gulf which education sometimes causes between parents and their children.
3. To develop an appreciation of good radio programs:
- (a) By the pupils developing a taste for worthwhile programs in school and also a discrimination by which they differentiate between worthy and worthless broadcasts.
 - (b) By giving parents examples of programs that are fully as interesting as jazz and yet of true educational value.
 - (c) By planning special programs to be broadcast for special groups and for the public who are interested in the special groups—as the Parent-Teacher Forums conducted by the Ohio School of the Air.
 - (d) By teaching the pupils how to listen to and utilize good radio programs, increasing the benefits of programs heard at all times and places.

The Radio Industry. From the standpoint of the radio industry, radio education is considered to be much more than merely an excuse for the sale of additional thousands of radio receivers. Of course it does increase sales. The schools of America may some day be using more than 300,000 radio sets and more than a million loud-speakers. This, of course, makes of the fostering of radio education a legitimate promotive enterprise of the industry. This is no more open to attack than hundreds of other advertising campaigns intended to increase the consumption of various personal needs, or the formation of desirable habits of living such as the promotion of health by life insurance companies or fire prevention by Underwriters Associations.

A Salutary Influence. The radio industry also desires that the addition of an increasing number of educational broadcasts shall save it from the over-doses of jazz music and advertising appeals which create apathy on the part of thousands of set owners. The desire is not only to increase the size of the audience but also its dependence on

broadcasting. Further, the industry has every right to expect that, if it be of great benefit to the schools of America, eventually education may be one of its important sources of income. Broadcasters do not care whether these funds come from governmental sources, as is the case of the Ohio School of the Air, or from private benefaction, from foundations such as the Payne Fund of New York or from the sponsorship by commercial houses that are acceptable to school officials.

Unusual Economy. Education by radio is comparatively so inexpensive that if a proper organization for furnishing it may be formed, the broadcasting industry will be fairly paid for their assistance and at such a slight cost per pupil that none will be in favor of denying the classroom teacher an assistant—radio.

(E) OBJECTIVES FROM THE VIEWPOINT OF THE RADIO INDUSTRY.

1. To stabilize a great enterprise:
 - (a) Enabling it to work as well as to play.
 - (b) Emphasizing worth as well as wit.
 - (c) Providing permanent development and growth as well as passing amusement.
 - (d) Enabling it to increase its universality of appeal.
 - (e) Increasing the number of listeners.
 - (f) Deepening of listeners' dependence on broadcasting.
2. To stimulate sales of individual sets or of central receiving equipment by arousing the interest of all manner of educational institutions and of individuals interested primarily in educational broadcasts.
3. To provide a new source of revenue that may come increasingly from governmental sources, private benefactions, foundations, legitimate sponsorship.

Television. It is difficult to prophesy how much these objectives will change. Television will most certainly bring about an increased use of radio reception by schools. Likewise, the wider use of the motion picture and the talk-

ing films will have its effect upon classroom listening. These points will be considered at some length in the Chapter on "The Future of Educational Broadcasting."

The Dominant Aim. In summary, the central and the dominant aim of education by radio is to bring the world to the classroom—to make universally available the services of the finest teachers, the inspiration of the greatest leaders and the educative power of unfolding world events which through the radio may come as a vibrant and challenging textbook of the air.

THE PARABLE OF THE POWERFUL PENNY AND THE PRACTICAL PHILANTHROPIST

The Philanthropist sat sorrowing. Yet all the world thought him a practical philanthropist whose generousities should have made him happy beyond the hopes of man.

He summoned his servant, a venerable man whose name, Powerful Penny, had once been one of pride but was now spoken only in derision.

"Why," quoth the Philanthropist, "are we so powerless? The forces of evil well-nigh outstrip the forces of good. Ignorance takes a frightful toll in misery and unhappiness. Penny, you are no longer powerful."

"Yes, but sire, you forget that the books we have scattered so widely are always at work. We have indeed added to the wisdom of man."

"Nevertheless, good servant, we must reach the minds and hearts of more people and do it more effectively. We must conceive of some way in which to multiply Good and spread it more widely. We must induce the wisest and noblest men and women to do more of our teaching in both school and home. Let us think on it." And with a nod he dismissed his once powerful servant and lapsed into profoundest thought.

But Penny had scarcely passed the portals when a cry of joy burst from the lips of his master. "Come back, Penny! I have it! You shall again become powerful. **Yes, more powerful than ever before.**"

"But how?" pleaded the Penny. "We Pennies are not appreciated—yea, we are even despised."

"Penny! Have you not heard of the new miracle—the Magic Multiplier known as the Microphone. 'Tis said that one may speak in its presence and all the world may

RADIO, THE ASSISTANT TEACHER
DRAMALOGS



THE CROSLY PLAYERS



THE WEAO PLAYERS

Rehearsals of players, musicians, teachers and announcers is a constant process of the Ohio School of the Air.

hear! Let us bring to it the messages that shall win our youth to ways of wisdom. Let us insure that this new miracle shall extend the influence of our worthiest men and women a thousand—yea, ten thousand-fold.”

Penny resumed a posture of pride. “It can be done. It has been requiring ten of my family to teach a single pupil through one recitation—ten cents per child per lesson. But a million can hear a broadcast as cheaply as one. Even though we bring an illustrious traveler, poet or scientist a long distance, grant him a fee, and pay for the broadcasting, we can reach many, many children for a single cent.”

“Yes, Penny you are again powerful. We will henceforth let the Slow-Thinkers build in brick and stone and scatter books. They will do it well, and we will bestir ourselves in helping Schools of the Air—marshalling the master teachers and leaders of progress before the microphone. Penny, you can do more educating than a dollar has ever done. Wireless the Ohio School of the Air and tell them we are coming!”

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CHAPTER III

PREPARATION OF EDUCATIONAL BROADCASTS

The Problems of a Director. Education by radio is so new a thing, particularly the preparation and presentation of radio programs for classroom use, that one hesitates to be dogmatic about any phase of it. As in all new and more or less experimental fields, there will be for some time all manner of problems to be met in the administration of schools of the air. The problem of adequate financing and the difficulty of securing and training effective teachers-at-the-microphone will not be among the least.

Broadcasts for School Use. In this chapter, we shall limit ourselves to the problems of a director of broadcasts for school use. We shall assume that the financial problem is solved, that he has a radio station ready to broadcast such programs as he shall bring to the microphone. The types of preparation discussed will have reference to broadcasting and will give but passing mention of the preparation which the classroom must make for receiving it. It should be noted that preparation in the studio and in the classroom are parallel efforts. While much of the work mentioned in this chapter is being done, the classroom is busy preparing for successful hearing of the same series of broadcasts, as will be outlined in Chapters V and VI.

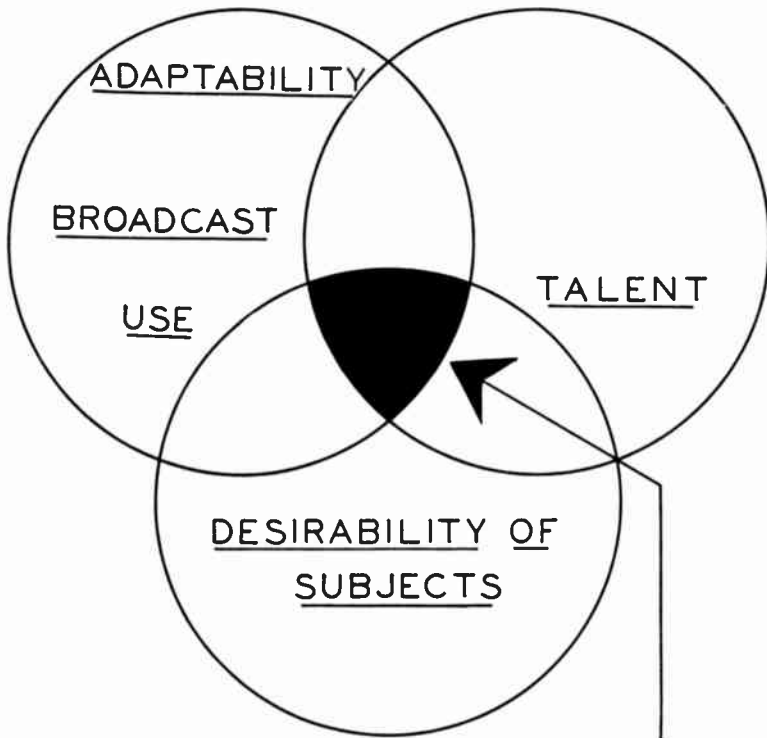
We shall consider the following: choosing of the curricula, grade placement of the features, fixing the length of the lessons, choosing the time of the broadcast, listing and enlisting talent, training of talent, and the broadcasting of the program.

CHOOSING THE CURRICULA

The Factors. In the beginning of present day schools of the air, the program necessarily includes but a few sub-

jects and amounts to relatively few hours of broadcasting each week. Later, as the new idea takes hold, increasing interest in the field and the consequent demand for a broader curriculum naturally result in the addition of other subjects. Certain factors determine the making of that first rather meager curriculum. They are: demand from the field for certain subjects; adaptability of each subject to radio presentation; and the availability of the particular talent required. In a determination of what shall constitute the curriculum, these questions must be considered.

Limitation of Curriculum. The following graph shows how the radio program, during the period in which it is attempting to cover only part of the field and do only a part of the task should limit the presentations to these features which will be of greatest value to the listening schools.



The Broadcast Curriculum

THE DETERMINING FACTORS IN A BROADCAST CURRICULUM

DETERMINING THE MOST WANTED SUBJECTS AND COURSES

Objective Data Needed. It is very evident that to date there have not been sufficient available radio data, founded on objective tests, controlled experiments and so on, to guide those who would make a model air school curriculum. However, there are a number of ways of ascertaining what teachers and others think they want in the way of an educational broadcast.

The Natural Choice. The word "think" is chosen advisedly, because of the fact that at the beginning, in all sincerity, the teachers are not at all sure just what they do want. If they are asked for curriculum suggestions when as yet the whole idea of radio education is new to them and they have not had a chance to get the views of their fellow teachers the average teacher naturally considers first and foremost her own subject. Her choice is quite likely to mirror her own prepossession.

Generally speaking, the history teacher is sure to ask for history dramalogs, the science teacher for science features and so on. Because of this fact, the making of a satisfactory survey requires that each person who receives a questionnaire must also receive at the same time a variety of suggestions which shall serve to give a comprehensive view of the problems as well as the particular opportunities involved in educational broadcasting.

Information Supplied. Consistent with this point of view, the surveys made by the author have always provided a considerable amount of information for the person who was asked to contribute of his own thought and observation upon specific points. Thus, before any attempt was made to fill out the questionnaire, thought was provoked on pertinent matters. For instance, the sample week's program accompanying the questionnaire undoubtedly was of great suggestive value, enabling those replying to give answers more significant than would otherwise have been possible.

The Ohio Survey. Thus, when the Ohio School of the Air was making its first curriculum, it repeated in amend-

ed form, the Payne Fund survey already noted in Chapter I as a turning point, and conducted it intensively in the Ohio field. The results were very similar to those of the previous survey, indicating that the most favored subjects were as follows: Music Appreciation, Geography and Travel, Literature by Living Writers, Health Talks, History, Current Events, Civics and Citizenship, Drama, Holiday programs, Nature Study and Art Appreciation.

Less favored features, listed in order of their preference were: Foreign Languages, Parent-Teacher Forums, Physical Education, Safety, Vocational Guidance, Spelling and Grammar, Opening Exercises.

Unexpected Ratings. It is interesting to note that in actual broadcasting some subjects receiving low ranking in the advance evaluations of teachers have climbed close to the top. This may be due to a combination of causes, chief of which is that the broadcasting teacher has been able to choose subject matter or methods of presentation which did not occur to the persons answering the questionnaire. In large measure each person's views are colored by his own particular tasks and enthusiasms.

Parents to be Heard. Aside from the questionnaire, a mass of opinion was gathered through personal contacts in which scores of people expressed themselves with regard to the desirability or undesirability of a wide range of subjects. Not only educational leaders and classroom teachers were interrogated but also parents, professional men, taxi drivers, laborers and so on. Every one of them contributed some viewpoint that proved valuable to the organizers of the broadcast. In passing, may it be said that it seems to us that occasionally there is a danger in assuming that only professional educators can think clearly and counsel wisely on matters of education. Parents are frequently doing more good sound thinking than the professional educator cares to admit.

Teacher Training While in Service. Why are certain subjects more desirable than others? We have already discussed the "most wanted" subjects. Aside from the ques-

tion of adaptability of the subject and the availability of the talent, we center our interest on two or three criteria. First, there is a feeling that some subjects are taught with less than usual efficiency by the majority of teachers. Second, inherent difficulty is encountered, particularly on the part of inexperienced teachers, in the teaching of certain rather specialized subjects such as Nature, Thrift, Fire Prevention and Safety First. Upon these subjects the teacher is frequently ready to admit she is far from being a specialist. And then there is the matter of the varying ability of the instructor to teach the regular subjects in the curriculum. Here is an opportunity for teacher-training. In fact there has already been noted a distinct appeal for broadcasts which will serve to further the training of the teacher in service.

DETERMINING ADAPTABILITY FOR RADIO USE

Distinct Appeal to the Ear-minded. Certain branches of study taught in our public schools require little or no adaptation; certain others would require so much adaptation to radio's use that it seems best to not even consider them in our curriculum-building at the present time. Radio is a blind Goddess and speaks best to those who have developed most keenly the use of their ears. The microphone knows but one image—the sound image. It makes its appeal through the auditory channel, without the aid of the visual concept. In the silent movies we have pantomime, appealing to the eye-minded; the radio, on the other hand, depends solely on auditory concepts. Its devotees must conjure up their own pictures by translation from sounds. They must be truly ear-minded.

Emotional Coloring. A picture is worth a thousand words, yes—but aren't they printed words? What of the comparative power and effectiveness of motion picture and the living spoken word? Unquestionably, a few sentences spoken with a rush of genuine feeling—anger, despair, exultation, hatred or the like—will carry more emotion into the heart of the listener than any visual image could produce. There is a pantomime of sound. Through the loud-

speaker flows a rich flood of emotional coloring seldom released from the printed page into the hearts of any, save the most imaginative and sympathetic of readers.

Making the Dead Past Live Again. Consider history for a moment, how all too frequently in the past it has been a deadly, dull catalogue of dates, with a hum-drum account of what is alleged to have taken place in between. What a splendid opportunity is offered by the radio history-dramalog to quicken the dead carcass of history. Is there any youngster who will not more gladly and effectively learn his history from a dramatic presentation than from the printed account? Through the magic of the unseen stage, he is an ear-witness to the making of history; in very truth the dead past lives for him once more in the pulsating, throbbing present. He can feel the pulse-beat of the people at the various crises in history when emotion ran high and determined more than anything else the future course of the nation.

The Impression of Actuality. There is no doubt that history is admirably suited to radio purposes. The teachers demand it because they feel that the radio presentation adds to the various periods in history an atmosphere of realism which dramatization alone can secure. They have felt this lack, but have not had the time to dramatize. Now comes the school of the air with a dramalog which is the result of many, many more hours of thought and effort than any one school could possibly allot to it. And yet, herein lies the magic, the secret of radio education. As the radio players re-enact history, not merely for the pupils of a single school-room but for hundreds and thousands, there is the absorbing sense of being present at the making of history, of being witnesses of great events.

Moreover, radio has sought entrance to the classroom at an opportune time, as noted in the following quotation:

With the speaking stage struggling for a bare existence, lovers of the spoken word are turning to radio plays as a medium for the projection of the legitimate drop. With the increasingly rapid

development of play production "on the air" a new field has been opened for the dramatically minded youth of today, and a new hope has been born in the hearts of those who love the works of the great playwrights. Radio furnishes a medium by which students of drama may be properly trained, and the classics and more modern works may be made vivid. Radio drama has a definite place in modern culture. It is here to stay.

—*Excerpt from a booklet (French) on "Radio Drama" by Gwendolyn Jenkins and William Knepper.*

MUSIC IDEALLY FITTED TO RADIO USE

Visual Accompaniment Unnecessary. Music has been called the language of the emotions. Fortunately, it is almost entirely an ear subject. The microphone not only transmits but also affords opportunity for music and music appreciation without serious loss. In fact, divorced as it is from any consideration of the unseen musician himself, radio music may be superlatively effective. Even at a symphony we note that many people deliberately close their eyes the better to hear the music.

Choice of Goal. In planning music broadcasts we must immediately choose whether their purpose shall be instruction, appreciation or a combination of the two. We must clearly define our field of service. Shotgun methods will not suffice in radio education. The primary need in some situations may be instruction and in others appreciation or a combination of the two.

Three Distinct Groups. To apply this definition to such a subject as music and music appreciation immediately brings forth the fact that at least three different types of broadcast should be given. Metropolitan schools, having a great deal of strength within themselves including bands, orchestras, choruses and so on, and having adequate musical leadership, are interested in hearing over the radio only the world's leading musicians and symphonic music.

A second class, having inadequate leadership and insufficient strength for supporting bands, orchestras and

vocal groups, is interested in music of a simpler nature than the symphonic and welcomes especially that part of any musical broadcast which is supplementary to their own program.

The third group, and by far the largest, has no musical leadership, no band, no orchestra, no glee club, and welcomes simple instruction in music as well as some of the features mentioned for the second group, and only a touch of the symphonic. This illustrates how radio can be supplementary and the broadcast be assimilated into the regular program.

Stimulation of Imagination. There are many other types of subject matter well adapted to the radio. The truly interesting speaker, the successful story-teller, have since time began excelled in painting word-pictures. Thus they are able to bridge the gap caused by the lack of visual presence and to project themselves and their message across the world. By holding to a vocabulary that we know, using specific, concrete and colorful words, and a happy choice of figurative or image-forming language, they are able to speak pictures before our mind's eye. Thus by a wise word choice the geographer, the historian, or the story-teller may not only give us his message but also stimulate our imagination in so doing. To the person who can project himself through the microphone so that his words really live, virtually all bars are down in radio.

Bridging the Blindness Gap. Still other subjects and branches of study, as will be noted in the chapters on Classroom Use, permit a ready bridging of the gap, provided that the classroom teacher is alert to assist the microphone teacher with every available visual aid. Though television has not arrived in a practicable form, it is quite possible for the classroom teacher to cooperate with the microphone teacher, in a Nature series, for example. Frequently she can have in the classroom, examples of the object being discussed or in lieu of the actuality, she may arrange to have a drawing of it on the blackboard.

The Least Available. At the bottom of the scale of availability are most likely to be found those subjects which

deal with things and ideas which can be illustrated easily in the classroom but which are largely dependent upon visual appeal to the understanding. The cooperation between teachers at the microphone and in the classroom may thus be both difficult and ineffective. Such subjects belong in the field of visual rather than radio education. Thus radio has not yet found it expedient to approach such fields as manual training, in which the acquisition of skills demands much in the way of equipment, co-ordination and so on, which is not to be found except in schools especially prepared to teach the subject. As yet, it appears to be too dependent upon intimate reactions between shop instructor and pupils to be taught effectively by radio.

Future May Extend Field. This does not preclude the possibility that a person who is an artist in handling both tools and children might be able to do a splendid job of teaching manual training on the air. Inspiration and motivation might bridge the blindness-gap. Perhaps, therefore, we should not rule these seemingly extreme ventures out of the picture. We may no sooner declare the impossibility than someone shall demonstrate the possibility or the actual feasibility of it. One somehow hesitates to set limits in radio for fear of "being a piker," after all. It is too early to exclude any subjects in the radio curriculum.

Lack of Interaction. There is yet another element of difficulty in all radio broadcasting—a difficulty which the adoption of television itself may not remove. The constant interplay of question and answer, suggestion and argument by pupil and teacher, has not yet found its way adequately into the classroom use of radio. Perhaps it may yet be developed. It is already with us, partially, in the classroom discussions which may and should follow each broadcast. This will be presented in chapter IX.

DETERMINING AVAILABILITY OF TALENT

Master Teachers Needed. The availability of the needed talent is necessarily a factor in the decision to include or exclude a given subject being considered for the curriculum. Suppose the subject is definitely wanted by the field, and it lends itself well to the limitations of broadcast-

ing. The deciding factor then becomes the finding of an expert teacher, professional or non-professional. The lists of possibilities will surely include the great leaders who are the teachers of teachers. Time and place must be considered for not all great artists are to be found conveniently gathered together in any one locality. Yet in some manner these superb teachers must be found.

Enthusiasm a Carrier-Wave. When these master teachers are found, they must possess more than a mastery of their subject. Certain qualifications should be found to a much greater degree than in the teacher of a single classroom—plus something else. Above everything, the microphone teacher must have a tremendous enthusiasm—an ability to lose himself in his story. Just as the tiny vibrations caused in the microphone are sent out on the air astride a carrier-wave having thousands of times their own power, enthusiasm is the carrier wave of radio education.

General Qualifications. The basic qualification for a radio teacher is, after all, that of any teacher,—to have a message and to give it with heart, mind and soul. The radio teacher's manner should be attractive, forceful, stimulating and likable. His should be a genuine personality whose vitality may be projected through the sensitive microphone. His voice should be clear, pleasing and magnetic—his tone, easy, natural and yet expressive. Distinct enunciation is essential to his success as a microphone teacher and the flexibility of a varied and stimulating intonation will prove invaluable. But of his further qualifications, more later in connection with training.

Parallel Problems. When the promoter of broadcasting for schools has proceeded thus far he becomes more urgently concerned about grade placement, length of lessons, time of day and other details. Of course, nearly all of the matters now being discussed run parallel. While deciding on the matters just mentioned he is also busy discovering and enlisting talent. He first attempts grade placement but may shift his original plan due to the fact that he discovers talent especially capable in teaching a slightly older or younger group.

THE SCHEDULE FOR THE OHIO SCHOOL OF THE AIR
 1930-1931
 Showing Suitable Grade Placement

FEATURES	Grades								High School	
	1	2	3	4	5	6	7	8		
Monday										
Literature and English										
Civil Government										
Tuesday										
Current Events										
Citizenship										
Nature										
Wednesday										
Physics										
History Dramalogs										
Art										
Thursday										
Stories										
Geography (Home)										
Geography (Foreign)										
Friday										
General Science										
Health										
Story Plays and Rhythmics										

 Indicates grades for which the course is specifically intended.



HAMLIN GARLAND
Author



C. FRANCIS JENKINS.
Scientist & Inventor



GRACE ABBOT
Chief, U. S. Children's Bureau



VILHJALMUR STEFANSSON
Explorer

Four non-professional "teachers" whose messages on the Ohio School of the Air will never be forgotten. They are representative of a large number of leaders worthy of being heard in the classroom.



DR. CHARLES AUSTIN BEARD
*A leading author of History
Textbooks*



DR. W. R. McCONNELL
*Professor of Geography, Miami
University.*



MR. WILLIAM H. VOGEL,
*Supervisor of Art, Cincinnati Public
Schools.*



MISS BESSIE GABBARD,
*Kindergarten Teacher, Linwood
School, Cincinnati.*

Through the School of the Air the influence of the professional teacher is wonderfully extended. Only the author of textbooks in the above list had ever served such a large classroom—and even he welcomed the more direct touch with the pupils in the Ohio School of the Air.

GRADE PLACEMENT OF SCHOOL BROADCASTS

Grading Sometimes Approximate. The problem of the grading of subject matter for broadcasting is fully as important as in any other mode of instruction. The course as a whole and each separate lesson must be carefully keyed to the age group for which the course is announced. Such grading cannot be expected to satisfy all teachers equally well. Some fifth grades, for example, will report a certain history dramalog as being quite understandable, while other fifth grades will consider it too difficult.

Teacher Must Decide. There is no final solution of the problem except that all listening is voluntary and the teacher is frankly advised to further grade a course that may be announced for fifth and sixth grades. If she decides that it is too difficult for her pupils the sensible thing to do is to refrain from listening.

School broadcasts have up to the present seldom attempted to keep elementary school subjects to a single grade. This is due in part to the exigencies of the case, especially the lack of time to offer so many features as would be thus required.

Variation from Classroom Grading. There is some evidence that subject matter and wording which would normally be clear to a seventh grade, would be more suited to an eighth grade if taught by radio. However, as the difficulties of radio teaching are overcome there is reason to doubt this shifting of grade placement. Further experience is necessary before safe conclusions may be reached.

Even Youngest Pupils Listen Effectively. In the beginning, many broadcasters and interested educators prophesied that radio education would be effective only in the upper grades and high school. This has been proved erroneous, especially by the Ohio School of the Air, which has three courses to which even first graders continue to listen successfully. The listening span, (or better, the participating) is very short for the first graders, but from the

second grade upward, the classes report that eighteen minutes is not too long.

FIXING THE LENGTH OF LESSONS

A Many-Sided Problem. There are difficult decisions to make in the drafting of a broadcast curriculum. How long shall each broadcast be? Fifteen, twenty, twenty-five or more minutes? Shall the time vary with different features? Should a half hour be used for dramalogs and twenty minutes for other instruction? Shall it vary with different age pupils? Should an hour be thus divided into a fifteen minute, a twenty minute, and a twenty-five minute period? The answers vary as a study of the graphs of schedules of the American and the Ohio School of the Air indicate. It should be noted that first grade pupils in the Ohio School of the Air listen only to a brief story (seven or eight minutes in length) and follow directions of the Story Plays and Rhythmics. Some teachers of first grades report good results, others advise that first grades do not make the attempt.

TIME OF DAY

No Ideal Time. Such matters as fixing the broadcast period are of necessity dependent on several considerations. First one must ascertain what time of day pleases the larger share of the intended listeners and what hours are possible from the standpoint of the radio station. Not all schools open at the same time in the morning. Intermissions vary in length. The platoon system is to be met. In the latter difficulty home listening might be the answer if all homes were equipped so that equality of opportunity existed.

Opening Exercises. Apparently there is no time that is equally pleasing to all schools. Thus there is no chance to satisfy all schools desiring opening exercises by radio. Some schools convene at 8:30 A. M. and others at 9:00 A. M. A broadcast at the earlier time robs the second group

of the broadcast, while with the 9:00 o'clock opening, the exercises would be a misnomer in the first mentioned schools.

Time Zone Problem. In the case of chains, powerful stations, and stations near a time changing meridian, there is the equally knotty problem of a full hour shift in clock time. Such difficulties appear to be inherent and no complete control of them seems possible. Other difficulties are removable and will be considered at length in the chapter on Classroom Use of Radio Broadcasts.

LISTING AND ENLISTING OF TALENT

Methods of Discovery. The program manager who would have talent when he wants it and needs it must be ever on the alert to discover it. He must constantly be asking those in a position to know as to the whereabouts of talent, professional and non-professional. Such inquiry may be made personally, by letter, or by publicity. The program manager's call-list should be extensive and yet sometimes it proves very hard to find many who can by any chance do acceptably a certain desired task.

Testing by Telephone. An excellent way to secure an unconscious preliminary voice-test is for the broadcaster to talk with the prospect over the telephone. The broadcaster thus has an opportunity of appraising the speaker's voice and deciding whether or not the voice and the personality as revealed seem to warrant his seeking to interest him further in the work. Those with sufficiently attractive voice and personality may be given special tryouts, at which time they are put as nearly at ease as possible, so that the tester may hear a fairly representative effort.

Reasons for Availability. The enlisting of such talent even to the point of the tryout depends upon a number of considerations. Many are attracted because they are intensely interested in broadcasting lessons in some subject which is their hobby. Others are drawn by the sheer novelty of the thing—their egotism is fed by the thought



—Courtesy Edu. Broadcast Equipment Co., Newark, N. J.

The large school listens through the aid of a master set with receiver, switchboard, microphone and phonograph.



The Virginia Ridge one room school at Philo, Ohio appreciates radio much more than the average metropolitan school. Radio ends isolation for such schools.

that they may have a part in the thinking of the thousands to whom they can project themselves via the microphone.

Self-Promotion a Factor. Naturally, unselfishness and crass egotism meet here. However, there is a legitimate half-way mark. Those who have something to gain in justifiable self-promotion are usually interested, for they know that, if successful, their names will become household words. Hence, frequently they derive a more genuine satisfaction from this indirect recompense than from the small (and sometimes totally lacking) fee which the School of the Air may be able to afford.

Better Pay Must Come. However, the time should come when radio teachers who can render exceptional service should receive correspondingly attractive rewards. Far-sighted teachers, beginning to realize this, are becoming available in greater numbers. Though you may tell them in advance they will hardly believe until they learn from experience that radio lessons consuming but a few minutes on the air may require many hours in preparation. There must be something to hold them, to keep them at the hard work, and to keep them happy.

The Greatest Attraction. And this inducement is not lacking. It comes in the form of stimulating encouragement in the hundreds or even thousands of letters which pour in upon them from their great unseen audience. These letters of appreciation from young and old, from some mother, or from some shut-in, perhaps, tie him to his task. The material rewards should be increased whenever possible, but they may always remain secondary to the satisfaction that the broadcasting teacher has of knowing that as a part of the miracle of radio education he has touched countless thousands of human lives, unlocking to them new mysteries, opening up new vistas.

THE TRAINING OF TALENT

Radio Technique. The training of talent presents the utmost in variety. Generally speaking the radio teachers

have been chosen because of native ability and a high degree of training they already possess. Nevertheless, the radio teaching presents several departures from their regular experience and they must be properly oriented in the land of radio—of teaching the unseen—of popularizing, simplifying and condensing. They must be trained in teaching method, preparation of scripts and in delivery at the microphone. This task is fundamental and receives constant consideration.

CHOICE OF TEACHING METHOD

A Wide Choice. For the presentation of the lesson material the teacher may use any of a number of methods or a combination of methods. He may elect to give a straight lecture. Or, he may prefer the Socratic method of question and answer. He may cast his material in dialogue form taking all the parts himself. Or again, he may call upon a cast of characters to present the story and the lesson he wishes to teach. He may use musical illustrations or musical backgrounds. He may speak of past great events as an eye witness, thus securing the illusion of actuality. He may further intensify this sense of reality by having at the microphone a suitable variety of sound effects. He may add to these the use of special lighting in the studio in order to create the atmosphere which will enable him to impart the maximum of true emotional feeling to his audience. Thus, aided by the atmosphere of the studio, the microphone teacher may paint upon the pupil's imagination an unforgettable picture. Once they have seen King John signing the Magna Charta, heard him speak, and sensed the tenseness of that great moment, they will have no difficulty in remembering that particular bit of the history of the English race. The microphone portrays emotion more surely than does the camera.

THE PREPARATION OF THE LESSON

Content and Organization. Now that the teacher is looking forward to the specific lessons, has chosen his method of teaching, knows the grade of the pupils, and

the length of the period, he is ready to approach the problem of content and organization of his material for the series as a whole and each broadcast separately.

Not a Complete Course. In broadcasting but one lesson a week his problem becomes quite different than it would be if he were teaching daily. Experience has shown that in outlining the topics of his course and assigning them to certain dates, he has been obliged to skip much material which would ordinarily be presented in a complete course. Unless otherwise stated we will consider that all features are on a once-a-week basis, though this is following practice and it is quite sure to change.

Choice and Timing of Topics. The radio teacher's problem then, is one of determining what part of a five-day assignment of Geography for example, will be most helpful to the classroom teacher. If he must choose to present only one of the South American countries, for instance, there may be one country in particular through which he has traveled most extensively or has read about most widely. His inevitable inclination will be to choose that country. Just at the moment, however, the spot-light of world interest may be centering upon another South American republic. In such case, he is likely to disregard his greater personal interest in the one country and choose the one in the limelight. If, for instance, Colonel Lindbergh or some other hero is visiting there, it will take on unusual interest. Since some events of great significance cannot be known in advance, this offers argument for considerable flexibility of the broadcast series. Through all the scheduling, it is necessary for the radio teacher to time his topics as nearly as possible in conformity with the order and the time in which the majority of schools will be studying them in their regular curriculum. He can do this only imperfectly so that it actually devolves upon the classroom to meet his schedule.

A Problem in Simplification. His next problem is not so difficult. If he is a specialist in his field, accustomed to presenting his subject matter to the certain age group which

he is asked to teach, he will in general find that lessons over the radio must be still more simple and clear in language and construction than were he actually present in the classroom. It is better for him to simplify too much rather than not enough.

The Most Effective Speech. Simple English, the English of the Gettysburg Speech, is after all, not only more pleasing but more effective. It is the common, vivid word which is the radio teacher's great need. With common words, men have developed the commerce, the art, the whole fabric of the world in which they live. With simple words men have sailed the high seas, fought their wars, and then built up their little world again. Ordinary words mean much because of the tasks to which succeeding generations of the race have put them. Words are meaningful because of the associations which cluster around them. The familiar word is richly freighted with connotation or associations; the new word is relatively ineffectual because, as yet, experience has not filled it with meaning.

Words in Apposition. It follows that the radio teacher must go over his script with a "fine-tooth comb" to detect the long, unusual words which can be replaced with the short, familiar words. He may, of course, use an occasional new or even difficult word, if it is truly important and hard to avoid. In that case, he should suggest the meaning of the new word by his use of synonyms and antonyms. Thus he may now and then give the pupil a new word without his realizing that he is being taught a broader vocabulary.

Sibilants Troublesome. Incidentally, his word list must avoid those words which for one reason or another do not broadcast well. Words strong in sibilants are special offenders, sometimes affecting unfavorably both the intelligibility and the personality of the broadcast.

PICTURIZATION

Rewriting Versus Devitalizing. The use of similes and metaphors, particularly those related to the experiences of school children, will be found effective. Such word pic-

tures are easily remembered. Abstruse ideas, finding utterance in hazy, involved expressions will fail to hold the audience. The radio speaker's style must be clear and his illustrations simple and easy to follow. Even after the script has been submitted for the broadcast it can be tested for diction as well as for the matters of emphasis, repetition and so on. The script can be revamped until only the more effective expressions are retained. The ability thus to rewrite without devitalizing is not a common one—the vitality or the worthwhile part of the original must be preserved at whatever cost.

The following is a sample manuscript indicating the writing and the rewriting of a talk on Jane Addams, as made by Ruth Young White in a series on "When They Were Young." (For intermediate grades.)

JANE ADDAMS

One day about seventy years ago a little girl six years old (was permitted to go) with her father (while he transacted some) business (in a) city near (her home) town (of Cedarville, Illinois.) As they (drove) along in the buggy (behind the fine) chestnut horses. (She looked forward to visiting the city.) (It seemed too grand to her, a child born in) a country town. She (planned) to stop at the (shop where hundreds of toys were displayed.) She (was eager) to see again the bright (confectionery) shop and to pick out (her choices from the glittering array inside the glass counter.)

MEASURING THE BROADCASTER'S ABILITY

The "Criticism of the Production" which follows, was adopted by Effie Bathurst of Teacher's College, Columbia

University, from the Denver Course of Study for Language :

1. **The speaker's use of his voice**
 - (A) Tone
 - (a) Loud enough.
 - (b) Voice well pitched and flexible.
 - (c) Correct pause, accent, rhythm and inflection and emphasis.
 - (d) Slow enough.
 - (B) Enunciation—clear Pronunciation.
 - (a) Correct accent.
 - (b) Correct sound of letters.
2. **Choice of words by speaker**
 - (A) Employment of meaningful adjectives and avoidance of overworked ones.
 - (B) Use of live verbs.
 - (C) Use of words which convey exact meanings.
 - (D) Avoidance of needless repetitions.
 - (E) Avoidance of slang and foreign phrases.
3. **The speaker's sentence and paragraph structure**
 - (A) Use of complete sentences.
 - (B) Use of clear-cut sentences and avoidance of statements that are short and choppy, or long and involved.
 - (C) Variety in beginning of sentences.
 - (D) Elimination of unnecessary statements.
4. **The speaker's ability in practical discussion.**
 - (A) Speaker's narrowing of subject for discussion to a topic that can be dealt with in given time, choosing the phase of the subject and the facts that are best calculated to interest audience.
 - (B) The speaker's arrangement of material in clear, orderly, interesting form, avoiding useless sentences.
 - (C) Use of direct quotations in anecdotes.
 - (D) Speaker's giving credit for quotations.
 - (E) Speaker's inclusion of all necessary facts when

giving an announcement or message, an explanation or direction.

5. The speaker's use of anecdotes and stories.

- (A) Telling the story with events in logical order.
- (B) Feeling of story and making it personal.
- (C) Telling of story so as to arouse interest and sustain it to the end.

By the following microphone test used by Gwendolyn Jenkins of Ohio State University, it is relatively possible to check the degree of efficiency a speaker has attained.

**BROADCASTING STATION WEAO
THE OHIO STATE UNIVERSITY**

Judge's No..... Audition Test Speaker's No.....
Speaker's Name..... Address.....

To the Judge: Draw a circle around the term which applies to the speaker. Place the number of points allowed by that term in the column to the right. Add up the points to determine the total score.

		Points
1. Voice Quality	Rich—20
	Medium—10	
	Thin—5	
2. Rate of Speed	Correct—10
	Too Fast—5	
	Too Slow—5	
3. Inflection	Good—15
	Fair—10	
	Monotonous—5	
4. Breath Control	Adequate—10
	Too Much—5	
	Too Little—5	
5. Enunciation	Clear—15
	Indistinct—5	
	Over-emph'd—6	
6. Pronunciation	Excellent—15
	Average—10	
	Poor—4	
7. Emphasis	Good—15
	Fair—10	
	Poor—5	
		Total

Type of Voice (check)	Corrective Suggestions
Tenor	
Baritone	
Bass	
Soprano	
Contralto	

Acid Test is Total Effect. Some broadcasters doubt that breaking up of such words as personality, attractiveness, forcefulness, and so on, is practical. They would rather chance a sum total judgment than any addition of percentages which may result in a reversing of the sum total choice. The proponents of the plan point out, of course, that such a thing as forcefulness is measured by voice quality, tempo, variation of intensity, and various other features. Such tests may before long develop a much better body of fact upon which to base decisions.

OBTAINING COOPERATION OF THE CLASSROOM

Informing the Audience. For a moment we must consider a matter of primary interest to the classroom but also of great concern to the broadcaster because his programs will fail of fruitfulness unless he serves his audience. The broadcaster and the classroom must work together. It is of paramount importance that a perfect spirit of cooperation shall prevail. In many ways the teacher may be kept in touch with the plans of the broadcaster. Printed publicity, articles in the daily and weekly newspapers and articles in the professional educational publications, will probably be most effective. This is one phase of the whole project which requires a more adequate development than it has yet received. We must devise some method of keeping the audience even better informed concerning the scheduled broadcast.

Printers' Ink Necessary. Then, too, from the promotive standpoint, the press is important in increasing the know-

ledge and esteem of the public, especially those whose duties keep them from hearing the broadcasts. In order that classroom teachers, superintendents, and principals may accomodate the radio broadcasts as a definite part of their school curriculum and make of them a really successful addition to the regular schedule, it is necessary that advance information be furnished them. See accompanying advance schedule used by the Ohio School of the Air. The chapters on Classroom Use will consider the lesson leaflet in greater detail. Suffice it here to point out the nature of the data which it is mandatory that the broadcaster furnish in advance:

1. The date, hour and minute on which every item is to be broadcast.
2. The exact topic, the purpose and the lesson plan.
3. Detailed suggestions on the material to be presented. Thought-impelling questions may result in voluntary pupil activity, acceptance of projects,
 - a. On preparing for this particular broadcast, if needed.
 - b. On receiving the broadcast.
 - c. On the follow-up of the broadcast.
4. Photographs and biographical sketches of the teachers of the various subjects should be included.
5. The lesson leaflets should also contain as many illustrations as possible since the ear needs all the help the eye can give it.

At the time it begins listening, every school should have very definite instructions on the whole matter of how to listen. Such information, therefore, should be included in the regular lesson leaflets. See reprints in Chapters V and VI.

**THE OHIO SCHOOL OF THE
AIR COURIER**

*Devoted to the Cause of Radio Education
in Ohio.*

J. L. CLIFTON, Director

*B. H. DARROW, Director of the Ohio School
of the Air.*

C. M. KOON, Assistant Director.

Educational broadcasts over WLW every
school day, 2:00 to 3:00 P. M., eastern
standard time.

P-T-A FORUM

The first of a series of radio
broadcasts for parents and
teachers will be conducted
Wednesday, November 5 from
6:15 to 6:40 P. M. over WLW,
Cincinnati. The program is be-
ing arranged by Mrs. Hamilton
Shaffer and Mrs. Ethel Peters
Simon and will deal with prob-
lems and opportunities in child
training. Detailed information
will be sent on request.

Address—

Mrs. Ethel Peters Simon,
Extension Secretary, Ohio Congress of
Parents and Teachers, State Depart-
ment of Education, Columbus, Ohio.

SCHEDULE OF BROADCASTS

October 27 to December 19, 1930
2:00 to 3:00 P. M., Eastern Standard Time
Broadcast over Station WLW, Cincinnati

Monday, October 27—

2:00-2:30—Literature and English—Anne Campbell.

2:30-3:00—Our Government—"The Legislative Branch"—Car-
rington T. Marshall.

Tuesday, October 28—

2:00-2:20—Current Events—Harrison M. Sayre.

2:20-2:40—Citizenship—"A Discussion of the State and Demo-
cracy"—John Pontius.

2:40-3:00—Nature Study—"Galls"—Harry E. Eswine.

Wednesday, October 29—

2:00-2:20—Studies in Botany—"The Importance of Leaves"—
Arthur T. Evans.

2:20-2:40—History Dramalog—"The Settlement of Jamestown"—
Crosley Players.

2:40-3:00—Art Appreciation—"Belated Kid"—Wm. H. Vogel.

Thursday, October 30—

2:00-2:20—Geography—"From New York City to Philadelphia"—
W. R. McConnell.

2:20-2:40—Geography—"France and the French People"—W. R.
McConnell.

2:40-3:00—Stories—"A Hallowe'en Story," "The Cat Who Kept
Hallowe'en"—Bessie Gabbard.

Friday, October 31—

2:00-2:20—General Science—"The Golden Eagle Scout"—Hanor
A. Webb.

2:20-2:40—Health—"Pure Air"—Anna M. Drake.

2:40-3:00—Story Plays and Rhythmics—"Hallowe'en Frolics"—
Alma Ruhmschussel.

Such a schedule as the above is of the utmost importance.

REHEARSALS

How Much Rehearsing. For some radio teachers, rehearsals of the broadcast should be numerous. For others, repeated rehearsals tend to take the life and fire out of their messages, reducing them to stale memorization. So in the case of a magnetic, readily comprehensive individual, it is best not to insist upon too many rehearsals.

To Read or Not to Read. Shall the teacher read from a paper at the microphone? Some say, "He should, for only thus can the all-important timing of the broadcast be made possible." With the manuscript before him, the speaker is less likely, for instance, to over-emphasize certain points to the exclusion of others equally important. More assurance and ease, also a better choice of words and phrases is possible when the speaker has the manuscript before him. One needs a tremendous amount of self-possession to speak at one's best when absolutely unaided before the microphone—before those far-flung, unseen and unseeing thousands.

Danger. There are, however, deadly dangers in the reading of manuscripts. Very few people can read as convincingly as they speak. While their speech may lack fluency it usually possesses fidelity to their thinking and has a ring of sincerity that their reading utterly lacks. Of course, there should be no long waits, no hesitating and no stumbling but these are no worse than reading that drones along like the grinding of a coffee mill.

The Measure of Effective Reading. Perhaps the secret of good reading is found in **rethinking the thoughts and re-feeling the emotion** contained in the manuscript as one goes along. Some few people can do this so completely that the listener is intrigued, being in doubt as to whether the person is reading or speaking fluently and effectively out of fullness of mind and heart. Such a person has both finesse and fire. If one quality must be lacking, some listeners will prefer that it be the one and some the other. For example, it is claimed that eastern studios are more con-

cerned with form and purity of diction than are those of the west where naturalness and freedom are the goal.

A Helpful Suggestion. If familiarity with one's own script has not bred contempt, any rehearsing that brings more complete mastery should be beneficial. The danger comes in lapsing into the reading of words instead of the propulsion of ideas. One very helpful device is to look up from the manuscript quite often, re-phrasing the idea which the next lines contain. If this is done every time the reader senses that he may be assuming his "reading tone and manner" he may swing again into the freedom and joy and power of interesting conversation. Ideas, like objects, may become shop-worn and lose appeal, even to their owner.

Artificiality Fatal. As might be expected, a certain type of elocutionist with his artificial and affected methods, does not fare well at the microphone. His success with a seen audience is oftentimes due in part to visual support of gestures which cannot be broadcast, and his broadcast work sounds stilted and exaggerated. This is true also of the bellowing type of politician. It is difficult to prevail upon either of the above gentlemen to use conversational tones and to calmly and simply present their message.

Fitting Type to Talent. In general, then, it may be said that some discretion must be used and each speaker must be aided in learning which procedure is best for him. If the audience can be sure he is reading, then he is not entirely succeeding. He has obtained surety of expression and of timing at the expense of the conviction-bearing quality that goes with ideas and expressions freshly created in his mind. And here is the secret. **Good reading is re-thinking aloud.**

The Dress Rehearsal. The best place for the conducting of the "dress rehearsal" is in an actual schoolroom setting. The radio teacher can teach over the microphone in the principal's office. Listening teachers and classes can immediately check back with him on every detail, telling

him what ideas or words failed to get across, and wherein improvement may be made. **As yet but slightly tried, this type of rehearsal is one of the next great steps in the development of schools of the air.**

CO-OPERATIVE TEACHING



A President Broadcasts



A Superintendent at a control panel sends the President's voice to desired classrooms.

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CHAPTER IV

PRESENTATION OF EDUCATIONAL BROADCASTS

PREPARATION FOR THE BROADCAST

The Show Must Go On. The broadcasting of each program feature requires considerable checking on every detail. There are some worries which no amount of rehearsing can eliminate, chief among them being the question of whether the talent for the particular broadcast shall arrive at the studio on time. The program director can add immeasurably to his own peace of mind if he has emergency material ready to fill the gap, should the exigency arise. "The Manuscript in Advance" slogan finds a real and added justification in such emergencies. The possible necessity of last minute substitution is not to be overlooked when the program is dependent on some notable coming from a considerable distance. He is only too likely, on occasion, to underestimate the time required to reach the studio, and "The show must go on." To that old saying we may add a word, "Time, tide, and radio wait for no man."

Setting the Stage. Then there is the matter of stage setting. Frequently it is quite simple. However, in presenting history dramalogs the setting may be quite involved—a sound setting, we must bear in mind. Not only must there be the proper sound-effect instruments, but also someone who knows how to handle them properly. The timing is sometimes quite difficult.

Caution. In the case of history dramalogs, scripts must be kept in order so that no character will lose his place. Even though the characters may have virtually com-



HISTORIC SCENES

Broadcasting of Ohio Senate and House of Representatives—the first legislative bodies ever to be broadcast in the act of passing important measures.

mitted their parts to memory, it is quite essential to take this extra safeguard.

Early in the program it is important that the proper atmosphere for the broadcast be created. The American School of the Air begins and finishes with a theme number to fix the atmosphere. In the Ohio School of the Air this is achieved by the playing of "America the Beautiful," the children sometimes singing to the organ accompaniment. The announcer has a very important part to play in maintaining an excellent atmosphere throughout the broadcast. He must give an impression of sincere, business-like effort at all times, but an overtone of good-will and good humor should prevail. There may well be an occasional bit of jollity or easy comraderie in his incidental remarks. It is not necessary to add that he must be guided by the dictates of good taste in all his little sallies, not merely lest some hypersensitive souls should think his remarks out of place, but in order that the best use be made of the time on the air.

Music Is Important. Music is regularly scheduled between the features of the program in order to give classes, still listening in auditoriums or rooms other than their own classrooms, an opportunity to move about. Nor should this music be used merely as a filler. It can be used directly as a part of a music memory course.

A Visible Audience. Some speakers seem to do their best if they have an audience actually visible in the studio with them as they speak. Others claim they find no particular advantage in having any such audience. For them the microphone and their imagination is quite sufficient.

Smiling Voices. After only a few broadcasts, the majority of teachers "feel" an audience. From that moment, their true personality is released into their work. The listening pupils feel a greater intimacy than was heretofore noticeable. Take the "Smile Lady" of the Ohio School of the Air as an example. When Alma Ruhmschussel, of the Dayton, Ohio, public schools, stands before the microphone, with her voice she sends her smile into every waiting class-



HOME ECONOMICS



GENERAL CLASSROOM



CONTROL BY THE PRINCIPAL



SCIENCE



IN THE GYMNASIUM

A typical installation
 Jeffersonville, Ohio
 High School

—Courtesy A. Atwater Kent, Philadelphia, Pa.

room. As a result of that personality hundreds of little folks eagerly ask the classroom teacher again and again, "Teacher, does the Smile Lady come today?"

Cutting and Filling. Once in a while the announcer may need to speed up an inexperienced speaker. On the other hand, the matter which took eighteen minutes in rehearsal may require but sixteen minutes on the air. Those two minutes already scheduled will seem an eternity unless they be filled in by the announcer. His is the task of averting "that awful pause" in the broadcast. This he may do by putting questions to the speaker, preferably stressing points which might benefit from further explanation or emphasis. The listening children immediately sense the dramatic intensity of these miniature interviews and their interest is caught anew.

Special Announcements. The announcer is constantly needed, too, in order to keep the listeners informed of coming broadcasts, whetting the pupils' appetites for subsequent programs. Then, when the program comes along, the greatest factor in its success has already been secured—an interested, eager audience.

While it is impossible to portray in print either the radio personalities of the broadcasting teachers, the activities of the director or the soul-satisfying quality of the music, the material presented below will serve to represent the Ohio School of the Air at work. Only an electrical transcription or sound on film can adequately mirror a radio broadcast.

A SAMPLE DAYS BROADCAST

2:00 P. M. EASTERN STANDARD TIME

WLW Announcer: "This is the School of the Air, conducted by the Ohio State Department of Education. Our organist will play one stanza of "America, The Beautiful," during which we ask you all to rise and be ready to sing the first stanza." (The organ plays the first stanza).

WLW Announcer: "All ready! Sing!"

And then they sing, Ohio's school children in a chorus 200,000 strong, separated by the walls of the classrooms,

separated by miles of fertile fields and city streets yet gathered in unison, one voice, one force, one thought. At the close of the song the announcer continues.

WLW Announcer: "And now you will hear from Uncle Ben, the Radio Schoolmaster, who will speak to you from the studios of WEAO at Ohio State University."

Uncle Ben. "Good afternoon boys and girls of the School of the Air; Mr. Harrison M. Sayre, Editor of World News and Managing Editor of the American Education Press will present his regular weekly Current Events Lesson—Mr. Sayre!"

Mr. Sayre: "Good afternoon to every student of the School of the Air; to those who are listening in their homes, as well as to the increasing number of those who are taking part in our program in the classrooms. Are your maps ready? (Pause)."

"There are two topics that I should like to discuss with you this afternoon, if time permits. I hope that in some classes you have been preparing for this period by selecting the topics for me. Fairview School, Dayton, wrote me that the other day they had picked, in advance, all but one of the topics that we discussed in the Current Events period, one week not long ago. I hope that more schools will begin to adopt that practice. I want to ask all of you who can, to get pencils and paper, or if you prefer, have someone near the blackboard, ready with chalk. I shall have some questions shortly.

"The most important news of the past week—as you probably have guessed, centers on the London Naval Conference which is opening this week, and, in national affairs, the preliminary report of the President's Commission on Law Observance and Law Enforcement—commonly called the Wickersham report, from the name of its chairman.

"Tomorrow morning in London, King George V will open the long talked-of Five-Power Naval Conference. That alone indicates how important a conference this is, for this

is the first time that King George has appeared at a formal public function since his almost fatal illness early last year.

“The conference is being opened in the royal, or throne room of the House of Lords. Some of you saw the fine picture of that room in yesterday’s newspapers, or will see it in your current events paper this week. All of us are familiar with the appearance of the exterior of the building—the square-spired House of Parliament, standing beside the Thames River.

“But the conference itself is not to be held in that building. After the opening meeting, addressed by the King, the delegates are to hold their serious conferences in St. James’ Palace. As we all know, the official name of the British court is “The Court of St. James.” This name comes from the palace where the conference is being held. It was originally a hospital dedicated to St. James. Henry VIII remodeled it into a palace, and he and his successors, for more than 140 years made it their London home. King Charles II and King George IV were born there. King Charles I spent his last night there before he was beheaded.

“Buckingham Palace has been the London home of British Kings and Queens since 1837, but because the British court for so many years was held in a “court” in St. James’ Palace, the British court still clings to its old name.

“Now for ten questions, which are really simple background questions—we need them, to understand the setting for the conference. Have you your chalk, or your pencils ready? (Pause).

1. What powers are taking part in the present conference?
2. Who are the seven American Delegates?
3. When and where was the last successful naval conference held?
4. What powers took part in that conference; and for how long a period did the agreement stand, which was reached at that conference?
5. What class of vessels did that earlier treaty cover?
6. What ratio did the nations at that time accept?

7. What classes of war vessels are hoped to be included in the present conference?

8. What is meant by "parity;" between what nations is parity of fleets sought, at the present Conference.

9. What nations have declined to consider the abolition of the submarine?

10. How much does a first class battleship cost Uncle Sam?

(Answers were then given to the above questions, bringing out the relationship of the London Naval Conference to the earlier Washington Conference.)

"The Virginia, one of Uncle Sam's first-class modern battleships, completed in 1924, cost \$22,897,804. A modern 10,000 ton cruiser costs about \$1700 per ton, or almost as much as a battleship. The life of a war vessel of either class is estimated at twenty years. One of you, if you are clever with figures can compute that in terms of annual depreciation costs. Then add the cost of the upkeep of such a warship—about \$1,250,000 every year.

"But let us think of this conference in terms of dollars and cents that can perhaps be saved as a result of it, though that is no small sum. Let us rather think of it in terms of peace and good will on earth—the goal for which mankind has been striving for two thousand years. Of course, we are not going to have peace merely by sinking battleships. Not any more than you would have peace between boys who feel like fighting, by merely taking away their boxing gloves. That isn't it. But these five nations have already had, for ten years, a successful working agreement, whereby—with respect to battleships—they have abolished naval building competition. The London conference is to decide, first of all, whether that successful agreement shall be continued, and second, whether it shall be extended on some mutually agreeable terms, to other classes of war vessels. If not, we shall doubtless be compelled to build more, and bigger, and faster war vessels in a race that is as inclusive as is the race to see who shall have the tallest

building, (and a far more dangerous race, too, we must all agree).

“If we can agree at this conference which is being held this month, to put an end to competitive naval building programs, we shall have taken a long step toward proving that these five powers, and the smaller ones who may be inspired to follow their lead, really meant what they said last fall, in accepting the Kellogg Pact for the renunciation of war. Do they really mean that they intend to settle all disputes by peaceful means? If so, let them stop their building of more of the machinery of warfare than is absolutely needed for the policing and actual defense of their shores.

“I want to tell a story that I heard just the other day from Mr. George Young, who is a member of the advisory committee on foreign affairs, of the British Labor Party. On his way across the Atlantic, to this country, there was a mild-looking German on board, who kept close to his heels all the way across, because he found that Mr. Young, too, could converse in German. Mr. Young thought he looked like some clerk who had been accustomed to waiting on the ladies—perhaps a millinery salesman. But lo and behold, he found that this meek, mild-looking individual was by profession and training, a lion tamer. And as if that were not enough of a surprise, Mr. Young learned that the man was coming to America to give up training lions, and instead, to engage in raising fancy pigeons! Surely that ought to be a very symbolic story. The man realized that the world was wearying of seeing lions raised for the purpose of exhibiting them, whether tame or wild. There is a better market for the doves of peace. The world wants more of them.

“The world has had quite enough of the strutting of Russian Bears, of British Lions, or French Fighting Cocks, or Italian Wolves, or even Eagles, be they German, Austrian, or American. Let us keep this Noah’s Ark of pre-war animals in the separate compartments of the zoo where they belong. The world is getting too small for all those animals to be turned loose, unfettered and unrestrain-



VACHEL LINDSAY

The voice of this poet is gone forever. His readings should have been recorded so that they might be rebroadcast each year



EDMUND VANCE COOKE

The versatile teacher as well as poet and platform man. His teaching is worthy of admittance to any classroom.



PAT GILLICK

The organ and the organist can give a touch of color and beauty to the most isolated school. It affords to some boys and girls their only chance—since the homes are not yet equipped.



W. A. WALLS

Superintendent of the Kent, Ohio, schools so impressed his audience by an Armistice Day talk that more than a thousand schools and other groups requested copies of it.

ed. Those of us who saw what happened in the last international animal-fight must do our best to see that such animals are kept in their proper place.

“You and I will want to watch the conference that is being held this month with patience and understanding and sympathy. Each nation represented there has its own point of view, its own interest to look after, and a long history that makes it feel very strongly on certain points. France wants **security**, first and foremost. Your history will tell you why. Great Britain wants **control** of the sea lanes. And your history should show you why. The United States wants **freedom of the seas**, and not too much responsibility for interfering in the affairs of nations which, at least until recently, have been “far removed from our shores.” And history should show you the reasons why we hold **our** point of view. We shall not get anywhere by blinking at the facts, we must face them, and we should not be surprised, or impatient, if it takes time, and long, hard effort, to achieve a spirit of cooperation and agreement among the nations.

2:20 P. M.

Uncle Ben: “Thank you, Mr. Sayre! Boys and girls, you have been listening to Mr. Harrison M. Sayre presenting one of his regular weekly lessons in the Current Events series, which is intended for Junior and Senior High School students. And now while classes are changing we will call upon our organist.” (The organ plays for about two minutes).

Uncle Ben: “I wish to announce that the promised issue of the Courier is off the press. If you are not on our mailing list write us.” (Pause). “Dr. W. R. McConnell of Miami University will now present a geography lesson for fifth, sixth and seventh grade pupils. His subject is “The Rhine—River and Valley.” Dr. McConnell!”

2:24 P. M.

Dr. McConnell: “Good afternoon, boys and girls of the School of the Air. Today I am going to talk to you

about that interesting river, The Rhine, in Germany, and the country that surrounds it.

“With a map before you try to find the source of the Rhine River. Its source is in the high icy valleys of the Swiss Alps. One of the little streams that helps to form it flows from a glacier on Mt. St. Gothard only 20 miles from the source of the Rhone River. In its upper course it is a brawling mountain torrent. Madly it rushes down over falls and rapids through deep and narrow Alpine gorges, until it enters Lake Constance. Find this lake on the border of three countries—Switzerland, Germany, Austria. (Pause). The Rhine carries large quantities of silt-mud and sand into Lake Constance, but it drops this load of material in the lake and flows from it a clear, bright stream.

“After leaving Lake Constance the Rhine flows westward as a rather placid stream until it comes to a ledge of hard rocks at Schaffhausen where it tumbles down 70 feet and makes one of the famous waterfalls of Europe.

“From Schaffhausen the river flows rather quietly westward to Basel. On this part of its journey it receives the waters of a rather large tributary from Switzerland, and the Aar River. Find this river on your map. (Pause). The Aar brings to the Rhine more glacial water from the Alps.

“At Basel the Rhine turns suddenly northward and flows through a broad valley about 20 miles in width lying between the Black Forest on the east and the Vosges mountains on the west. This valley because of its fertile soil has often been called the “Garden of the Rhine.” Crops of wheat, corn and tobacco are grown in the fields, vineyards cover the lower slopes of the hills and cattle graze on the meadows that lie near the river.

“In this part of the river are to be seen great rafts of timber formed from trees that grow in the forests of the nearby highland. Remember we are thinking about that part of the Rhine which flows between the Black Forest and the Vosges mountains. The Black Forest is really a mountain district whose slopes are covered with heavy black forests—thick dark masses of pine. It is a land of

wild scenery, with winding streams, small lakes and quaint old towns among the forests. The chief product of the region is timber which is made into rafts and floated down the Rhine, often as far as the Netherlands. The woodlands of the Black Forest are carefully tended. As the trees are removed, young trees are planted. The trees that are planted by one generation are cared for by the next and sawed into lumber.

“The Vosges mountains also furnish lumber which is sawed by water-driven sawmills in that land of swift streams.

“Find the City of Mainz on your map. (Pause). This city is at the north end of the broad valley through which the Rhine flows from Basel. Ages ago this part of the valley was the bed of a lake which reached from where Basel now stands to a place near the present site of the city of Mainz. This helps to explain the fertility of the soil of that part of the valley.

“Below Mainz is the town of Bingen. Find it on your map. (Pause). At Bingen the Rhine enters a narrow winding gorge through which it flows for about sixty miles. This gorge through a plateau and mountain district makes the scenic region of the middle Rhine. It is the part that is so famous for its scenery and its old castles around which are woven many legends. In some places the slopes are terraced for vines; in other places they are forested.

“Bingen is a quaint old town in the midst of an important grape-growing and wine-producing district. Just below Bingen is one of the most imposing scenes along the Rhine where the river sweeps in a great bend around the shoulder of a mountain.

“From Bingen to the city of Cologne, the channel of the Rhine is narrow and the current is swift. Everywhere one can see ancient castles where some baron of long ago lived. As one goes down the river from Bingen one of the very finest of these castles that one comes to is the “Mouse Tower” standing on a rock which forms an island in the middle of the Rhine. This tower was built for collecting

toll from those traveling up and down the stream. It was first called "Toll-house" but the people changed the name to "Mouse Tower."

"There is an old story which says the Bishop Hatto of the city of Mainz had a barn on this island that was filled with corn. There came a famine in this part of the Rhine valley and the people were suffering and starving to death. The poor people came to Bishop Hatto and begged for some grain. He told them to go to the barn and help themselves. Then he set fire to the barn. He said the people in it were like mice eating up the corn. All those poor people who came to him for help were burned to death. Soon afterward, the legend says, hordes of mice came out of the ruins of the barn and devoured the bishop in spite of all that he could do.

"There are many other old castles between Bingen and Cologne. Many of these castles which are now crumbling into ruin were robber castles. They were occupied by princes who lived along the Rhine and plundered the people who travelled by way of the river.

"Find the city of Cologne on your map. (Pause). It is the largest city on the Rhine River. If you will now trace a land route from the City of Paris to Berlin you will see that this route passes near Cologne. It was natural that a big city should grow up where the important land route that connects these cities crosses the great waterway of the Rhine. Cologne is a very old city. It was founded by the Romans in the first century.

"We may think of Cologne as a port, for large ocean steamers reach it. We may think of it also as a manufacturing city for it is near a coal field, and has some iron ore near by.

"The coal field which I said was near Cologne is in the valley of the Ruhr River. Find this river. (Pause). You will notice that it is a small stream that flows into the Rhine below Dusseldorf. Find the City of Essen in the Ruhr Valley. It is the great iron and steel city of Germany corresponding to Pittsburgh in the United States. Essen

was once famous for the manufacture of the huge Krupp guns; now it makes steel rails, bridges, engines, and farm implements.

“But to return to Cologne for a moment, that city has a cathedral that is one of the finest in the world. In this cathedral is a famous chamber called the Chapel of the Three Kings. We are told that here for a time were buried the bones of the Three Wise Men of the East who followed the star to Bethlehem and offered gifts to the infant Jesus.

“The city of Cologne and the city of Crefield are also noted for silk manufacture. This is partly due to the fact that the water in the Ruhr River is suitable for dyeing and bleaching. Find Crefield on your map. (Pause).

“After leaving the busy manufacturing region in and near the Ruhr River valley, the Rhine flows through the lowland of western Germany and soon slips across the border into the Netherlands, where it flows through the land of the Dutch dairy farmer. The Rhine has built a large delta at its mouth out of the sediment that it has gathered from the land it drains. It is said that Napoleon once claimed the country of Holland because most of it was the delta of the Rhine which had been built out of the sediment carried from Switzerland and Napoleon controlled Switzerland at that time.

“The valley of the Rhine River from its source in the Alps to its mouth in Holland has witnessed many of the most important events in the history of Europe. Julius Caesar built a bridge across the Rhine and fought against the Germans. In Switzerland around the source of the Rhine there were frequent struggles waged for the independence of the Swiss. In the lands around the mouth of the Rhine the Dutch people fought a great war for their independence against the Spaniards. The central part of the Rhine has long been in dispute between Germany and France.

“At the city of Worms on the Middle Rhine, Martin Luther met with Charles V for a conference at the out-

break of the Reformation. At Mainz on the Rhine is a monument to Gutenberg, the inventor of printing.

“The two greatest literary men that Germany ever produced, Goethe and Schiller, were born in the Rhine valley. Goethe was born at Frankfort and Schiller near Mannheim. Many of the writings of these men deal with events connected with the Rhine valley.”

2:40 P. M.

Uncle Ben: “Thank you, Dr. McConnell. Boys and girls, you have been listening to Dr. W. R. McConnell, our geography teacher. Again, while classes are shifting, we will ask our organist to play.” (Organ plays for about two minutes).

Uncle Ben: “Listen, I hear the Pied Piper.” (Piper is heard, at first faintly, then more loudly as though approaching the audience. Piping stops.)

Mr. Harry Eswine: “Good afternoon, boys and girls! Here we are out at Old Aunt Mary’s on our once-a-week visit to learn something new and instructive about the out-of-doors. The subject for today is “The Flowers of the Corn Plant.” This will mean so much more to us for we are going to study something about corn with plenty of corn plants around us, as we are going right out into the corn field.

“I trust that every class has followed the suggestion I made in the *Courier* and brought to the classroom two corn plants—one with the anthers still in place on the spikes of the tassel and the other with the silks well out of the end of the ear but still green. Did you use your magnifying glass? (Pause). Did you make drawings on the blackboard? (Pause). I hope so, for you will be able to see more interesting things on this trip. Let’s go!

“There are some plants around us that are much more fully developed than others so we must choose the ones that will best suit our purpose. Here are two. This one is just beginning to shed its pollen and right over there is a stalk where the silks are well out beyond the end of the ear but are still green and tender. When I mention the

flowers of the corn plant I can almost hear some of you say under your breath, "Does the corn plant have flowers?" (Pause). Yes indeed it does, and a great many of them too. They are not large and highly colored flowers like those of the tulip or the rose, for example, but they are real flowers just the same. Did you ever think that the large and highly colored parts of flowers are not the most important parts of them? The really essential parts of flowers are generally rather small and not highly colored. These parts are called stamens and pistils. It is the work of the stamens to grow the pollen while the pistils are the part of the plant that produce the seed. Now let us try to find out just where these are located in the corn plant. Here is a corn tassel that is just beginning to shed its pollen. Notice that when I shake this tassel, a shower of fine yellow dust falls out and is carried away by the wind. (Pause). That fine yellow dust is called "pollen." You see that corn grows its stamens in the tassel.

"Let us now examine the silk on the ear that grows on another stalk. Notice that there are a great number of these silks. There are always at least as many silks on an ear as there are grains of corn, for each grain of corn must have its own thread of silk. When I strip off the husk on this ear you can see how a thread of silk runs down to the start of each grain. (Teacher or pupil in each classroom, in the meantime, strips off husks.) I think it is plain to you that the silk is a portion of that part of the flower that produces the seed, that is, it is a part of the pistil. It must be evident to you that the corn plant has flowers, since we found the parts that grow pollen and the parts that produce seed. In other words we have located the stamens and the pistils.

"We are now ready to study our corn flowers more in detail. I will take this ear of corn whose silks are just beginning to grow out beyond the end of the ear and carefully remove the husks. (In each classroom, the action is carried out.) Note how those threads of silk all remain attached to the cob. There are three things about the threads of silk that are important. (1) The threads of silk

are covered with a sticky substance. When I grasp a handful of the silks I can notice that stickiness. (2) There are tiny thread-like branches growing along on these threads of silk. If you will look closely you can see these with the naked eye. You can also observe that the silk is split at the free end. (3) The silks have a soft or pithy center. You may ask, "What part of the pistil is the silk?" It is the style of the pistil. (Pause). The silks are each attached to what looks much like watery blisters. These are the beginnings of the seeds. They are called ovules. An ovule means a plant egg. The ovule together with the silk makes the pistil.

"Now let's examine a tassel more closely. Take this one that is just beginning to shed its pollen. (Pause). Notice a rather large central part that is really a continuation of the stalk. Then there are branches coming out from this. These are called spikes—the large one being called the central spike and the branches the lateral or side spikes. Observe that hanging down from these spikes are tiny little objects not larger than a small grain of rice. If you look closely you will see that they are double-like affairs, each hanging from the end of little threads. These little objects are called anthers. They are hollow. Let us think of them as little rooms. At the lower end of each are openings.

"If we could make ourselves small enough to enter these little rooms, we would behold a wonderful sight. Hanging all over the walls of these little rooms are countless numbers of tiny golden balls—grains of pollen, if you please. As soon as these grains of pollen ripen, they loosen their hold on the walls and fall out through the tiny opening. They are now outside and are carried away by the moving air. Pollen grains are produced in almost countless numbers. A single tassel produces anywhere from ten to twenty million grains of pollen. (Pause).

"Presently some of these pollen grains come to rest on the silk of some ear of corn. The sticky surface holds them there. When they become attached to this moist, sticky surface they start to grow. One may almost think of them as little seeds. Each pollen grain sends out a little growth

called a pollen tube. The growth follows down through the pithy center of the silk until it reaches the ovule. When this has been accomplished we say that the ovule has been fertilized. That means that it has the power to grow. It now goes on and develops a seed or what we call a grain of corn. But our time is up. We must hurry. Next week we will visit the homes of some members of the largest family in all the world. What? (Pause). Yes, ants! Goodbye, boys and girls, goodbye!" (The Pied Piper is then heard piping as he leaves—at first loudly, then faintly and finally fading out).

Uncle Ben: "The Pied Piper will be with us again one week from today and will take us on a trip to see some wonderful ant hills. Remember to send in your lesson reports. Tomorrow—history dramalogs, art appreciation and literature by living writers." (Organ begins playing "America, the Beautiful") softly. "This concludes today's session of the Ohio School of the Air which is conducted by the Ohio Department of Education and comes to you each school day from two to three o'clock over this station. Our Organist will now affix our signature." (Organ plays closing measures of "America, the Beautiful.")

SAMPLES FROM BROADCASTS

The following play, written by a member of the staff of the Ohio State Department of Education, was enthusiastically received by teachers and pupils. To include it in this volume—in cold type—is to rob it of voice, sound and action. While, in general, dramalogs designed for school use must stress factual content and tone down the extremeness of emotion which is permitted in other radio dramalogs yet this script has gripping power. There are fewer sound effects used than in many dramalogs, but the interplay of voices, the shifting of speed, volume and tone of speech is vastly more effective than the result achieved by a single voice "ironing flat" the same words and phrases. The result is a quickening of emotion and an increased receptivity.

LINCOLN

By L. W. Reese

Editor of the High School Teacher

Scene I.

THE STUDENT

Announcer: A. Lincoln, as he was in the habit of signing his name, is perhaps the best known of all great figures in American History. He is also perhaps the best loved. His life actions are dramatic. His words are simple Anglo-Saxon, yet full of fire and prophecy. Lincoln's boyhood, and, in fact most of his life, was spent in a backwood settlement where "book-learning" and colleges were more or less frowned on, unless the possessor of "book-learning" was a man's man. Lincoln combined both for not only was he a mental but a physical giant. The first sketch shows young Lincoln seated in the shade of a huge tree. Around him are his friends.

John: Come on, Abe, let's go huntin'. I know where there are some wild turkeys jest waitin' to be shot.

Abe: No, John, I have to finish reading this book.

John: Let the book wait. You can read it tonight.

Abe: No, I have to read it while I have daylight, for my father thinks it is too warm to have a fire in the fireplace during the summer time, and we cannot afford candles. Besides, my father is not very much in favor of my reading or "moonin' around" as he calls it. He said he never did have much use for a man who could read and write, for they never come to a good end.

Jim: Say, Abe, we-uns know where there is a place in the crick where the fish are jest dyin' to be ketched. How 'bout it Abe?

Abe: Thanks, Jim, but I am afraid I can't. I have to read this book today, for I promised the judge that I would return it tomorrow. I walked ten miles to get this book, and I am going to read it through and through until I understand all of it. There are parts in this book that I just can't seem to understand, but I must understand them.

John: Aw, what difference does it make whether you understand it or not?

Abe: Well, it seems that I just have to understand what I read and what I hear the old judge and the circuit preacher say. I can't sleep until I have put into my own words what I read and hear.

John: You are wastin' your time. What's the matter, Abe? Do you think you are goin' to wear a plug hat some day and be the President of the United States?

Abe: No, I guess there isn't much chance of my ever being President of the United States, but if I ever did, I shouldn't be the first backwoods boy who did.

Jim: Ho! Ho! Ho! That's good! Abe here thinks he may be President of the United States. Hello, Mr. President! How do you like Washington? That's the place where the president lives, ain't it Abe?

Abe: Yes, that's the city where the president lives, Jim. Howdy, Mary Ann!

Mary Ann: Say Abe, are you all going to the social down in Possum Hollow Saturday night? If you are, I know of some girl that would be glad to go with you. I suppose you know who?

Abe: Mary Ann, I surely would like to go to that party, and I don't know of any girl I would like to take there better than you, but the judge told me that he was going to be home Saturday night, and if I wanted to come to his house, he would explain some of the parts of the federal constitution that I don't understand.

Mary Ann: Well, Abe I guess if you don't want to go, John or Jim will be more than glad to take me. Goodbye!

John Well, Abe, I am glad now that you like to read, for I was afeared that Mary Ann would go with you.

Abe: Thanks, John. I guess I should say thanks. I wish you luck, for Mary Ann is surely a fine girl.

John: We will miss you all right, for the last time you could lift the most and throw the best rasler from Sugar Crick.

Jim: Say, Abe, I have been watchin' you today readin' that book. You been readin' it so hard that you never went to dinner. All you have done is jest move around that tree, about one step ahead of the sun. What ails you anyway, Abe? What are you doin' all this readin' and studyin' for anyway? You are missin' so many good times. I can't see much use in it anyway. My Pap said he knowed

a man once who studied so hard that he got sick or died or went crazy or somethin'. What's the use in it anyway?

Abe: I can't explain it. But I feel that I must study and get ready and maybe some day, who knows, my chance will come.

Music.

Scene II.

Announcer: Next we see young Lincoln and his friend, Hank, walking through the streets of New Orleans, the rich commercial mart of the South. They have just sold the cargo that they floated down the Mississippi River. They are full of eyes and ears, for they are young and from the backwoods.

(Sounds of horses trotting by and of boys walking.)

Hank: This is sure some town, ain't it, Abe?

(Sounds of cart and buggy wheels.)

Abe: Yes, Hank, it is not only a great city, but it is growing. It has been a long time since Andy Jackson fought here. I plan to visit the battle site before we leave.

Hank: Did you see that rig with two horses hitched to it just go by? Them people down here sure put on the style.

Abe: It's a rich market town. There are many French people here who came before Jefferson purchased Louisiana.

Hank: Say, Abe, what does this read on this paper that's tacked up in front of the post-office? It has a picture of a colored fellow running.

Abe: Hank, that's a notice telling about a slave who has run away from his master. There is a reward of \$200 for anyone who catches him and notifies his master.

Hank: Say, Abe, wouldn't it be great if we could capture this here slave and git the \$200?

Abe: Hank, I don't think that I should try to capture this slave even if I saw him, and I know that I would not take the reward, for I just can't understand all this slavery proposition. It is a big problem, and is bound to cause great trouble some day in the United States.

Hank: Look, Abe, there's another notice tacked up by the side of the one about the slave running away.

Abe: Yes, that's a notice of a sale of twenty slaves—men, women and children— and other property belonging to the estate of a planter who died recently.

Hank: When are they selling them thar slaves?

Abe: Today! Hank.

Hank: Say, Abe, let's find where they are selling them. Wouldn't it be great to see them selling slaves? I always did like to go to auctions.

Abe: I don't think I should want to see a sale where women and men were sold like cattle.

Hank: Don't seem just right, do it, Abe?

Abe: No, it doesn't, Hank.

Hank: Look, Abe, there comes some colored people all tied together. Golly, I bet they are going to have the sale right near here. Let's follow them.

Abe: No, I don't want to.

Hank: Aw, Abe, let's follow and see where they are taking them slaves. Come on.

(Sounds of slaves singing as they tramp along.)

Hank: Right here is where they're going to sell them. Right here on this platform.

Auctioneer: Now gentlemen, we are going to sell the slaves and other possessions of the late Mr. Kortier. What do I hear for this black man? He's just twenty years old, sound of wind and limb. He can work fifteen hours in the cotton field and be good for next day. What do I hear? What am I bid? Run back and forth there.

Bidder: \$500.

Auctioneer: \$500 I am bid, who bids 600? Do I hear 600? 600 I have, now 700, etc., (run up to 1000).

Auctioneer: I am bid \$1000. Are you all done? All done, All done. Going! Going! Gone! Sold to Colonel Jennings of Jackhurst, Mississippi, for \$1,000.

Auctioneer: Here I have a mulatto girl, just sixteen. She is pretty as a picture. What do I hear? \$1000!

1000 I have (go up to 1500). \$1500 I am bid! Are you all done, all done, all done! Sold for \$1500.

Auctioneer: Here we have Sammy aged six. Look at his father and mother over there and you will get some idea just how Sammy will look when he gets of age. Turn a somersault, Sammy. Am I bid \$300 for Sammy?

(Sobs and cries of the slaves.)

Abe: Hank, let's go. I can't stand it any longer.

Hank: All right, Abe, I feel like you do.

Abe: Hank, I don't like this slavery business. Husbands taken from their wives and children from their parents. If slavery is not wrong—nothing is wrong. If I ever get a chance at this thing, I'll hit it hard.

Music.

Scene III

THE PARDON

Announcer: Ralph Waldo Emerson once said of Mr. Lincoln that, "his heart was as great as the world, but there was no room in it to hold the memory of a wrong." He was kind always to women and children. When he visited the army hospitals, he was just as kind to the Confederate men as he was to the Union men. He never failed to listen to the pleas of the mothers who had sons in the war. One time he pardoned a youth who had slept at his post of duty. The boy's mother was deeply grateful. She is speaking.

Mrs. Jones: I don't know how I can thank you, Mr. Lincoln, for pardoning my son, Jimmy.

Lincoln: That's all right. Just tell that young son of yours that the United States will expect great things from him.

Mrs. Jones: I know that Jimmy will do great things for the Union. He would never have slept on guard duty, but he had been on duty for thirty-six hours, and when his tent mate became ill, without a thought Jimmy volunteered to do his chum's guard duty. Then he went to sleep. Oh, what will the neighbors think of Jimmy. (sob, sob).

Lincoln: There, there, Mrs. Jones, don't feel badly. You have a fine son, and he will never sleep on duty again. We are fighting this war with young men, most of them in or just past their teens. We can't expect them always to have old heads on their shoulders. O, how this war makes us all suffer! Not only those in the field but the mothers

and fathers who are home. O, that the Union could have been saved without this bloodshed! But despite the cost, Mrs. Jones, we must keep the Union together. We must have faith that right makes might, and in that faith let us dare to do our duty as we understand it.

Mrs. Jones: You are right, Mr. Lincoln. I shall go back to my home strengthened and encouraged. I can't see how you can carry all this burden for it seems too much for one man's shoulders.

Lincoln: You are right, Mrs. Jones. It is too great a burden for one man to bear, but the burden is lightened by the sublime thought that my courage is being sustained by Divine Help, and that my way is guided by the Great Guide. His hand is forever on my shoulder, lifting me when I grow faint with weariness and sorrow.

Mrs. Jones: Mr. Lincoln, I feel that before I bid you goodbye, I should tell you what Mr. Stanton said when I showed him your letter asking for the pardon of my boy.

Lincoln: Now, Mrs. Jones, if Mr. Stanton, my Secretary of War said something about me that you thought was not fit and proper, it does not worry me, for I know that Mr. Stanton is under a great and grave responsibility—the winning of the war. So you don't have to tell me.

Mrs. Jones: But I must tell you, Mr. Lincoln, much as I hate to, for he said something that no one should say about you, the President of the United States. Why, Mr. Lincoln, when I showed him your letter requesting him to pardon my Jimmy, he looked at the letter and handed it back to me just as mad as he could be and shouted, "Lincoln is a big fool!" I was so shocked and mad that I talked right back to him.

Lincoln: It certainly would have been interesting to have heard you talk back to Stanton. Now, Mrs. Jones, are you sure that Mr. Stanton called me a big fool?

Mrs. Jones: Of course I am sure.

Lincoln: Well, well, do you know that that statement of Stanton's that I am a big fool worries me—for if you are well acquainted with Mr. Stanton you know that he is

never very far wrong. If brother Stanton says I am a big fool, he may be right. Now, Mrs. Jones, just forget that remark of Mr. Stanton. His position is one of the most difficult in the world. The pressure on him is immeasurable and unending. He performs his real task superhumanly. He fights back the angry waters and prevents them from undermining and overwhelming the land. Sometimes I don't see how he survives. He is torn with a thousand worries and trials, Mrs. Jones, that you know nothing about, and that I can but dimly see. We cannot in all fairness be too hard on him, because Stanton's guiding principal is to save the Union. As for me, I am afraid that I am a softhearted old fool, and, if I were in Stanton's place as Secretary of War, there would be no rules upon which the army or country could depend.

Music.

GETTYSBURG ADDRESS

Announcer: Among the sheltering hills of southern Pennsylvania, close to the Maryland border is the little town of Gettysburg. This town was made famous for all time, for it was the scene of the decisive battle of the Civil War. There in three hot days in July, 1863, nearly two hundred thousand men fiercely fought. On the Fourth day of July, the North was the victor. Thousands upon thousands had been killed. Here were buried many who gave their lives in this memorable conflict. This battlefield was dedicated forever by the men who fought here and by Lincoln and Edward Everett, who spoke here.

On November 19, 1863, this battlefield was "Consecrated by appropriate ceremonies" by Edward Everett and President Lincoln. Two boys, Garber and Morrow, arrived at the grounds early. They took seats on the front of the platform and remained there until the dignitaries arrived. They were asked to slide down, which they did, and then they stood on the ground, leaning up against the front of the platform. They saw and heard everything that went on as only boys can.

SOUNDS OF CROWD

Garber: That was a great speech Mr. Everett made. My! But I wish I could say the fine things he said and say them the way he did.

Morrow: It's no wonder the people applauded so long. He is a great man, too, been a professor at Harvard, and is minister to England.

Garber: Isn't he a fine looking man? Hasn't he a fine build and strong, clear voice? ?

Morrow: I wonder if the President will speak as well?

Garber: I don't know. I can't see how he can beat Mr. Everett.

Morrow: Isn't Lincoln a tall man, though? He's so tall that he looks awkward.

Garber: Doesn't his face look sad? It looks just like he is carrying all the sorrows of all the people who are suffering due to this war. His face is full of deep furrows. His eyes look as if they were full of tears.

Morrow: Now the music has stopped. The chairman is going to introduce Mr. Lincoln.

Chairman: Ladies and Gentlemen, Citizens of the United States, I have the deep honor to introduce our President, Mr. Lincoln, who will formally set apart these grounds with a few appropriate remarks.

Mr. Lincoln: Four score and seven years ago, our fathers brought forth on this continent a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal. Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this. But, in a larger sense, we cannot dedicate, we cannot consecrate, we cannot hallow this ground. The brave men, living and dead, who struggled here, have consecrated it far above our poor power to add or detract. The world will little note, nor long remember, what we say here, but it can never forget what they did here. It is for us, the living, rather to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and

that government of the people, by the people, for the people shall not perish from the earth.

Everett: Allow me, Mr. Lincoln, to congratulate you on those noble sentiments.

Lincoln: Dear me, Mr. Everett, I am sorry that I could say so little. I had only twenty lines.

Everett: Yes, Mr. Lincoln, but there was more in those twenty lines than in my twenty pages.

Lincoln: No, Mr. Everett, we shall not try to talk about my address. I failed! I failed! And that is about all that can be said about it.

Everett: No, Mr. Lincoln, you did not fail. My speech was to the ear and brought applause. Your speech was to the heart and brought tears. Your speech was full of eloquent simplicity and appropriateness at the consecration of the cemetery. I should be glad if I could flatter myself that I came as near the central idea of the occasion in two hours as you did in two minutes.

Lincoln: I hope you are right. It pleases me deeply that in your judgment the little I did say was not a failure.

Everett: Your brief address, Mr. Lincoln, will live as long as the English language is spoken. It will live until tongues become dumb and ears refuse to listen.

Music.

Ann: Lincoln carried on. He saw that this nation did not perish from the earth, although his own days were but few. Barely had the news that the war was over reached all the states before Lincoln was shot in his own Washington. Not in Richmond where he had been just a few days before but in his home city. When the news was flashed that Lincoln had died a martyr's death, a heavy gloom settled not alone on the North, but on the South, for all now realized that he held malice towards none and charity for all. Stanton, his sometimes stormy but efficient war secretary, with tears streaming down his cheeks, his chin resting on his breast, said of Lincoln with all the sincerity of one who has lost a great and dear friend those memorable words that have echoed and will continue to echo throughout the years, "Now, he belongs to the ages."

The spirit of Lincoln lives on; he, who had the wisdom of a sage; he, who had the vision of a seer; he, who had the fixity of a saint; he, who had the tender compassion of a mother; he has not gone from these United States. His idealism is holding a challenge aloft to the youth of America, to so carry on that this nation shall never perish, and that those who have died in times of war and in times of peace for the sake of this great ideal, shall not have lived and died in vain.

A REPORT ON RADIO ARITHMETIC LESSONS

By IDA M. BAKER, *Broadcasting Teacher, Cleveland, Ohio.*

Radio lessons in arithmetic are planned to furnish the curriculum in arithmetic for a given grade. By controlling the amount and quality of the learning material and by directing the method of learning this content, builders of radio lessons aim to produce better thinkers and better computers than are now produced by regular classroom instruction. To reach this goal, particular attention is paid to the tasks the child is asked to do and the things about which he is asked to think. Radio lesson sheets and drill sheets furnish tasks for the child to perform; radio talks tell him what to do and think as he performs these tasks, and stimulate him to carry on activities in school and outside of school.

Reports from the research department point out that children in radio classes can compute and can reason to better advantage than can children of like ability not using the radio.

Teachers of radio classes report that the lessons help them to teach arithmetic more scientifically and more skillfully. They also report that children in radio classes compute and think better for these reasons; the goal in each lesson is so clearly defined that both child and teacher are conscious of disabilities at the end of the teaching period; children in radio classes are easily grouped and drill sheets take care of individual differences; the teaching material as well as the drill material are most carefully planned; vocabulary is built up in suggested activities, in directions associated with the process, and in problems; children develop power to listen, to concentrate, to compete with their own records, and are interested in their own progress; the variety of examples and problems holds the interest of the children.

Builders of the radio lessons believe that the success of the radio experiment is due partly to the enthusiasm and cooperation of teachers of radio classes, children in radio classes, and parents of these children. Teachers receive training in methods of presenting the content of arith-

metic and in diagnosing pupil difficulties. Children receive training in concentration and in determining examples and problems that cause difficulty and in selecting drill material to remedy their weaknesses. Parents can talk intelligently to the radio child about his arithmetic work, for they can familiarize themselves not only with the learning material but also with the modern ways of presenting this learning material.

Results of radio teaching are very encouraging. Lessons are now being broadcast to children in Grades 2A, 3B, 3A, and 4B.

THE HEALTH LESSON BY RADIO

By DR. EDGAR DALE, *Ohio State University*

Anecdotes of concrete nature, when apropos, are especially valuable in driving home a point. For example, in a health lecture given over the Ohio School of the Air on November 13, 1931, one of the aims was to impress upon the child the need for the practice of health habits. The following simple yet forceful story was told to illustrate this point:

"A year ago when I was at the circus I saw a very interesting and difficult acrobatic stunt. Two men were swinging in their trapezes high in the air. As their trapezes came together, one man caught the other man by his hands and let his own trapeze swing back without him. As the trapeze came back toward them, the man who was hanging by his knees and holding the other man, swung him high into the air and then let go of him. The man who had been thrown high into the air then turned three somersaults and caught his trapeze as it came toward him.

"The trick looked very easy, but anyone could see that this habit must have been learned with a great deal of practice, and that this man must have taken a good many falls before he learned to somersault in the air and catch his trapeze as it swung up to him. And then one day I read a story about this same acrobat and found out the number of times he had fallen into the net before he learned to do the trick. Tell your teacher now the number

of times you think he fell. (Pause) He had fallen into the net 2,000 times in learning this trick. And you must remember that falls into a net are not only likely to be painful, but are also dangerous. That's quite a price to pay for a habit, isn't it, but it does show that if you want to do a thing hard enough and if you practice it long enough, you are very likely to learn how to do it."

The fourth sentence from the last in this paragraph also illustrates another important principal in radio talks; namely, that of giving the child an opportunity to react to the statements of the speaker.

This same principle of pupil participation is better illustrated by the following problems, which were put to the children near the close of this same talk. The introduction to this activity and a few of the problems follow:

"I want to see now whether you are able to use the rules which I gave you for forming good habits. So I'm going to tell you about some boys and girls who were trying to form good habits but who didn't always follow the right rules. I wonder if you can figure out just which rules they didn't follow. If you have a pencil handy, just write down your answers and then talk them over with the class when the broadcast is over.

1. Ann used to wait until nine o'clock at night before she started to do her home work. By the time she had finished studying, it was very late, and she was always cross and sleepy the next morning. So Ann decided to start doing her home work right after supper. Her sister said, "Oh, Ann, you'll never do it." Ann then answered, "Maybe you're right."

Has Ann followed the right rules for forming good habits? If not, which rule hasn't she followed?

(Pause)

2. Harry wants to learn how to play tennis. The school doctor has said that it is a fine game for a boy's health. Harry is supposed to play tennis three times a week in order to learn the game. But Harry goes out only when he feels like it and says that he will probably

learn to play as well as the others, who go out three times a week.

Has Harry followed the right rules for forming good habits? If not, which rule hasn't he followed?

(Pause)

3. Here's the last one. On Monday Jean decided that she would try to brush her teeth twice a day, every day in the week. She forgot to start on Monday night so she said, "Oh, I'll just put it off until next Monday and start out right next week."

Has Jean followed the right rules for forming good habits? If not, which rule hasn't she followed?

(Pause)

THE FOLLOW-UP

The Broadcasters Technique. Chapter VI will deal at length with the matter of the follow-up, in its reference to the teacher and the pupils. Suffice it here to make a few passing remarks only, and these from the standpoint of the broadcaster. The broadcaster sometimes uses reviews, lists of additional questions and suggestions, true and false tests on the air. These he also sends to all inquirers, along with certain materials mentioned during the broadcast of the lesson.

The Log-Book. It is advisable to keep a complete log recording as nearly as possible everything said on each program. Occasionally the content of a certain program will be in such wide demand that it will be advisable to have it run off in mimeographed or printed form for mailing to those who request it. Many added benefits are also attained by the use of interesting stories from the field. Their use on the air and in the lesson leaflets may well be complemented by use in newspapers and magazines. This is especially true of the incidents which help to arouse the ambition of the listening pupil.

Room for Betterment. Much improvement in listening and in fixing the benefits is possible. Some of the avenues will be presented in the chapters on Classroom Use.

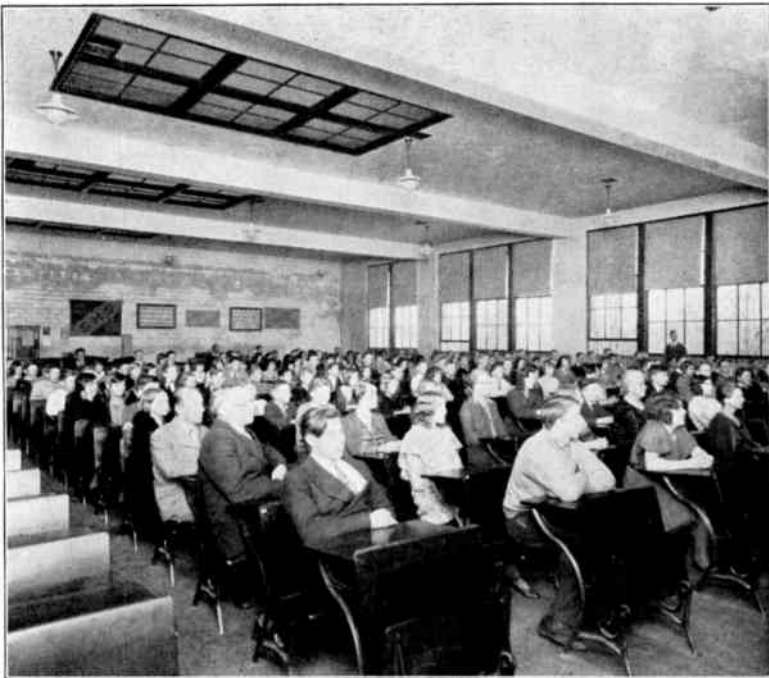
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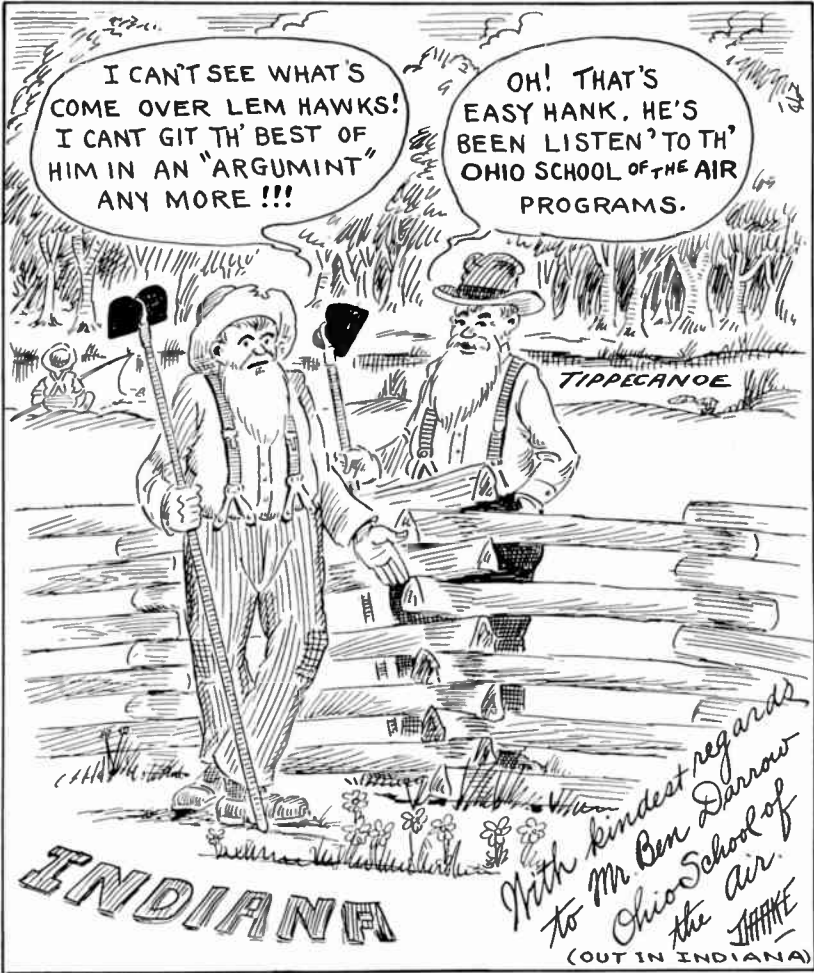
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"**Radio and the Three R's,**" by John W. Elwood, p-19.



A rather large group for radio reception but results were reported to be satisfactory



CHAPTER V

CLASSROOM USE

Part I — EQUIPMENT AND LESSON LEAFLETS

Radio's Advantage. The cost of equipping schools is naturally one of the prime deterrents to the growth of education by radio. Unlike motion picture projectors, however, receiving sets are articles of home equipment. They promote their own cause continuously because they reach the home.

School-boards Respond. Schools have equipped more rapidly than might have been foreseen. In the Ohio experiment it was thought that very few school boards would have funds they could use or would choose to expend for radio equipment. Nevertheless many of them bought equipment at once, some assuming the entire cost and others sharing it with Parent-Teacher and a wide variety of other organizations. Data from the reports of the Ohio School of the Air is significant. (See Chapter VII.)

AN EASY TASK

The Isolated School. In the case of one room schools and others of but a few rooms the choice of a radio set is comparatively simple. Where electric current is not available the old battery type of set alone is to be considered. Such schools may have difficulty in obtaining up-to-date battery sets but will experience no bother in buying discarded battery sets.

An Unfair Test. Here is one of the hazards. Many schools subject radio progress to an unfair test in trying to listen with faulty equipment. Most often the offenders are discarded loud speakers. Certainly an entire school,

or even an entire class should not be asked to endure reception which was considered too unsatisfactory for a single family to use. The teacher and at least part of the pupils will know whether their school set is below par and cease to listen or replace it with better equipment. Some few teachers have decided that radio programs "are not plain enough," apparently blaming the broadcasts when the fault lies in their own poor equipment.

Volunteer Installation. Smaller schools, having socket sets, have successfully wired their own buildings, the amplification of the set being sufficient to carry a number of speakers. A much safer procedure is to depend upon trained radio service men.

A REAL HAZARD

Auditorium Listening. One of the greatest dangers to the success of radio for schools has been the receiving of the program in auditoriums. No blanket indictment is placed against them, because some of them are small and reception good. And even in the larger ones the reception is sometimes claimed to be satisfactory. Nevertheless there are several reasons for cautious use of auditoriums.

- (1) The acoustics are often bad.
- (2) If only one speaker is used the volume is likely to be too loud for those close to the speaker or too low for those farthest away.
- (3) Even though the loud speakers are so placed as to give good audibility there are still the problems of:
 - (a) Lack of classroom helps such as desks, maps blackboards, etc.
 - (b) Too many pupils, causing the loss of classroom leadership of the teacher.
 - (c) Loss of time in marching to and from the auditorium.
 - (d) The tendency toward confusion whenever and wherever the discipline is not of a high order.

Of course some of the above objections are inoperative where a single class or comparatively small groups are taken to the auditorium. Nevertheless the classroom offers a more satisfactory place for listening. The interaction between pupil and teacher in their own classroom during the radio lesson is more natural and complete. No time is lost. The taking of notes, observing of maps and drawings, etc., is much easier in the classroom atmosphere.

CENTRAL RECEIVING EQUIPMENT

A Many-Featured Service. There is a growing tendency to consider radio reception as a part of a still wider service. The majority of larger schools either are equipped with central receiving sets or are looking forward to such equipment as their goal. Each of these is a device for the originating of a program. The connections of each of the three instruments named are carried through a switchboard and thence to the classrooms, auditoriums, cafeterias and so forth, where the loud speakers are attached. The principal or any other school official can then send to any single classroom or any combination of classrooms his choice of phonograph recordings, local program or radio-received program. In order to be able to send different radio-received programs simultaneously to chosen rooms, it is, of course, necessary to have as many radio receivers as desired pick-ups.

Short-Wave Reception. Some schools provide a short wave receiver and report considerable motivation of pupil activity in the "fishing for" and receiving of programs from foreign countries and most distant points in the United States. A satisfactory short-wave receiver can be purchased at such slight cost that almost any school should be able to justify the expenditure for the above reasons.

Economy. Where there are several rooms to listen to the same series of music appreciation lessons, it is possible to extend the life of a phonograph record due to the



—Courtesy Magnaphone Co.,
Grand Rapids, Mich.
Superintendent using hand
microphone.



Superintendent Tuning in,
Enon, O.



—Courtesy Operradio Co.
St. Charles, Ill.



—Courtesy the Simplex Radio Co.,
Sandusky, Ohio
PRINCIPAL OF JUNIOR HI SCHOOL
BROADCASTING

A wide variety of equipment is used but the Central receiving set is growing in favor.

fact that it is played a fewer number of times in serving the same number of children. This aids in the building up of a library of superior records.

A LOCAL BROADCASTING STATION

A Varied Training. The microphone transforms the principal's office into a broadcasting studio. Many schools report that they have used such a local school radio station to splendid advantage. They make the appearance at the microphone a reward for excellences. Thus the boy or girl who can sing or play some musical instrument the best, or give a reading most satisfactorily, write the best essay, or who is superior in debating, is allowed to broadcast to the entire school system. Sometimes this means many buildings as well as merely many rooms. Wherever the process is not repeated too often and is otherwise well managed, there seems to be no diminishing of interest. In fact, the majority of such schools report that after one or two years use the zest of the pupils is even keener than at first. (See illustrations Chap. 1X.)

"Spotsound." One special opportunity afforded by the using of the microphone is the training of the pupils in better speech. When a pupil from a certain room is speaking at the microphone his classmates take note of every faulty pronunciation, enunciation, inflection and cadence. The disassociation of that part of the person expressed by the voice from that which is engendered by his appearance has a very distinct training value. We have used the word "spotlight" to deal with the visual. The microphone brings in an era of "spotsound," in which slight errors are increasingly discernible to the ear just as slight irregularities in appearance become discernible to the eye when in the glare of the spot light. **This equipment offers a splendid incentive as well as a successful medium for correctional speech.**

Two-way Conversation. Very few schools are aware that with some types of equipment and a simple "reverser of the poles" in the set in the principal's office, it would

be possible to make a two-way carrier out of the line between the rooms and the office. With such a device the principal could listen in on the new Latin teacher, the new sixth grade teacher or on any classroom at any time. He would obtain a more certain estimate of the normal discipline and class procedure than is ever obtained when he tiptoes his way in as formerly. Perhaps the teacher would soon become as accustomed to the possibility of eavesdropping as she has been already inured to the un-announced visits of the principal.

Soft Recordings. Some few schools have used their own recording system to preserve programs in which they were especially interested. This system will allow several playings of the record although of course it lacks the permanency of such records as are commonly sold on the market. One special value lies in the fact that where the time of the broadcast makes it impossible for a class to listen, they can use the recording at the exact time it suits them best.

COSTS

Wide Range. Radio costs change so rapidly and equipment becomes obsolete after such a short time, improvements are introduced so frequently, that it would be rather useless to attempt giving anything authoritative on the matter. There is and probably will continue to be a wide difference in the cost as announced by various companies.

Sales Arguments. The higher price of some equipment will be justified by its makers on the score of durability and superlative results. They will claim that their master outfit provides for greater efficiency in use, better balancing of the impedance of the wiring, so that speakers will be at the required level for every classroom. They will also stress the contention that with their equipment there is a much wider range of reception of vibration frequencies than is possible with the cheaper equipment.

Instructions Difficult. The writer knows of no easy or non-technical instructions that can safeguard the schools' purchase of equipment. The Radio Score Card appearing in this chapter may serve to focus the judgment of the local schools on the chief considerations to be met.

RADIO SCORE CARD*

Tested by _____ *Date* _____

Name of Set 1. _____ *Model* _____

Name of Set 2. _____ *Model* _____

Name of Set 3. _____ *Model* _____

Name of Set 4. _____ *Model* _____

Rate the sets being compared by marking

A—Excellent; B—Very Good; C—Fair; and D—Poor

ITEMS	SET NO.
<p>I. CONSTRUCTION</p> <p>1. Appearance: Beauty, compactness, built-in speaker</p> <p>2. Sturdiness: Strong construction, simplicity, no exposed delicate parts, durable finish</p> <p>II. OPERATION</p> <p>1. Simplicity: Easy to operate, single dial, etc</p> <p>2. Reliability: Can be depended upon</p> <p>3. Minimum of care and serving necessary</p> <p>III. VOLUME</p> <p>1. Volume of distant stations adequate. Test stations throughout the dial range</p> <p>2. Compare especially the volume of stations from which most of the broadcasts are to be received</p> <p>3. Even flow of current, not varying from too loud to too low, or fading</p> <p>IV. TONE QUALITY</p> <p>1. Low frequencies (Organ, Cello, etc.)</p> <p>2. Compare at high frequencies (Violin, soprano)</p> <p>3. Spoken words, distinct, clear, natural</p> <p>V. SELECTIVITY</p> <p>1. Dial range covered by nearest high powered station. (Determine by number of dial marks)</p> <p>2. Observe nearest channel to high power local station that a distant station can be heard</p> <p>3. Selectivity at high frequency end of band, at middle and low frequency end of band</p> <p>VI. COST OF SET INSTALLED</p> <p style="text-align: center;">Composite rating of each set.</p>	

*By C. M. Koon

USE OF MISCELLANEOUS BROADCASTS

A Severe Test. The acid test of any educational broadcast is whether the pupils gain or lose by the substitution of radio reception for a part of some study period or recitation. Experience has shown that it can be either gain or loss. The school must master the methods of making radio-received lessons superior to other instruction or they cannot justify their listening.

Causes of Failure. Any one or a combination of all circumstances may ruin the results. Poor programs, poor transmission or poor reception, or any combination of them may partly or entirely destroy the value of the effort.

The World a Great Text-Book. It will be best to consider the use of broadcasts under two heads. First, the regular broadcasts of radio stations; second, special broadcasts conceived and presented especially for school listening. Under the first head many schools have found it possible, by following the radio page in the newspapers, to greatly embellish their ordinary classroom work by participation in national and international events. Such items as the broadcasts from France, England and Germany, the celebration of Lincoln's birthday, Armistice Day and the like, the broadcast of the opening exercises of a Washington Bicentennial, the inauguration of the President and of the Governors of states, and many other events of similar nature, occurring in school time, and taken advantage of by the school, have in their estimation, enriched their curriculum. They claim to have been able to adapt such broadcasts to the teaching of History, Geography, Sociology, and other subjects and in such fashion that the broadcasts were the most colorful part, and a very productive part of the work done in a given study. The growing use of such broadcasts indicates that the teachers are becoming less skeptical of the advisability of deviating from the established routine in order to participate. Such school leaders maintain that **the world is the greatest textbook** and that

the radio has much to offer by bringing the world to the classroom.

Much Adaptation Necessary. Since nearly all such broadcasts are conceived for listening by adults, the use of them requires a maximum of adaptation. The teacher must first of all be on the alert and carefully follow the press or the event is over before she knows of it. Her pupils, if on the lookout, may usually be counted upon to forewarn her of great national events in which they wish to participate. Nevertheless, in order that they may listen, she must re-organize her schedule for the day. This is not difficult except in the junior and senior high schools. Care must be exercised there or a real loss of time may occur. This fact has severely limited the reception of "catch as catch can" programs, occurring as they do, on no regular schedule and with no continuity of definite objective.

Listening Posts. Many teachers have found such programs so stimulative of interest in various subjects which they must teach, that they richly justify the effort entailed. Some teachers, for example, detail two pupils to hear a broadcast and to later report it to the entire class. This makes of the radio a Listening Post at which pupils may eaves-drop on world happenings.

Immediate Motivation. This plan is especially useful when the broadcast occurs at a time when no reasonable adjustment of recitations will permit the entire class to take part. Domestic Science classes, for example, report that two girls are assigned to listen to broadcasts by Domestic Science specialists, and then to report to their class what they have learned. They proceed immediately to put to the test the recipes they have heard. This makes for immediacy, zest and practical accomplishment.

Sample Programs. The National Broadcasting Company and the Columbia System issue lists of educational features for the especial use of teachers.

BROADCASTS DURING SCHOOL HOURS
THE NATIONAL BROADCASTING COMPANY AND
ASSOCIATED STATIONS

- Fridays, April 17: { 11:00 A. M. Series A
 } 11:30 A. M. Series B
 April 10, 24: { 11:00 A. M. Series C
 } 11:30 A. M. Series D
 N. B. C. Music Appreciation Hour; Conducted by
 Walter Damrosch.*
- Fridays, April 3, 10, 17, 24: 4:00 to 5:00 P. M.
 Radio Guild: A series of plays selected from
 high school reading lists and presented by out-
 standing actors.*
- Fridays, April 3, 10, 17, 24: 2:30 to 2:45 P. M.
 The Aircyclopedia: Interesting questions and
 answers on history, geography, nature and liter-
 ature.*
- Fridays, April 3, 10, 17, 24: 3:00 to 3:15 P. M.
 Child Study: Problems of child training discussed
 in question and answer form by one of the direc-
 tors of the Child Study Association.*
- Friday, April 10: 3:15 to 3:30 P. M.
 Medical examination of the Byrd Expedition: by
 Dr. C. Ward Crampton, Director of the Clinic of
 the Post Graduate Medical School and Hospital.*
- Mondays, April 6, 13, 20, 27: 2:00 to 2:15 P. M.
 Health Talks: by leading physicians and surgeons,
 through the cooperation of the New York Tubercu-
 losis and Health Association.*
- Mondays, April 6, 13, 20, 27: 3:15 to 3:30 P. M.
 Current Events: Discussions of current events, art
 and history.*
- Tuesdays, April 7, 14, 21, 28: 11:00 to 11:15 A. M.
 Your Child: by Grace Abbott of the Children's
 Bureau of the Department of Labor.*

**the long list of stations relaying these programs is omitted on this reprint.*

The following reprints of portions of the regular program issued by Margaret Harrison of Teachers' College, Columbia University, will indicate the variety of features available in eastern United States.

Program for Friday, April 25, 1931

- 9:00— 9:15 Newscasting WHAM
- 10:15—10:30 Journeys Through Music Land WHO
- 11:10—11:20 Department of Health talk WNYC
- 11:45—12:00 FOUNDING OF A NATION. (for schools)
 "Haunted by Skulking Savages," stories of
 early settlements in America. National
 Broadcasting Company WEAF
- 2:20— 2:30 "Sports and Recreation" WJZ
- 2:30— 2:45 "Hiking through the Black Forest" continu-
 ation of series on Germany. WBAL
- 3:00— 3:15 "The Vanishing Nobility of Alaska," Uni-
 versity of Pennsylvania, WCAU
- 3:00— 4:00 U. S. Marine Symphony Orchestra WEAF,
 WTAM, WWJ, KSD, WHO
- 3:30— 3:45 N. Y. Aquarium talk WOR
- 4:01— 4:15 French lessons WOR
- 4:15— 4:30 Everyday English Course WAAT
- 5:00— 5:15 "The Seven Arts" WJZ
- 6:00— 6:15 MASTERS OF ENGLISH LITERATURE—
 William Shakespeare WNYC
- 6:00—..... "The Meaning of Arbor Day," University of
 Pittsburgh talk KDKA
- 6:30— 6:45 Elementary French Lessons WNYC
- 6:45— 7:00 Advanced French lessons WNYC
- 7:10— 7:25 State Industrial Safety Campaign. "New
 Hazards for Old" WNYC
- 7:15— 7:30 Universal Safety Series. "Economic As-
 pects of Safety and Health," Prof. Irving
 Fisher of Yale University. WEAF, WJAR,
 WFI, WRC, WRVA, WPTAF, KOA, KGO,
 KECA, KOMO.

A USEFUL METHOD

Reportorial Skill. 'Reporting' applies also to broadcasts specifically devised for school participation. Wherever the schedule does not make it practical for an entire class to listen, it is possible for certain pupils to be assigned as reporters. Their choice may depend upon the fact that they are superior students who will not lose by missing the regularly scheduled recitation. Or the assignment may be passed around in the effort to develop the listening ability and the reportorial skill of each pupil.

Three Types. Such broadcasts may be chosen on the basis, as in the case of the Domestic Science, of their presenting subject matter of direct value. In other cases they may be selected because they report significant national or world events, because the person to be heard occupies a place of leadership or is personally very popular.

Danger or Opportunity. Such listening to "hit and miss" broadcasts is frowned upon by some superintendents and principals because of the fear that it will grow into the too promiscuous use of the radio by the less energetic teachers. Others stoutly maintain that the better the teachers the more anxious they are to afford their pupils this closer touch with the world.

Right Methods. School use of especially prepared broadcasts faces a number of hazards. In previous chapters we have indicated that good programs can be provided and that, while there will never cease to be a call for improvement, yet the problem will continue to be most largely one of bringing about right conditions of reception. Granting that the programs are well broadcast and that they are transmitted by a sufficiently powerful station to reach any given school, the problem is narrowed to one of the facilities and abilities which the school and the teacher have for receiving the broadcast.

Participation the Goal. Instead of using the word "listening," we shall speak of "participation." **The mere listening to radio programs is not enough.** In many radio broadcasts, motivation, pupil activity, response, and so on,

are not only possible, but through a cooperation of the teacher at the microphone and the teacher in the classroom are possible in about the same degree as in other teaching.

The physical equipment is important. The hazards of poor equipment have already been covered. A "fuzzily" received broadcast is worse than a dilapidated text-book.

RIGHT CONDITIONS OF PARTICIPATION

Expectancy. There is another element in listening which is equally important. Even though the children are gathered in small groups in their own classrooms with all the facilities which the auditorium lacks and though the broadcast is well presented and the reception from the standpoint of the instrument is the very highest in satisfaction, yet the broadcast may fail miserably. **The class must be prepared.** It must in some cases possess certain "groundwork" information. But even more important is its attitude concerning the coming broadcast. If it is one of expectancy, curiosity, alertness and willingness the broadcast will be immeasurably more successful than if it is approached with boredom and half-heartedness.

Team-work Fundamental. Radio broadcasts cannot be expected to surmount the hazards of lackadaisical participation. The nature of the pupil's interest depends largely upon the teacher. If she is apathetic her pupils will be likewise, for they are under her eye but not under that of the teacher at the microphone. If she is genuinely interested, her pupils will reflect her attitude. **Education by radio has no other problems comparable to that of attaining real team-work between the broadcasting teacher and the classroom teacher.**

PREPARATION FOR THE BROADCAST

Active Curiosity. The nature and the amount of advance preparation will of course vary widely. In general, the more that is already known about the subject to be

presented, the better, unless the interest has been satiated. The result of right handling will be increased interest and receptivity.

Information Needed. The teacher must know the schedule as to course, radio teacher, aim of the series, the methods of presentation and the time. She needs to know these items a semester in advance. Accordingly, the lesson leaflets sent to the teacher well in advance of the broadcast include an engraving and a biographical sketch of a radio instructor. She may add to this preparation from her own knowledge. She may place the print near the loudspeaker. This makes for the necessary feeling of intimacy with the Assistant Teacher who is to come via the loud-speaker. The lesson leaflets may also contain all manner of illustrative material that will supplement what the text-books normally contain. Bibliographies of books most likely to be available save the time of the classroom teacher in assigning readings. Lists of questions, both in preparation and in review, are appreciated by the busy participating teachers.

Improvements. The following reprints from the lesson leaflets of the American School of the Air, the Damrosch Manual, the WMAQ Educational Program and from the Courier of the Ohio School of the Air will serve to point out how general instructions and suggestions may be afforded the teacher. Also they show how the teacher is counselled on the participation of the classroom in each separate broadcast. The development of such teachers' helps is open to much improvement, as in fact, is everything connected with educational broadcasting.

The following excerpt from the Ohio School of the Air Courier shows how teachers are taken into the confidence of the broadcaster:

FOREWORD TO TEACHERS

It may be said that at no time has the world of science been so able and willing to serve education as at the present. The radio, having passed through a joyous, carefree childhood, and the storm and

stress of the adolescent period, is now approaching mature, creative manhood. As it comes knocking at the schoolroom door, it says, "Can you, will you use me?" Great broadcasting stations are at our service. A wealth of talent is available, but unless there is close co-operation between the radio teacher and the classroom teacher, the pupils will profit but little.

One marvels at the tremendous possibilities of radio. But in the classroom use of the radio many problems remain to be solved. Extensive experimentation in the psychology of hearing should be made. New principles of teaching must be evolved. New methods must be developed, for educational broadcasting is still in the experimental stage. But a big idea is on foot, and we teachers, as a body who have always performed our duty towards public education, must co-operate in order that the radio may be made to work in constantly new ways.

Even in an age of marvels, there is something awe-inspiring about the radio. Through the radio the throbbing present may be brought home to us and the dead past made to live again. Certainly not the least of the splendid achievements in radio has been the development of radio education—the enriching and vitalizing of classroom instruction.

Very gratifying results have already been noted. However, with the conception that this newest aid to education seeks to complement but not to substitute for the living presence of the classroom teacher, who shall set bounds to what we may confidently expect to accomplish in advancing the ends and aims of true education in the days which lie immediately before us?

J. L. CLIFTON

State Director of Education

The following articles reprinted from the Courier (Ohio) show how seriously the broadcaster considers the matter of gaining the cooperation of the classroom teacher.

GETTING THE MOST FROM BROADCASTS

"At no time have there been more effective aids available to the teacher in carrying on her work than are now at her disposal. Wonderful resources are available for instruction by radio. Great teachers and leading artists may be heard, national celebrations of history-making

events may be broadcast to the classroom; but unless there is close cooperation between the classroom teachers and the radio teacher, the pupils will profit but little.

“Some have feared that the radio might replace the classroom teacher, but to date the teacher remains the most important factor in the success of educational broadcasting for classroom use. Broadcasting and reception today offer no serious difficulties whatsoever. It is much more to the point that there be at hand a mediator between the two who has the ability to select the especially applicable things of educational value and to encourage their application.

“We need a permanent organization to secure continuous contact between the officials of the Ohio School of the Air and the classroom teachers. There should be organized channels for educationalists to bring their criticisms to headquarters. For it is not only important that the classroom teachers be sympathetic with the plans and help carry them out in getting their classes ready for broadcasts, receiving the broadcasts, and reviewing them, but it is also just as important that the teachers and broadcasters cooperate in determining what is to be broadcast, and how it is to be presented.

“By means of cooperation, the usefulness of the radio can be made to work in constantly new ways. It is only through the strengthening and thickening of the bonds that unite the classroom teacher and the radio teacher that educational broadcasting can come into its own.

PREPARING THE CLASS FOR THE PROGRAM

“According to reports received, more than four-fifths of the schools that listened to the broadcasts during the year made some advance preparation. This is encouraging indeed, for advance preparation of the classes is essential in most instances, if the broadcasts are to be understood and appreciated. As the stage settings and the lighting effects play an important part in the success of the opera,

so does the surrounding atmosphere affect the success of the school broadcasts.

“With the aid of the advance information regarding the broadcasts that will be available this year, the wise teacher will teach her pupils how to listen intelligently. She will have them make suitable preparation in order that they may understand the broadcast lesson. And above all, she will strive to create the proper mental attitude for the radio presentation. But the greatest preparation of all will be a sense of expectancy imparted by the teachers to the pupils—mental receptivity.

“By way of suggestion to other teachers, we are submitting some of the things that teachers did last year in the way of preparing their classes for the broadcasts. Talks by the teacher and class discussions of the coming broadcasts were most common. Advance assignments consisting of outlines, reference, reading, study of dramatics, study of the lives of the artists, studying of pictures, construction of maps and other map work, were common.

“Sometimes teachers read poems and stories in advance and the regular classroom work was adjusted to coincide with the radio lessons. Blackboards, pictures and other illustrative materials and devices were used to assist and guide the pupils in understanding and appreciating the work. It should be especially helpful for the teachers to follow the suggestions given for each lesson in the preparation for the radio lessons.

HOW TO LISTEN FOR BEST RESULTS—REPORTING IMPORTANT

“Very little is known about correct methods of listening to educational broadcasts. Until more is learned, teachers must use their own ingenuity to devise ways of securing the most benefit from the radio lessons. The local teacher who has her boys and girls before her has many advantages over the distant radio teacher. She can gain a wealth of information from the attitude of her pupils. The attentive eye, the alert posture, the ignoring of other stimuli, inform her that the broadcast is being well received. She knows her pupils and their environments. Being in a posi-

tion to consider their individual needs, she knows how to select and apply the radio lessons.

“There should be right environmental conditions for the listening. Crowded rooms, moving objects, and especially distracting sounds interfere with good reception. If it were possible, it would be very desirable to use pictures, stage settings, and artificial lighting effects to harmonize with music and other features. Suitable charts, pictures, globes, maps, models, blackboard outlines, and drawings, decorations, display materials from the school or collected by the pupils, experiments, and so forth, may be used to create proper environmental conditions and supplement the radio message. Writing facilities should be provided for the pupils and everything should be in readiness before the broadcast starts.

“With the exception of programs for special occasions, classroom reception is much better than auditorium reception. Better teaching conditions prevail in the classroom. It saves the loss of time in shifting the classes to and from the auditorium. With microphonic and phonographic attachments, it is possible to make many additional uses of the radio equipment in the classroom.

“The attitude of the teacher towards the radio messages will be reflected in the class. If she anticipates them with pleasure, the pupils will also. If she listens attentively, the pupils will follow her example. If she wants to talk about the radio lessons, the pupils will eagerly join in the informal discussion. The art of conscious, vital listening, not mere hearing, has never been overworked. Sometimes it will be well for the pupils to close their eyes and give their ears and imagination a chance to transform the classroom into a concert hall, a church, or forest, or open country, or beach.

“According to reports, nearly all of the schools that used the broadcasts of the School of the Air last year did some reviewing. Informal class discussions were most common. Summaries and further research by the teachers and pupils were frequently used. Sometimes pupils wrote compositions on the presentations, and occasionally debates

were held. After all, the classroom teacher knows better than anyone else how to make the best use of the broadcasts.

We cannot emphasize too strongly the fact that definite progress and improvement in the School of the Air's program depend very largely upon the faithfulness and willingness of the teacher to report on the broadcasts. We must learn in this as in any other undertaking by experience, by the trial and error method. In the very nature of things, this is a result impossible of attainment on our part, unaided."

In the following excerpts note how objectives and methods are made known and how the use of good books is encouraged.



Playing Indian under the direction of an instructor and a musician a hundred miles distant.

CHICAGO PUBLIC SCHOOLS
EDUCATIONAL BROADCASTS WMAQ

LITERATURE, GRADES 4, 5, 6

FRANCES R. JACKSON, *Principal, Revere School*
*The Aim in general will be to give pleasure in the
appreciation of literature.*

In order to focus the attention of the listening children on the ideas which are presented by the poems, suggestions regarding the use of slides, pictures and films, will be made to the teachers.

A brief test will accompany each broadcast program. The children should be encouraged to read the test over in advance of the broadcast in order that they may know what to listen for and be able to answer more intelligently. The results of these tests may be sent to WMAQ. Such an indication to the broadcaster of the reception by the children would be an indication of need for changes or improvements in the succeeding broadcasts.

The plan for each broadcast is as follows:

1. A musical selection (phonograph record, which will suggest the theme of the program and establish an appreciation atmosphere.
2. An appropriate prose reading chosen for dramatic interest or timely material.
3. Selected poems carrying out the theme of the program and including:
 - (a) Selections listed in the Chicago Board of Education Course of Study for grades 4, 5, and 6, of which at least one will be of a humorous or non-sense type.
 - (b) A memory gem which will be read once and then repeated line by line with the suggestion that the children be directed to repeat it after the broadcaster.
4. A musical selection to close the program and to intensify the appreciation mode or theme.

In the outlines for each broadcast collateral readings are suggested which, if read in advance of the broadcast, will materially increase the child's interest and profit.

The broadcaster welcomes comment from both teachers and pupils.

AMERICAN SCHOOL OF THE AIR CLASS-ROOM GUIDE
 COLUMBUS, February 4, 1930
 BIBLIOGRAPHY

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Builders of Our Country, bk. 1, by G. V. D. Southworth (Appleton) Columbus, p. 24-36.

Christopher Columbus, by M. S. Byne (MacMillan). Sincere narrative well told in detail. Very few illustrations.

Explorers and Founders of America, by A. E. Foote (American Bk. Co.) Columbus, p. 24-37.

Famous Explorers, by E. E. Sparks (Hall & Locke). "First Explorations of Columbus," by himself, p. 65-84.

ART

Portrait, by Piombo, in the Metropolitan Museum of Art, N. Y.

"Columbus at the Court of Isabella," by Brozek (Perry, Turner Prints).

"The Landing of Columbus," by Van der Lyn (Perry Prints).

"The Eve of Discovery—1492," by Ferirs (Foundation Press).

MUSIC

Publications—

Alla Trinita 15th Century Melody, harmonized by Burney (G. Schirmer, Inc.)

From Vade Mecum, vol. II (J. Fischer & Bro.). Lucis Creator Optime, Decius (1486). O esca viatorium, Isaak (1493).

Records—

Gregorian Chants. Victor Record 20410 and 21621.

SUGGESTED PROJECTS

On an outline map of the world, draw the route Columbus took on each of his four voyages.

Study the poem "Columbus" by Joaquin Miller. Memorize your favorite stanza or stanzas.

Dramatize scene in the court of Ferdinand and Isabella when Columbus begs their aid.

In the following pages are reprints from lesson leaflet materials on two broadcasts. Note how the radio teacher imparts of his zeal to the classroom teacher. Also note how questions asked in advance may cause pupils to listen more attentively.

CURRENT EVENTS



HARRISON SAYRE

“Mr. Harrison M. Sayre, who presented the Current Events broadcasts last year, will continue the presentations this year. Mr. Sayre is particularly well suited to do this work. For the past seven years (since its founding), he has been the editor of *World News*, the news magazine of largest circulation among high schools throughout the country. He is a graduate of Wesleyan University, Middletown, Conn., where for a time he taught in the high school

and coached the debating teams. He has attended three of the sessions of the Institute of Politics, at Williamstown, Mass., and spent one summer, recently, in studying European conditions at first hand. Since July, 1928, Mr. Sayre has been managing editor of the American Education Press, publishers of *Current Events* and a number of other periodicals for classroom use. In that connection, he is the founder of *My Weekly Reader*, a paper for the elementary grades which has met a phenomenal reception.

PLACE OF CURRENT EVENTS IN SCHOOL OF THE AIR

“The modern teacher thinks of current events, not so much as facts to be learned, but rather as experiences to be visualized and enjoyed—as great movements and changes to be understood and made part of the life of the pupil.

“The modern teacher sees in current events an opportunity to show the unity of the curriculum. “Articulation,”

we are told, is one of the greatest needs in present day instruction. Current events can serve as the one living screen on which the various actors of our educational system — History, Science, Civics, Geography, English, are shown joined in one common, living, vital play. It is the drama of modern life—full of contradictions and unsolved problems, but full of vital, undying interest for every pupil.

“‘Some present-day situation is always the true starting point for a lesson,’ says John Dewey.

“The modern teacher sees current events, too, as the ideal means for inculcating good habits in respect to current reading. Some ninety per cent of the leisure reading of adults is newspaper and magazine reading, rather than book reading. That is a fact which schools, in general, have been slow to admit. If the aim of education is “to teach persons to do well those worthwhile activities which they are going to do anyway,” then current events deserves its place in the curriculum as a means of furthering worthwhile newspaper and magazine reading. Let us stop criticising the newspapers for printing trash, until we have trained a generation to enjoy and demand something better.

“What has all this to do with current events as a subject in the curriculum of the School of the Air? Simply this, that it explains the aims and the motives that underlie the efforts of the lecturer who will present this topic every Monday afternoon.

“How can the teacher who sympathizes with those aims help in attaining them?

(1) By having a world map (or if that is not accessible, large continental maps) available on the walls during the current events hour. “Current events is geography,” says Professor Stull, of Teachers College. Many schools make an interesting project by pinning ribbons to the spots on the map where important events are occurring—and running the ribbon to a card on which the clipping explaining the event is pasted.

(2) By anticipating the current events lecture with a few minutes’ discussion of the events of the week. What

important events have occurred during the past week? Which of these do you think most significant, and why? Which do you think the current events lecturer is likely to choose for his topic? What was his reason for selecting the topics on which he actually did talk?

(3) By following up the lecture, by carrying out the suggestions it contains. Practically every week last spring the speaker suggested either magazine articles that could profitably be read for further information on the subject, or a question that might well serve as the topic for a debate or an essay. The schools that adopted these suggestions invariably reported that they found the time well spent.

(4) By making available to the students the magazines and current events papers in which they may pursue further reading in the field of current happenings. A fifteen-minute talk by the best lecturer on earth can not "cover" current events. Of itself, it merely shows the listener that the lecturer "knows the stuff". And the aim of teaching current events should be to build up in the pupil the conviction that it is both possible and desirable for him, however busy he is, to keep in touch with the worthwhile developments of the age in which he lives.

"And finally, bear in mind, that you can greatly help to improve the current events hour in the School of the Air. If a current events test is given, by all means send the results of such a test to the director of the school, so that they may be used as a guide in preparing future talks. If you like certain features of the talks better than others, say so, telling what grades you are representing in your observations. For remember that the school is pioneering, and can only develop its greatest potentialities through the cooperation of the teachers and pupils, as well as of those who are at the other end of the microphone.

—Harrison M. Sayre.

OUT TO OLD AUNT MARY'S—FEBRUARY

REVIEW QUESTIONS

1. What are three differences between butterflies and moths?

1. What are the differences between the Tomato Hawk Moth and the Cecropia Moth?
3. Describe the Monarch Butterfly and tell of its habits.
4. What becomes of a drone bee in winter?
5. Why are bees valuable to us?
6. What is nectar? Where do bees get it?

INTRODUCTION

"All the subjects for our February visit to "Old Aunt Mary's are to be devoted to four of our common wild animals, the groundhog, the rabbit, the raccoon, and the skunk. These four animals including a few others have survived, while many of their companions of the wild, like the beaver, the otter, the bears, and the deer, have disappeared from the thickly settled communities. Some of our smaller wild animals will likely always be able to exist in fairly representative numbers regardless of what man and other natural enemies may do. It is interesting to consider in connection with each animal studied the qualities it possesses that have enabled it to survive and in some cases even to increase.

"Many kinds of wild animals lived here when this was the Indians' country, then why not after the coming of the white man? The Indian had more need for the wild animals than the white man had. They furnished him about all his clothing and much of his food while his white successor depended on the domestic animals and the cultivated plants for these necessities. The dog was the only domesticated animal known to the Indian before the discovery of America, and the pumpkin, the bean and corn were among the few plants he cultivated. When the Indian went hunting or fishing he took only what he needed; the white man took all he could get. The Indian conserved wild life; his successor exploited it. The Indian helped to preserve the balance in nature; the white man too often destroyed it.

"The love of animals is common to us all. We notice it appearing even in childhood, and satisfy it with animal toys. Later on real animal pets take the place of those of

rubber or of cotton or of metal. Even in adult life animals continue to hold our interest and engage our attention.

SEVENTEENTH VISIT—FEB. 3

The Groundhog

“The groundhog, or the woodchuck, belongs to that group of animals known as rodents. The rodents are the gnawing animals. The squirrel, the chipmunk, the beaver and many others belong to this same family. Some of the



A PET GROUNDHOG

habits of the groundhog and the squirrel are very much alike, i. e., both sit up and both hold food in forepaws while eating. Many of the rodents are likely as numerous as they ever were since most of their natural enemies such as wolves, foxes and bears have become scarce and the coming of civilized man has increased the amount of food within their range.

QUESTIONS FOR OBSERVATION AND STUDY

1. Where does the groundhog live? What does it eat? When does it eat? What does it do when disturbed while away from its burrow?
2. Can a groundhog climb a tree? What are some of its enemies? How does it defend itself?
3. Describe the appearance of a groundhog. Can you think of any use it can make of its short tail? Why doesn't it need long ears like the rabbit?
4. Where are groundhogs' burrows found? How are these burrow's made? With what tools do they make them? Why is it difficult to drown out a groundhog?

GEOGRAPHY—FEBRUARY



PRINCIPAL WHEAT REGIONS OF THE NORTH CENTRAL STATES

**Studies in Our Own Country
LESSON XVI**

FEBRUARY 12—2:00-2:20 P. M.
Winter Wheat.

- I. Outline of the Lesson:
 1. Location of the winter wheat growing region.
 2. Leading states in the winter wheat region.
 3. Reasons for growing winter wheat in these states.
- II. Questions and Problems and Things to Do:
 1. On the map on page 11 note the location of our most important winter wheat region. Trace this region on an outline map and color it orange.
 2. Name the three leading winter wheat growing states. Rank them in order of importance. (The dots on the map will help you to rank these states.)
 3. When do the farmers in these states sow wheat? When do they harvest the crop?
 4. Why does not the winter wheat belt extend farther north?
 5. Why is not more winter wheat raised east of the region that you have colored on your map?

LESSON XVII

FEBRUARY 19—2:00-2:20 P. M.
Spring Wheat.

- I. Outline of the Lesson:
 1. Location of the spring wheat
 2. Leading states in the spring wheat region.
 3. Reasons for growing spring wheat in these states.
- II. Questions and Problems and Things to Do:
 1. On the map on page 11 note the location of our most important spring wheat region. Trace this region on an outline map and color it orange.
 2. Name the four states that lead in the production of spring wheat.
 3. When do the farmers in these states sow wheat? When do they harvest the crop?
 4. Why do these states grow spring wheat rather than winter wheat?
 5. Why are the winters in the spring wheat region so cold?
 6. How does latitude help to explain one reason why wheat grows rapidly and ripens during the short growing season in the spring wheat area?
 7. Why does the spring wheat region have many hot days in the summer time?
 8. In what river valley is much of our spring wheat raised? Why are the soils in this valley so fertile?

LESSON XVIII

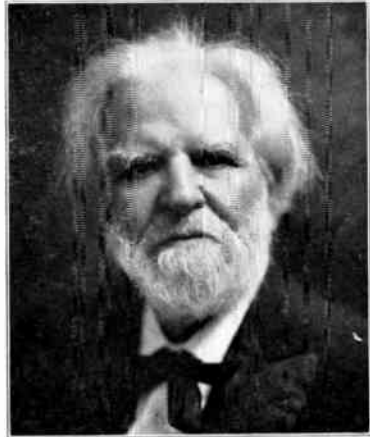
FEBRUARY 26—2:00-2:20 P. M.
How the Great Lakes Help the People in the North Central States

- I. Outline of the Lesson:
 1. The use of the Great Lakes as a trade route:
 - a. How vessels pass from lake to lake.
 - b. How the lakes aid fruit growing.
 - c. Relation of the Great Lakes to iron and steel manufacturing.

ENGLISH AND LITERATURE—JANUARY



DOROTHY CANFIELD FISHER



EDWIN MARKHAM

LESSON XIII

JANUARY 19—2:00-2:30 P. M.

Creative Letter-writing.

DOROTHY CANFIELD FISHER

Dorothy Canfield Fisher's father, James Hulme Canfield, was an educator, a college professor and president of two State Universities. A Vermonter by birth and New Yorker by residence, he went west after graduating from Williams College and was professor at the State University of Kansas, where on February 17, 1879, his daughter Dorothy was born. When she was ten years old she was sent to Paris for a year's schooling, and from that time on her education was partly carried on in France and partly in this country. She received her A. B. at Ohio State University during the time her father was President there. She studied for her Doctor's degree at the Sorbonne and Columbia University, New York.

In 1907 she married John R. Fisher and they went to live on one of the Canfield farms at Arlington, Vermont. In 1916 Mr. Fisher entered the ambulance ser-

vice and sailed for France. In the same year Mrs. Fisher, with her two children, went to Paris and immediately became absorbed in war relief work. The first winter she helped to organize an establishment for printing books and magazines for the blind; the following summer her husband was put in charge of a training camp for Ambulance Field Service and Mrs. Fisher ran the camp commissary. Her house was always open for refugees.

In the spring of 1919, the family returned to the United States, and Mrs. Fisher was appointed the only woman member of the State Board of Education of Vermont. Among her books are, "The Squirrel-Cage", "A Montessori Mother", "Mothers and Children", "The Bent Twig", "Home Fires in France", "The Day of Glory", "The Brimming Cup", "The Home Maker", and many others.

LESSON XIV.

JANUARY 26—2:00-2:30 P. M.

My Poems.

EDWIN MARKHAM

Edwin Markham needs no introduction to the audience of the



JOHN CLARK, Manager
The Crosley Stations WLW, WSAI,
W8XAL



—*Courtesy Crosley Radio Corp.*
JOSEPH RIES
of the Crosley Staff, Chief an-
nouncer for the Ohio School of
the Air.

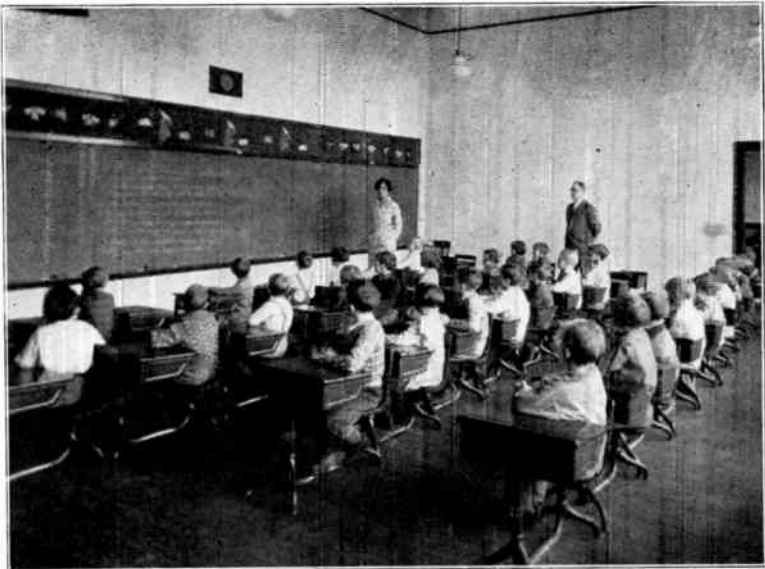
Men in such positions are educators with an enormous "student body."
Fortunately these men have high educational ideas.

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of the Air.



SEVENTH GRADE
Fairview School, Cincinnati, O.



DEVOTED LISTENERS
Loud speaker too high, Sandusky, O.

CHAPTER VI

CLASSROOM USE

Part 2—RECEPTION AND FOLLOW-UP

Agreement Important. The teacher, with reception provided for and with the schedule in front of her, must determine which broadcasts she desires. Of course, we are taking it for granted that she makes all plans in consultation with the principal or superintendent. For her to use radio against the will or without winning him to see its value would be foolish. Likewise it is unwise for a superintendent or principal to merely direct that broadcasts be used by a teacher in advance of convincing her that the radio instruction is to receive equal recognition and credit with all other class work. Teachers feel the obligation of covering certain subject matter and fear that use of the radio may rob them of time to prepare their pupils to pass the routine examinations.

Accommodation. With subject chosen, she is confronted with the problem of fitting it into her daily program and into the continuity of her daily instruction in the given subject. She may learn that, for example, a radio geography lesson on "Bolivia" occurs before or after her schedule calls for it. Occasionally, her class may be covering the countries of the world so as to keep in easy step with the radio geography instructor. If not, she must determine what is the best procedure: (1) to get into step with the radio presentations, or (2) to use the radio lessons as a review in case the subject matter has been covered, or (3) as a preview to be followed later by the routine instruction. The consensus of opinion seems to favor the studying of the text before or at the time of the radio lessons.

LAYING THE GROUNDWORK

Variety of Preparation. With a conception of what the radio broadcast is to be, the teacher can lay the groundwork for it. This may include the reading of everything which the textbooks contain on the subject and considerable browsing in such books as are available for collateral reading. The lesson leaflet has included some citations and she may add others. Or she may use bulletin boards on which the pupils post articles and illustrations of the coming topics as gathered from a wide range of sources. In the case of geography, the publications of railway, steamship and other companies are especially valuable.

In advance of the radio lesson the teacher and pupils may also provide on occasion, the following:

Books opened to a certain map or problem

Blackboard outlines

Charts, graphs, music

Regular and special maps

Drawings and pictures

Equipment for experiments to be performed under direction of radio teacher

Specimens and objects for study, prior to, during, or after the broadcast

Objects to be used in games and rhythemics.

ATTITUDE OF TEACHER

The Most Important Factor. As already mentioned, by far the greatest factor in the successful use of radio is the attitude of the teacher herself. If she has done a few of the many things which can be done to arouse interest and curiosity, the broadcast will succeed. If she is dominated by an air of expectancy the children register her enthusiasm as surely as the thermometer registers temperature.

Indifference Contagious. If, however, she is only mildly interested; if she allows the pupils to see quite plainly that she is providing the opportunity to listen merely because the superintendent directed it, or to indulge in a period of rest, the pupils will take it for granted that they

are to enjoy a period of freedom or even of noisy hilarity. The writer knows of one case in which a teacher turned on the radio and told his pupils to listen to a lesson in music. Said teacher then escaped into the hall to smoke a cigarette. It is needless to recount that few pupils were either desirous or able to obtain any measure of good out of that broadcast. The teacher should have been in front of the class, near the loud-speaker.

He might have left the room if the pupils had been sufficiently "sold" on the value of the broadcast. Even then his interest would have added distinct values to the pupils' participation. Investigation shows that inattention is nothing unusual in that particular classroom. Radio merely fell heir to a bad situation. Listening should never have been attempted under such conditions.

ENTHUSIASM INDISPENSIBLE

Pupil Must Be Receptive. As already noted, enthusiasm, interest, curiosity and mental hunger are the "carrier waves" of education. The teacher at the microphone and the one in the classroom both fail when they do not succeed in arousing enthusiasm. Too long have we answered questions before they were asked and imparted information in advance of arousing a desire to possess it.

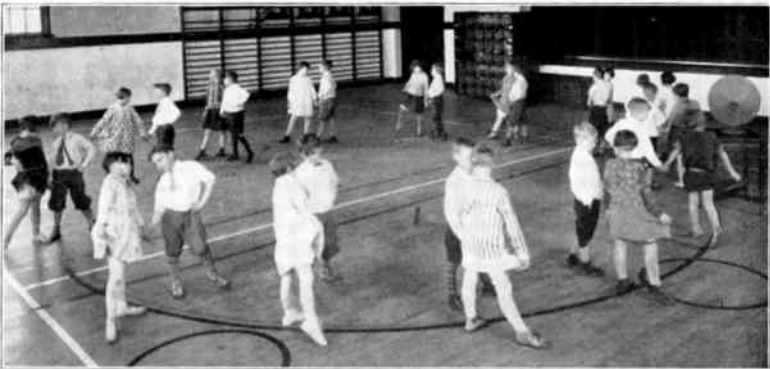
Teacher in Command. Radio must depend upon the classroom teacher to arouse interest in the speaker because of interesting things he has done, or the exalted position he holds, or his acknowledged leadership in his field, whatever it is, and in the appeal of the subject which he is to present. Children sense intuitively whatever adults consider important and, to the younger child, this is the only basis of evaluation. If Longfellow is enthused about as being a great poet—Longfellow becomes a great poet in the child's estimation.

Build-Up. Likewise the living leaders who may be placed at the microphone must be "built up" to the point that pupils are really anxious to hear them. This is perfectly legitimate. If the teacher shows enthusiasm or even

excitement over an opportunity to hear Henry Van Dyke, the pupils will catch her expectancy and the broadcast will come as a fitting climax to be long remembered.

Even the expression of curiosity as to what the teacher at the microphone will stress, has a value. The pupils may be put on the alert for new ideas, variance from their texts, or even for points to challenge. This is true as regards statements, use of words and pronunciation. Honest doubt and difference of opinion breed constructive thinking and lasting impression.

Accumulative Receptivity. Wherever this alertness has existed, the schools participating in the Ohio School of the Air report good or splendid results even though the conditions of reception were hazardous. Thus some schools have surmounted the problems of auditorium listening because of this accumulative receptivity on the part of the pupil and teacher. Others have reported valuable assistance by the radio even where the tone quality and audibility of the broadcast were far from good. In other words, the teacher's attitude is a paramount consideration except for the unusually receptive pupil.



THE MINUET STEP

Typical of thousands who welcome radio as an assistant.

TYPES OF CLASSROOM PARTICIPATION

Similarity to Other Teaching. Radio reception must be measured in very much the same terms as all other education. It must observe the same standards and obtain the same or better results than can be obtained without adding it as a tool for teaching. The nature of its participation, the type of motivation, the nature of the expression, must vary with the subject matter and with the method of presentation by the teacher at the microphone.

Three Principal Methods. The first is the straight lecture with little or no pupil activity except note-taking. The second is a variation of the lecture method, using the classroom teacher as a constant assistant to the teacher at the microphone. The third is the complete direction of pupil activity by the teacher at the microphone. The first of these methods is often satisfactory with older pupils but must be sparingly used in the lower grades. As will be pointed out later, some teachers at the microphone are apparently able to completely bridge the gap caused by the lack of visual aids and thus to hold the attention of the unseen class. The tendency is, however, very strongly in the direction of motivating the activity of the classroom teacher in doing things the radio teacher wants done. This will appear in the discussions of the teaching of Nature Lore mentioned below.

Direct Motivation. The third method is one in which the pupils follow the directions of the teacher at the microphone with little or no assistance from the classroom teacher. This appears especially in a discussion of Story Plays and Rhythmics.

BRIDGING THE GAP

Centering Visual Attention. In other words, there is a varying effort to bridge the gap caused by the fact that the radio teacher is not in sight of the class. In some cases, as in music and Story Plays and Rhythmics, the gap seems inconsequential. In other cases, the more mature pupils

may feel no loss in spite of the fact that the teacher at the microphone is not standing a few feet from them. The less mature pupils, however, need a centering of their visual attention by the classroom teacher.

Partial Solution. There is a chasm which is not so easily crossed. The lack of interaction between the microphone teacher and the pupil has not as yet been fully bridged. The shrewd radio instructor may, however, go a long way by asking himself questions, the very questions he knows would be asked in the majority of classes. He cannot raise all such points of misunderstanding and then dispose of them, but he can include the ones that most frequently arise. The after-discussion of the class with their own teacher must be relied upon for clearing the remaining difficulties. This is as it should be.

Variety of Broadcasts. In the chapter on Presentation of Educational Broadcasts a portion of typical broadcasts of Current Events, Geography and Nature Study have already been given. Perhaps no two broadcasts are very much alike, due to difference in subjects, difference in the ages of pupils and in the personality as well as the methods of the teacher at the microphone. One of the most colorful methods of teaching is the dramalog. This is quite unlike the lecture or the recitation to which the pupils are most accustomed.

Demonstration Materials. There are many ways in which the classroom teacher and the pupils may do those things which the lack of the physical presence of the microphone teacher makes it impossible for him to do. In general it will be noted that the attention of the pupil is centered upon something definite that has to do with the lesson—as the taking of notes, the following of instructions by one pupil at the blackboard, centering the attention of the entire class, the pointing out of specific locations on maps and globes, the examination of outlines or maps in textbooks on each pupil's desk, the observation of objects held by pupil or teacher as an illustration of what the radio teacher is saying, the actual following of definite directions by the

teacher at the microphone, the study of art prints and drawings and many other helpful methods which are apparent to the alert teacher.

Addition not Substitution. In chapter V we reprinted some lesson materials which indicate the centering of the eye attention of the pupil. The following reprint of the lesson page on Douglas Malloch clearly indicates that the teacher should have read the poems to the class before the broadcast or have had copies of them at hand during Malloch's reading. Thus the radio-teaching might have all the merit that other teaching affords, plus the value of hearing the poet read his own poems.

The reprints on Story Plays and Rhythmics are given at greater length because they demonstrate how the teacher and the class are prepared to actually follow the "Smile Lady's" instructions. Notice that the teacher can be thoroughly prepared for the coming of the broadcast. Mrs. Ruhmschussel's "General Suggestions" were of great value throughout her entire series of broadcasts.



A LISTENING CLASS



DOUGLAS MALLOCH

ADVANCED SCHEDULE

A real treat is in store for the boys and girls of the School of the Air when Douglas Malloch, the poet who makes living a joy, appears on the School of the Air program, Wednesday, October 23rd. Mr. Malloch is well known to many teachers in this region who read his daily syndicated poems. He is President of the Society of Midland Authors, past President of the American Press Humorists and the author of eight books including, "Come on Home" and "The Heart Content."

"The Poet of the Woods" is a sparkling speaker who is delightfully different. With a mixture of wisdom and witticism, he is highly original, refreshing, wholesome, simple, direct, and human.

Many hundreds of home sets will be tuned in to hear this apostle of sunshine and good cheer present his royal entertainment of fun and philosophy.

If time permits, Mr. Malloch will read the following poems:

The Hills Ahead,
A Little Old Place,
Me.

What It's All About.

—From his book, "The Heart Content."

The Bullfrog,
A Different Way,
His Heritage,
It Is the Flag,
The Night Ma Heard the
Burglar.

—From his book, "Come on Home."

LESSON IV—OCTOBER 23.

2:00-2:20 for Seventh, Eight, and
Ninth Grades.

We'll Just Pretend,
Packing Daddy's Grip,
Ten Rules for Health.

From his book, "Little
Hop-Skipper."

2:20-2:40 for Tenth, Eleventh and
Twelfth Grades.

Mr. Malloch will read:

The Better Part of Valor,
The Blotted Page,

Broken Dishes,
Just the Same,

A Little Trust,
Pots and Pans,

Today,

—From "The Heart Content."

If a Bird Can Sing,
If I Should Carve a Lincoln,
Just the Age,

—From "Come on Home."

The Nice Young Man,
The Unbreakable Doll,

From "The Little Hop-Skipper."

—From his book, "Little Hop-Skipper."

Teachers are urged to have their pupils read and study some of these poems in advance of the presentations. If copies of three books mentioned above are not available, copies may be purchased from Doubleday, Doran & Co., New York City.

LESSON V—OCTOBER 30.

B. Y. Williams, The Rhyme Reaper

LESSON VI—NOVEMBER 6

Miss Angela Morgan, Poet and
Author.

Miss Morgan, who comes from Philadelphia, is the author of seven books and her poems have been published in all the leading magazines and widely quoted.

Story Plays and Rhythmics AND Health and Happiness Stories



MRS. ALMA RUHMSCHUSSEL
*Supervisor of Physical Education,
Dayton Public Schools.*

GENERAL SUGGESTIONS FOR THE YEAR'S LESSONS

The activities in the story plays and rhythmics have been selected to engage most of the children of the class for the major part of the period. The teacher must bear in mind the necessity for keeping each child in the group active during the Play Period. If the entire group cannot take part in the radio lesson, be sure that they are seated comfortably to watch the activities of their playmates. There will be a certain enjoyment in watching and a keener interest for their turn in the games.

The lesson material will be "PLAY" of the big muscle type and follow the natural play instincts of the child—running, skipping, jumping, climbing, etc. The greatest joy to the child is in the repetition of the activity many, many times.

TO THE TEACHER

1. The teacher must create the proper atmosphere with her class for the radio play period, to make it a success and get the best response from the children.

2. Be sure your class is ready in the formation suggested; get the most out of the lesson and then later adapt the activities to your particular play space. At the present time almost every school has an available play space or the desks, chairs and tables are all moveable in the classrooms. It is impossible to give directions for the games suitable to the aisle space and also for a play space. However, all the story plays and rhythmics can be adapted to either. Make the most of what you have at hand.

3. The teacher should play with the class or be near the children and SILENTLY direct them if they fail to get the directions from the radio teacher.

4. The activities should be repeated many times, the following week and often enough for the children to become familiar with the different rhythms used.

5. "The Smile Lady" welcomes suggestions at all times. It is only through the cooperation of the teacher and her constructive criticisms that these lessons will be a real success.

GENERAL PLAN OF LESSON MATERIAL

I. Rhythmics and Dramatics with Music.

1. The aim of these activities is to secure free expression from the children themselves—not an imitation of the teacher's interpretation.

2. The child's imagination should be given free play and he should have that freedom of ex-

- H-10—The Health Game. R. K. Beeson. Bobs-Merrill & Co., New York.
- H-11—The Playroad to Health. Newmayer and Broome. American Book Co., Cincinnati, Ohio.
- H-12—The Safety Hill of Health. Lumis and Schawe. World Book Co., Chicago.
- H-13—The Sunshine School. Andress and Bragg. Ginn & Co., Chicago.
- H-14—The Way to Keep Well. American Book Co., Cincinnati, Ohio.
- H-15—Through Storyland to Healthland. Zucher, Robelle and Katz. Noble & Noble, New York.

LESSON I

SEPTEMBER 26—2:40-3:00 P.M.
Class Formation for Activities:

1. In gymnasium or large play spaces—class ready in a single circle, boys and girls alternating.

2. In classrooms — alternate row face forward and to back of room—two rows of children moving around one row of seats.

3. Most classrooms now have moveable seats. For these activities move all seats as close to the walls as possible. If seats are stationary, then use the space at the front of the room for a small group of children during the radio lesson. Later the activities may be adapted to your particular play space.

4. It is also possible to have the children form a circle around the desks using the aisles close to the walls. Most games can be played in this formation if the teacher will silently assist the children.

To the Teacher:

1. All printed instructions will give detail of the lesson, but the enthusiasm and spontaneity of the lesson must come from the teacher. She must put her OWN personality into the story or activity.

Note in the above reprint, that the classroom teacher can adapt the games to suit her local situation.

The Activities—Rhythmics: Marching.

All happy to be ready for a radio lesson, let us—

1. Skip lightly on toes—arms and hands swing free and easy as skip.
2. Run, run, run. Run lightly on toes—small steps—girls like little fairies—boys like brownies.
3. Quiet walk. Play going calling—going to church—walking with mother.
4. Fast, energetic march. We are happy and gay and walk briskly—now on tip toes—on heels—like giants—like little men—up tall—all clapping hands.

Imitations with Music:

1. Summer Play Activities.
 1. Going to the playground—the park—to the country. Skip, run, walk.
 2. Children roll hoops.
 3. On the SEE-SAW—
“See-saw, see-saw, up and down we go,
See-saw, see-saw, swinging to and fro.”
 4. Bouncing balls.
 5. Jumping rope.
 6. Swinging—
“Way up high,
Touch the sky,
Now come down,
Touch the ground,
High’s a tree,
I can see,
All around the town.”
 7. Children are all tired and go home.
 8. Sit down and rest. Go to sleep.

Health and Happiness Story:

The “Smile Lady” will tell the boys and girls what we will do to be healthy and happy.

LESSON II

OCTOBER 3—2:40-3:00 P. M.
Class Formation for Activities:

1. Be sure and read instructions in Lesson I and have your class ready that they may participate in the entire lesson.

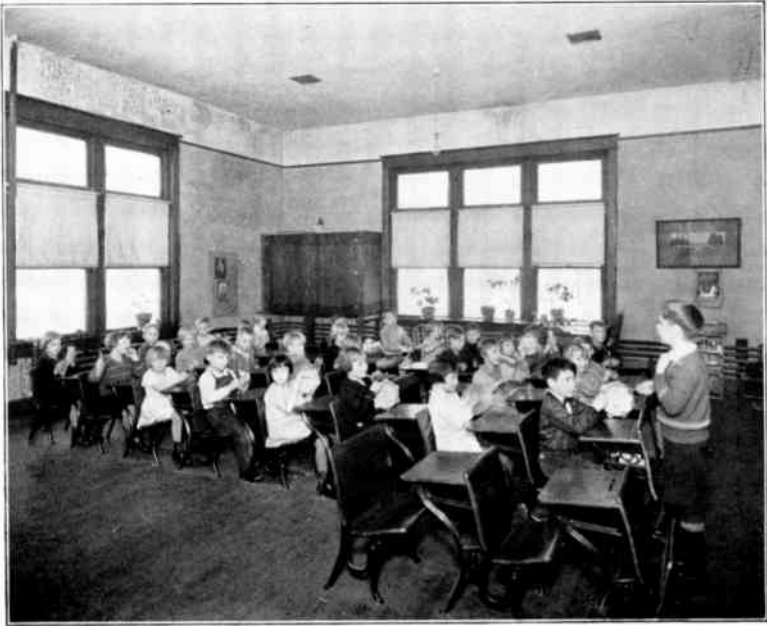


INDIAN LIFE

A second grade class integrating the Indian stories with other classroom activities.



Close attention is necessary in following the theme of a history dramalog.



—*Courtesy Baritone Mfg. Co.*

RECEIVING A LESSON IN RHYTHMICS
Shelby, Mich.

Excluding Competition. However, this centering the eye attention is not always feasible and the logical procedure is to close the "eyegate." While it is true that some people can concentrate on what they hear without being much bothered by unrelated things which the eye is seeing, yet there are few who could not profit by partially or entirely closing the eyes. Thus pupils may be asked to appoint their eyelids as traffic cops to shut off "Sight Avenue" in order that there may be no collisions with the traffic which is coming at right angles on "Sound Boulevard." In Germany, the participating classes listen to lectures and dramalogs with the blinds drawn. Few teachers doubt the necessity for such measures.

Comparision With Theater. It might be well to compare the classroom with the theater. What happens when the curtain goes up? The lights in the house go down and

the walls shut out the confusion that might come in from out of doors. The stage becomes the one source of excitation and appeal. Is it not comparable in the case of a history dramalog to shut out all things which might cause confusion? To close the eyes and depend fully upon the ears is like using the walls of the theater to shut out confusing sounds and sights.

Improvement of Hearing. Some may consider this pampering of the ears. If so, it is productive, as is shown by the ability of the blind person to "see" through his ears. His auditory senses are quickened and their ability enhanced. Thus, as the history dramalog is centered on creating the atmosphere of some tense moment in American History, the pupil with eyes closed is much more likely to follow the thread of the thought and to sense the visual picture from what he is hearing in words and sounds than he would were his attention even for a moment distracted. This is true even though the dialogue be simplified and the number of characters in any scene reduced to a positive minimum. If he lose a part of one sentence it may disturb the continuity. If he misses several sentences, he may lose the thread altogether. No troupe of players would care to do their work on the stage with lights in the house or with a motion picture being thrown on the side-wall. The people who expect to get the best results in radio dramalogs under similar conditions are quite likely to be disappointed.

FIXING AND RETAINING THE VALUES OF THE BROADCAST

Differences May Disappear. The methods of crystallizing the thinking produced during a radio broadcast naturally vary with different teachers. Several methods are quite likely to be used in following-up any broadcast. Since broadcasting time is rather precious there has been a tendency to leave drill, repetition and review quite largely to the volition of the classroom teacher. But the number of children being reached by such ventures as the Ohio School of the Air has grown so large and the cost per recitation has

PHYSICS—FEBRUARY

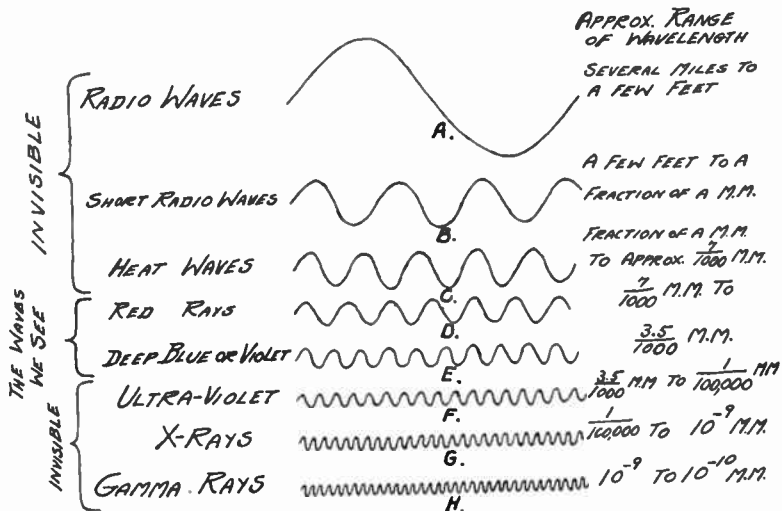


CHART OF THE VARIOUS LIGHT WAVES
(NOT DRAWN TO SCALE)

FIG. II.

LESSON VIII

FEBRUARY 11—2:00-2:20 P. M.

What is Light?

1. How light is produced.
2. Modern ideas as to what light is.
3. Some measurements in light.
 - (a) The velocity of light.
 - (b) The wavelength of light.
 - (c) The frequency of light.
4. Color: An explanation of what color is.
 - (a) Colored light.
 - (b) Why objects appear colored.
5. The intensity or brightness of light.
6. Are there any kinds of light other than what we see?
 - (a) Long and short radio waves.
 - (b) Heat waves.
 - (c) Ultra-violet.
 - (d) X-rays and gamma rays.
7. A discussion of the complete

range of light waves and what constitutes a difference in one light and another.

8. Relative importance of the visible and invisible light.

To the Teacher

This talk is intended to give the student some idea of what light is and point out the fact that the light we see is only a small portion of the light that actually exists. It is hoped that it will give the student something of the nature of the various forms of light and the relation between them such as is not generally touched upon in the regular course in physics.

It is suggested that each student read the chapters on light in their physics textbook. The chart given above (Fig. II) will be of assistance if copied on the blackboard so that the students can see it during the talk.

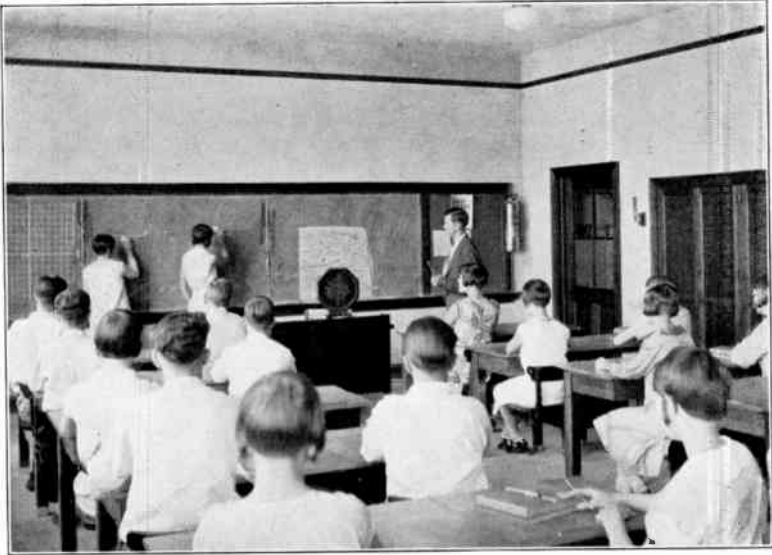
become such a small fraction of a cent, it is quite probable that any of the usual devices may justify their use in insuring that the pupil shall remember the essentials.

Emphasis—Repetition—Review. As already pointed out, the tendency is for radio to increase the dramatic appeal of the broadcast, to throw around it the glamour of picturization in sound. Since not all subject matter lends itself to emotional vividness, the teacher at the microphone is increasingly watching the matter of emphasis, repetition and review. It is too early to know whether the fixing of the values of the broadcast will remain the responsibility of the classroom teacher or be shared more equally by the Assistant Teacher at the microphone.

The following reprint of a portion of a page from the **Instructor's Manual** for the Damrosch Music Appreciation Hour and of a page from the Ohio School of the Air Courier are suggestive of the variety of follow-up work. Note the blackboard and notebook material for checking accuracy of pupils notes on preceding broadcasts.



Too Crowded for Best Results



The pupils at the blackboard can follow instructions by a teacher hundreds of miles away.
Continental, O.



Dramalogs demand attentive listening and the exclusion of visual competition of the eyes.
Genoa, O.

***CHILDREN'S ACTIVITIES SUGGESTED FOR FOLLOW-UP WORK
ON THE MUSIC APPRECIATION HOUR**

*(Compiled from teachers' suggestions by Radio Research Bureau,
Teachers College, Columbia University, New York.)*

Many teachers have found preparation and follow-up material of help in using the Music Appreciation Hour. The following activities are suggested:

ORAL COMPOSITIONS:

Let the children retell the stories of the composition.

The children might tell stories of the lives of composers.

Encourage children to tell stories about the musical instruments.

Oral dramatizations of the story of composition might be presented, such as: "Beauty and the Beast," "A Midsummer Night's Dream."

Help the children to notice the speech of Mr. Damrosch and the announcer.

Have them compile, and later write, a letter to Mr. Damrosch.

The children might present a simple "Radio" program, with an announcer, a "Mr. Damrosch," and a program of school music.

Encourage them to write poems expressing the story or mood of the music.

READING AND SPELLING:

Stories of the compositions could be prepared by the children for class reading from charts.

The teacher, whenever possible, could find a story to read to the children which would help explain the subject of the composition; as, "The Little Tin Soldier," a story on dwarfs, "Beauty and the Beast," poems and stories of rain, thunder storms, etc.

Introduce stories and pictures of fairies, fauns, dwarfs, animals, including the elephant, hen and rooster, fish, bee, and dragon fly.

Introduce into spelling lessons simple musical terms, as music, song.

HANDWORK:

Each child might keep a music notebook, using pictures of instruments, illustrations of stories in music, etc.

Freehand cutout pictures of instruments, illustrations of stories, etc.

Freehand drawings, for the notebooks, of subjects in weekly program.

Clay modeling, of instruments, figures to illustrate stories, etc.

Seatwork, such as cutout puzzles of instruments, matching picture of instrument with name, completing stories.

OTHER ACTIVITIES:

A sand table display of a symphony orchestra, with exhibit of materials used to make musical instruments.

A school orchestra, using instruments made by children. (See: "Creative Music," written by Mrs. Satis N. Coleman.)

Dances by children, to depict stories or mood of music.

If possible, have the children hear the compositions both before and after the concert, using phonograph records, piano solos, songs, etc.

Sing with the children, or for them, the melody of the selection given in the Manual, so they will be familiar with it when they hear the orchestral interpretation.

Children might make costumes and dress dolls to represent compositions, as: "Chinese Dance," "Swedish Wedding March," "Norwegian Dance."

**Reprint from booklet of Damrosch Music Appreciation Series.*

HEALTH—FEBRUARY*

How Col. Chas. A. Lindberg Developed good mental health.

"I came to the conclusion that if I knew the difference between the right way to do a thing and the wrong way to do it, it was up to me to train myself to do the right thing at all times.

"So I drew up a list of character factors at the left margin of a sheet of paper, and then I numbered the top of the sheet from 1 to 31, ruling the sheet up and down and sideways.

"One vertical column under a certain number would be my daily chart for that particular day of the month.

"At night I would read off my list of character factors, and those which I had fulfilled satisfactorily during the day I would mark with a red cross; those I had not been called upon to demonstrate that day, got no mark.

"But those character factors which I had actually violated during the day I would mark with a black cross.

"I began to check myself from day to day to compare my "blacks" and "reds" from month to month and year to year. I was glad to notice an improvement as I grew older."

Altruism	Faith
Ambition	Gracefulness
Brevity in speech	Honesty
Concentration	Hopefulness
Calmness in temper	Industry
Clean body	Initiative
Clean speech	Justice
Clean thought	Judgment
Clean conduct	Love toward all
Cheerfulness	Loyalty
Courage	Moderateness
Decisiveness	Modesty
Determination	Neat appearance
Economy	No argument
Energy	No sarcasm
Enthusiasm	No foul finding
Firmness	No talking about others

No talking too much	Respect fellow men
Optimism	Readiness to compromise
Perseverance	Recreation—
Physical exercise	"Manful, not sinful"
Pleasant voice	Self esteem
Punctuality	Self control
Patience	Self confidence
Politeness	Sense of humor
Reverence (Divine)	Sleep and rest
Parents	Sympathy
Home and family	Sincerity
Country	Tact
Respect superiors	Truthfulness
	Thoroughness
	Unselfishness

LESSON XV.

FEBRUARY 13—2:20-2:40 P. M.
A healthy Mind.

In helping pupils toward mental health some of the objectives may be:

To appreciate the close relation between mental and physical states.

To understand the effect of worry, anger and fear upon health.

To make a conscious effort to develop characteristics of happiness and cheerfulness.

To realize that each individual must meet others half way.

To learn to respect the rights of others.

Suggestions.

Prepare slogans;
Don't cry over spilt milk;
Don't crab;

A saucer of syrup will catch more flies than a barrel of vinegar;

A smile is worth a hundred GROANS in any market.

Discuss relation between physical health and state of mind. Have pupils to speak or write on how the following affect them—

1. Lack of sleep.
2. Lack of fresh air.
3. A cold.

*Reprint from lesson leaflet supplying follow-up materials.

CLASS DISCUSSION

Insuring Retention. One of the most valuable methods of insuring retention is through class discussions immediately following the broadcast. Attention may be given to the following:

1. Pointing out disagreement, sometimes resulting in debate by members of the class.
2. Mentioning new viewpoints suggested by the lecturer.
3. Rehearsing the most interesting facts presented.
4. Retelling stories and incidents.
5. Making of word lists.
6. Discussing varying pronunciations, styles, and so on.

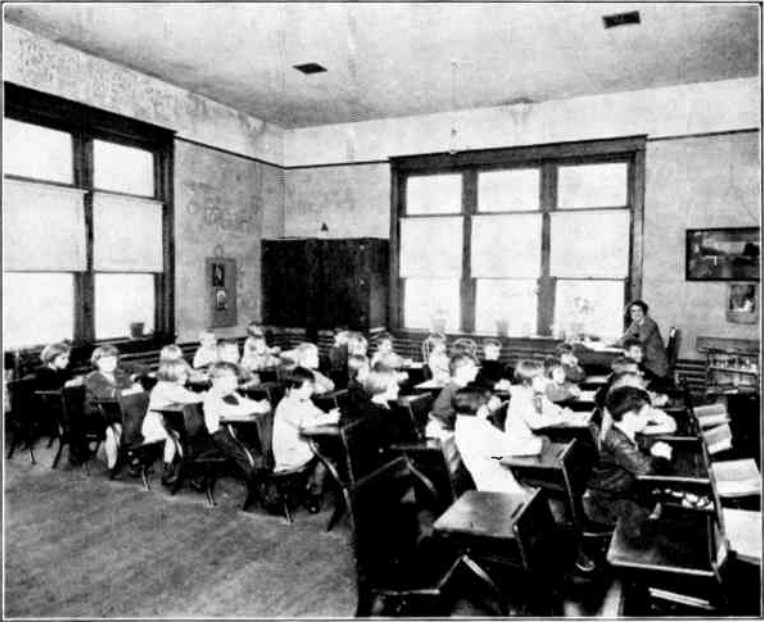
The class discussions may include the above and many other elements which will throw into sharper relief the main points which the radio teacher has attempted to make. On her part, the classroom teacher is quite likely to obtain values which she does not ordinarily enjoy from dependence upon the same text year after year, sometimes without new and fresh viewpoints and information from adequate collateral reading.

Notes. The organization of the notes taken during broadcasts constitutes another very valuable review. Some classes take great interest in the comparing of the notes taken by pupils. This gives splendid opportunity for evaluation of the comparative worth of different points made and facts stated during the broadcast. The majority of classes re-write these notes into permanent note-books, thus preserving them for satisfactory use later.

The writing of essays, orations, debates, and newspaper articles, have been used to advantage—sometimes as the outcome of voluntary motivations, sometimes by teacher assignment. The hope of schools of the air is that essay writing shall be handled in such fashion that it will not become odious.

VOLUNTARY PURSUIT OF KNOWLEDGE

Added Stimulation. Where really good motivation is supplied by the teacher at the microphone or by the classroom teacher, the inspiration given by interesting ideas



FIRST GRADE, *Shelby, Michigan.*
Even the youngest pupils like to listen to stories by radio.

opened up by the broadcast may result in the voluntary choice of projects. In Nature Study, these may take the form of home or school-yard beautification, by the cultivation of flowers and shrubs, landscaping, and the like. In Art Appreciation, they may take the form of classroom beautification. In History, they may result in pupils or groups of pupils determining on study and research to make clear, for example—"some hazy point of American History." Likewise each of the other subjects may present some motive for voluntary acceptance or teacher assignment of projects. In any case, there has been added stimulation to self-activity and the radio has proven itself an Assistant Teacher.

Reviews—Examinations. One other very important method of obtaining the fixation of the broadcast is here approached with caution. Reviews, tests, and examinations, as they have been conducted by many schools, result

in cramming and memorizing of little-understood facts that are quite likely soon to be forgotten. Some teachers succeed in making this drill interesting. Others do not. Nevertheless, radio broadcasts need the benefit of being dignified by the procedure, which the pupil knows, indicates that the teacher considers the subject matter very valuable.

EXAMINATIONS

A Proof of Importance. That is, wherever the broadcast does not succeed in being well-nigh entrancingly interesting, some children will take the matter of listening entirely too lightly. If they say to themselves, "We will not be examined on this and therefore we will study for the next recitation in which we know the teacher will be cross if we make mistakes," the radio lesson is at needlessly unfair disadvantage. The demands of routine winning of grades does promote activity on the part of the children in question. Consequently, it seems necessary that the pupils know that the things which they are learning via the loud-speaker are to receive recognition in tests, mid-terms and final examinations **equal to that accorded learning by the previously established processes.**

Local Use. There will be an increased use of tests both by the microphone teacher on the air and by the classroom teacher from material provided in the lesson leaflets. These will include the true and false, multiple choice and other favorites. One of the finest preparations for dramalogs and likewise one of the best follow-ups is the presenting of the dramalog by the children of a listening class. The latter plan is probably the better. If the cast is chosen before hearing the broadcast each pupil so chosen will learn how to play his part. The dramalog then rounds out a complete service to the classroom.

The following samples of pupils' notes will serve to indicate that boys and girls can successfully follow the broadcast, whether dramalog or lecture.

PHRASE PICTURES

(The following report was submitted by a precocious 5A pupil listening to the dramalog "Ye Olde Days" over station WLW during a program of the Ohio School of the Air.)

I heard some music.....I heard some talking.....Ye Good Olde Days.....The Crosley Players.....Edwards.....John.....They were much like we are.....Priscilla.....Mary, the wife.....Mr. Edwards is going to Boston.....quill pens.....Honor Thy Father and Thy Mother.....Poor Richard's Almanac.....The post is coming school.....Hear the horn.....and talking.....horses' feet.....calling the roll.....Say "Sir".....Copy ten pages of Vergil....."Haste makes waste"....."An ounce of prevention is worth a pound of cure".....listen.....stage-coach.....witchcraft.....comfortable.....Liberty (King George.....Harvard professor.....David goes there.....evening.....Fire in the fire-place.....Girls have a right to education.....Times have changed.....Grammer school for boys.....I heard some more talking.....No man can be beaten with more than forty stripes.....rough corduroy roads.....dressed like Indians.....dumped the tea at Boston.....David is against King George.....taxation.....tryanny.....Taxation without representation is tryanny.....We are free men in a new country.....more music.... ..

(The following was submitted by a child in 7A who had listened to a geography broadcast over the Ohio School of the Air.)

GERMANY

Rhine River and Valley.

- (1) Main street of Europe.
- (2) Has heavy silk trade on its water.

Rhone and Rhine River have their sources 20 miles apart.

- (1) Has important waterfall of Europe.
- (2) Aar River is one of Rhine River's tributaries.
- (3) Rhine River valley is about twenty miles wide.
- (4) Corn and potatoes are chief crops raised in Rhine River valley.
- (5) Large Black forests are in southwestern Germany and are noted for pine wood.

- (6) As trees are cut down, others are planted.
- (7) Mainz is in the Rhine River Valley.
- (8) Cologne is the largest city on the Rhine River.
- (9) Cologne was founded by the Romans in the first century.
- (10) Cologne and Crefeld are silk manufacturing centers.
- (11) Rhine River valley has many historical places.
- (12) Rhine River valley is noted for its vineyards.
- (13) Germany surpasses all other countries in quantity of potatoes and also in the amount of beet sugar made.

At the close of a Story Play and Rhythmics lesson, the Smile Lady suggested that poems might be written on "Brushes." The following written by a fourth grade pupil in Indiana, is typical:

"THE BRUSHES"

The brushes had a quarrel one day
This made the brushes weep.
I heard the big broom say
"The dust I sweep."

Now the bottle brush did work
The broom didn't get to win
The vegetable brush wasn't a shirk,
The hair brush was its kin.

The brushes weren't full of cheer
And they weren't quiet
They were always here
It looked like there was a fight.

Some brushes were plenty best
All the brushes needed rest
The broom was as white as a sheet
But the tooth brush was the best.

A PUPIL'S TESTIMONY

Sixth Grade, Jeffersonville, Ohio

"I have enjoyed listening to the Ohio School of the Air programs. They have taught me many things. I can

get a lot of notes on a lecture when before we had the radio I could only get a few. The radio has helped me to do better writing with pen and ink. I can now write better with pen and ink since I have been taking notes in my radio note book. It has helped me to punctuate as I write and learn to spell new words that I do not have in my school work.

"I have enjoyed listening to the lecturers of well known people. I have heard sixteen lectures in geography by W. R. McConnell, Professor of Geography, Miami University. His geography talks correlated with geography we are now studying. I have heard five lectures given by Harry E. Eswine, Extension Division Ohio State University. One very interesting lecture that he spoke on was Snakes. He told me so many things that I did not know. Nature study is not in the curriculum of our grade school and we relied entirely upon the radio.

"I have heard many lectures by Anna M. Drake, Assistant Secretary Public Health Federation, Cincinnati. Dr. H. G. Southard, Director, State Department of Health, F. H. Waring, Chief of the Division of Sanitary Engineering. The lectures of these three men have correlated with Sanitation we are studying.

"I have also heard interesting lectures by Walter R. Siders, Chairman, Board of Trustees, N. E. A., Earl Hanson, Wilkins Submarine Adventurer, and many others. Looking back over the school year I think of all that I've learned and often I can't remember whether I learned them from my text book or from the radio lectures.

"On the last day of the Ohio School of the Air I heard many people say they were sorry that they would not get to hear the School of the Air until another year, and I was as sorry as they were."

Radio-Record Books. The author has prepared for publication a note-book called a "Log for Radio Journeys." It provides an inexpensive loose leaf cover and sheets for use as the title page of each radio lesson report. Blanks are included in which may be written the name of the pupil, the grade, the school, the title of radio series, the

radio station, the teacher at the microphone and the title of the lesson. There is space to indicate the pupil's estimate of the speaker, the satisfactoriness of reception. Also there are the suggestions, "What new facts did you learn?", and "Make a brief outline of the lesson."

Repetition. As radio continues to win its way into greater acceptance there will be developed a wider and wider variety of use of note-books, discussions, debates, projects, tests and other devices. Eventually the repetition of many broadcasts heard on the air will be possible. Phonograph records will be available. The future will provide its own intriguing developments.

AN APPRECIATION

I left my work undone today,
I knew that no one would care,
For Uncle Ben had a treat for us;
Edmund Vance Cooke was on the air ! !

We watched with the maid in the Shave Man's Store,
While Daddy was iced, and stayed
To hear the girl at the football game,
"Yap, yap," while the game was played.

(Although "Yap" was not the word,
'Twas something equally absurd.)

What tho the garment still held a crease,
And the dust on the mantel lay,
Our memory holds the good things heard;
Edmund Vance Cooke was on the air today!

So I send to you a housewife's thanks,
For the School of the Air today,
Tomorrow, yesterday and thereafter,
So long as on the air it may stay.

EDITH M. PATTERSON.



—*Courtesy A. Atwater Kent.*

2000 Students Listening to President Hoover, Little Rock High School
Little Rock, Ark.

CHAPTER VII

MEASURING THE EFFECTIVENESS OF EDUCATIONAL BROADCASTS TO SCHOOLS

Lack of Agreement. Measurements in the domain of education are difficult. From time to time a new scheme of measuring, a new device, a new system is evolved, passes through a hey-day of popularity and then is discontinued and superseded by another. In fact there is no close agreement on the objectives of education itself. Nor is there any wide acceptance of any one system of teaching.

While devotees of the Dalton and Winnetka plans are each quite certain that their plan is best, yet the old type recitation hangs stubbornly on and all manner of combinations of socialized recitations, supervised study, lecturing and so on, still prevail.

Manifestly teaching by radio cannot sensibly expect to sweep into widespread acceptance. What should normally be expected is that there will be every grade and shade of thought from those who hail it as a panacea to those who would ignore it, heap derision upon it, or blithely try to "laugh it off."

Workers vs. Efficiency Experts. In the face of a concerted program of research on the part of several national groups, the author cannot forbear pointing out that as yet the time-keepers and efficiency experts nearly outnumber the laborers. This is quite likely to result in research rendering less practical assistance to the broadcaster of school programs than could be afforded by helping him financially. There seems to be a tendency of broadening the field of such efforts until the whole scope of education is taken in, making the final result indefinite and unconvincing.



The Columbus Federation of Womens Clubs comes to the support of Art Appreciation broadcasts.



A SMALL BUT SIGNIFICANT GATHERING

Teachers at the microphone and at the loudspeaker gather to compare notes—Columbus, Ohio, November 22-23, 1929.

Scope. Thus when the objectives of education are introduced in to the research, as some would do, the investigation is likely to end in a row of question marks. For the research to be of constant and practical value, it must be narrowed in its scope. It certainly should not attempt to prove axioms. For example, one research specialist suggested that he would not know, short of exhaustive studies, whether there would be the slightest educative value in having Henry Van Dyke read his poems on the radio or in having Hamlin Garland tell of the writing of the Middle Border books. Further, he expressed the same doubt in regard to any other feature that might be broadcast.

Lengthy Objective Tests. Certainly, one should not become so research-obsessed as to require lengthy objective tests to know that which is so inescapably apparent. If Henry Van Dyke's poems, imprisoned in cold and emotionless type can have such value as to be studied by pupils and teachers, it should go without necessity for proof, that those same poems with the feeling voice of their creator to interpret them to the hearer, should be still more worthwhile. And experience proves it. Pupils by the thousands report that they will never again read "Lincoln, the Man of the People" without reliving the thrill Edwin Markham afforded them as he read it over the radio.

Reports Needed. The broadcaster of school programs is hungry for reports from his listeners. Yet, unless he makes it very easy for them to report, busy teacher will assume that since the broadcast is all right and they can use it in many advantageous ways, there is nothing special to report. If they decide that it is not satisfactory, they may merely tune out without reporting their dissatisfaction. The broadcaster needs reports in either event.

Printed Forms. Accordingly the Ohio School of the Air distributes printed blanks to listening teachers. One small group of a score of schools are relied upon for the the most regular measuring of results. The other reports coming from the field as a whole are quite likely to be of a confirmatory nature, though less regular in arrival.

The blank form is shown on the following page:

STATE DEPARTMENT OF EDUCATION

Ohio School of the Air Report Form

Radio Speaker _____ Date _____

Subject of Broadcast _____

Teacher Reporting _____ School _____

School Address _____

How many 1st grade pupils listened _____, 2nd _____; 3rd _____; 4th _____

5th _____; 6th _____; 7th _____; 8th _____; 9th _____; 10th _____;

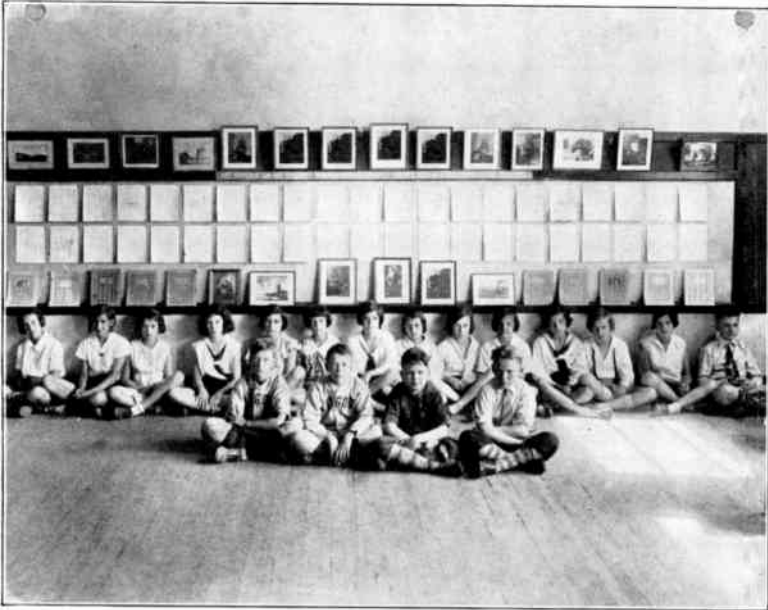
11th _____; 12th _____.

Please check all the statements which express your comments on the radio program. Use a separate sheet for each program, and return this sheet to the Ohio School of the Air, State Department of Education, Columbus, Ohio.

How many additional report forms would you like us to send you?

- | | |
|--|---|
| <p>1. Preparation for the program was made by
 class discussion
 outside reading assignments
 reading material in textbook</p> <p>2. The radio reception during the talk was
 goodfairweaknoisy
 some fading</p> <p>3. We listened to the radio talk in
 own classroomanother classroomsome other room
 auditorium</p> <p>4. The subject matter presented was
 suited to the age of the pupilstoo difficulttoo simplefitted into the curriculumwell organizedpoorly organized</p> <p>5. The subject matter presented had
 correct emphasis on detailtoo much emphasisnot enoughtoo much repetition of materialnot enoughthe proper amounteasily recognized objectives</p> <p>6. The radio speaker talked
 too fastfairly rapidlyneither too fast nor too slow
 too slowlyrather slowly</p> <p>7. The vocabulary of the speaker was
 suitabletoo many hard wordsa few hard wordstoo simple</p> <p>8. The speaker seemed to be
 reading his talkusing notestalking freely without any notes</p> | <p>9. The voice of the radio speaker was
 clearpleasingnaturalmonotonousdisagreeable</p> <p>10. The radio speaker had
 good enunciationfaulty enunc.good pronunciation
 faulty pronc.</p> <p>11. The pupils interest in the talk was
 greatfairnot great
 very littleindifferent</p> <p>12. During the radio lesson the pupils
 took notesused books
 answered radio teacher's questionsfollowed radio directions</p> <p>13. The pupils were restless
 towards the end of the talk
 at the beginning of the talk
 throughout the talkat no time</p> <p>14. As a result of the broadcast pupils
 asked questionsasked for material to readbrought something to classfollowed out some idea suggested</p> <p>15. The radio program was followed by
 class discussionoral testswritten testsreportswriting compositions
 a group project</p> <p>16. The total effect of the radio lesson
 excellentgoodfair
 poorinspirationalinformational</p> |
|--|---|

IMPORTANT. Please use back of this sheet for further comments and suggestions.



AN EXAMPLE OF MOTIVATION.

Sixth Grade, Kilgour School, Cincinnati, Ohio.

The children are some of the winners of Prize Pictures offered during broadcasts of 1930-31. The awards were made for having written superior reports of radio talks on Art Appreciation through the study of pictures.

The framed pictures displayed are some of those won by members of the class. The two rows of white sheets are samples of pupils' reports, and letters of congratulation written by the Radio Teacher, William H. Vogel.

On the chalk ledge are examples of Art Booklets made by all pupils as a regular art exercise. These each contained twenty written compositions on as many pictures. Each composition was accompanied by a miniature copy of the masterpiece described, in full colors and neatly mounted on a separate sheet. The covers were works of art involving original designs in speed ball pen work and poster colors. The display resulted in stimulating all art work.

SUMMARY OF TEACHERS REPORTS ON A HISTORY
DRAMALOG*

PRESENTED BY THE CROSLEY PLAYERS OF CINCINNATI

Some pupils in all grades from the third to the twelfth inclusive listened to the History Dramalogs, but a very large majority of the listeners were below the tenth grade.

I. Pupil Attitude during the Broadcast. According to the reports from the classroom teachers, 50% of the pupils showed an excellent attitude during the broadcast. They were very attentive and continued actively interested throughout the presentation of the dramalog. The teachers further report that 36.6% of the pupils showed a good attitude while 9.09% showed a fair attitude and 4.55% a poor attitude. The words: "very good," "very much interested," "fine attention," "good," and "not good" are used in describing the pupils' attitude during the broadcast.

The following remarks regarding pupil attitude are typical of those made by cooperating teachers:

1. Attention of class perfect as the subject is one on which there has been considerable discussion in class.
2. The children were in an expectant mood; attention was keen.
3. The children were very attentive and interested.
4. Pupils gave exceptionally good attention.
5. Exceptionally interested in the dramalog.
6. The children were alert. They enjoy it—so does the teacher.
7. Interest was good, partly because it was created before the lesson began.
8. Children listen well to clear, direct words.
9. All but one were able to grasp it.

*By Research Director C. M. Koon, Ohio School of the Air.

10. This was a "Z" group and as a rule it is rather difficult to secure and hold attention. They were, however, very much interested in this presentation and gave good attention.
11. The story did not seem to attract their attention, as it was so different from any of the stories read to them.
12. Children seem to understand the few parts I had read to them previously, but attention as a whole was very poor.

II. **Voice and Personality of the Radio Players.** According to reports, 45.45% of the classroom teachers considered the radio personalities and voices as excellent; 40.91% considered them good and 13.64% considered them fair. The words "likeable," "intonation varied and stimulating," "good," "very satisfactory," "very plain," "fine," "excellent," "alright," "fair," "a little hard to understand," are used to describe the voice of the radio players. The following comment was made regarding the voice and personality of the radio players:

1. The voice and personality of each player was very effective.
2. Voices seemed very real and fitted the different characters.
3. Voices seemed fitting, some cultured, some dissatisfied.
4. The "mother's" voice certainly sounded very motherly.
5. Voices were satisfactory—especially that of "Tecumseh's mother."
6. Possibly the "daughter's" voice was too mature for her age.
7. Speed was too great for children to follow.
8. For high school students, I should have preferred the treatment to be on a slightly higher level.
9. Clearness and enunciation somewhat lessened by

attempt to imitate voice of characters they are representing. Perhaps this cannot be avoided.

10. Better enunciation needed.
11. Where there are different speakers it is difficult to hear when one speaks in a loud tone with a great deal of volume, and another in a low soft tone. The quality of voice should be similar if possible.

III. Subject Matter of the Radio Lesson. Reports indicate that 40.91% of the teachers regard the subject matter as excellent. It was very appropriate, interesting and well adapted to the pupils. It was rated as good by 45.45% and fair by 13.64%. The words "suitable," "fair," "well organized," "closely related to the curriculum," frequently recur in describing the subject matter. The following comment was made:

1. Excellent, fine, entirely satisfactory, very satisfactory, good, fair.
2. Some of the conversation was above their understanding but they could have followed had it been given more slowly and distinctly.
3. It seemed to be entertaining as well as educative.
4. Very appropriate. Send more like it over the air.
5. We have just been studying these characters in history and this lesson gave a very fitting climax which I am sure will cause it to stay with the pupils.
6. All material pertinent.
7. We have but little material in our school text on Indians and were glad to get this material.
8. It was well adapted to junior high use.
9. Lesson material was very satisfactory for sixth. Fifth listened by choice.
10. Lesson material was too advanced for children of this age (third and fourth grades).
11. Don't try too many things at one time.

IV. Method of Presenting the Lesson. The method of presenting the lesson was considered excellent by 42.86% of the teachers; good by a similar percentage and fair by 14.28%. The words, "vocabulary suitable," "plans and objectives clear to the classroom teacher," "common, vivid words." frequently recur in describing the method of presentation. An examination of comment by the teachers indicates that as a rule the teachers have been favorably impressed with the parts taken by different characters but have been disturbed by background noises which were intended to add color or atmosphere. The following comment has been made by participating teachers:

1. Splendid for grades.
2. The important fact or points were given forcibly and well organized.
3. It showed genuine artistic talent.
4. Give us more dramalogs.
5. Pupils are more interested in dramalogs than addresses.
6. I was satisfied.
7. An excellent presentation except for the fact that "mob" background was too loud. The speaker in the interludes could not be heard.
8. Anxious-to-please and talking-down-to-small-folks words do not hold our group.

The following suggestions have been made for improving the presentation of the dramalog:

1. Since a thorough introduction is necessary, I believe if the teacher would talk a bit slower and emphasize its importance, it would be improved.
2. Spell the difficult words.
3. A little less wide variation in tone. I realize, too, it is necessary for effectiveness. At same time, deep impressive speech, and expression of sudden emotion are difficult to understand without changing the radio. Have more nearly uniform volume.

4. Have the principle actor do more talking.
5. A better introduction as to what the lesson was going to be.
6. More vigor and action.
7. More lively and colorful. It had enough of humor to make it appeal to eighth graders. It was very easy to follow and understand.

CONCLUSION

In conclusion, 85% of the teachers regard the radio dramalogs as excellent or good, and less than 2% of the teachers consider them poor. The composite value of the dramalogs, as determined by teachers' reports, would be 87.62%. In commenting on the usefulness of the lessons teachers state that the pupils get a better idea of historical settings; the dramalogs make the fact more impressive and real, which produces lasting effect on the pupils.

While the advanced material in the *Courier* seems to be giving a good general background, teachers make a few good suggestions for improving it. They would like to have the list of the characters to appear in the play and a statement of the part that each one will play. References and illustrations are good also in improving this material.

At the close of each term's broadcast to schools, the Ohio School of the Air sends annual report blanks to the teachers and principals of the listening schools. The following reprint is condensed.

State of Ohio, Department of Education, Columbus

OHIO SCHOOL OF THE AIR

Report for 1930-1931

To the Principal (or Rural Teacher):

The Department of Education desires information regarding the use that is being made of the educational broadcasts of the Ohio School of the Air. Please fill in all blanks that apply to your school and return promptly to this office in the enclosed envelope.

J. L. CLIFTON, Director.

Name of School _____ Type of School _____

(City High, One-room Rural, Etc.)

Address _____ Principal _____

Note:—Copies of this report blank are being sent to teachers and other school officials on our mailing list. It is to be filled out by

principals, executive heads of county districts, and rural teachers who have radios in their schools. In some instances copies may be sent to more than one person in a school. If so, please send a combined report for the building.

If your school has had no radio receiving equipment during the present year, check here(), and turn to page 4, question 7.

I—RADIO EQUIPMENT

1. How many battery sets are installed in your school? _____
2. How many unit electric sets are installed in your school? _____
3. If you have a central set with loud speakers in different rooms, how many rooms are served by this central set? _____
4. If you have a central set, do you have a microphone? _____
A phonographic attachment? _____ A switchboard? _____
Make? _____
5. Number of radio sets installed:
(a) Previous to January 1, 1930: _____
(b) Previous to January 1, 1931: _____
(c) Since January 1, 1931: _____
6. Make (or makes) of radio sets _____
7. How was the equipment obtained? _____
8. How satisfactory is the equipment? _____
9. Do you plan to have additional radio equipment next year? _____
10. If so, will additional pupils listen in? _____ How many? _____

II—USE OF THE RADIO LESSONS—

1. How many first grade pupils listened? _____; 2nd. _____; 3rd _____; 4th. _____; 5th. _____; 6th. _____; 7th. _____; 8th _____; 9th _____; 10th _____; 11th _____; 12th _____; Total _____
2. Were broadcasts received in classrooms? _____
In Auditorium? _____
3. What is the average number of minutes each pupil listened per week? _____
4. When did you start using the programs of the Ohio School of the Air? _____
5. What was the nature of the class preparation for the broadcasts? _____
6. What was the nature of the review after the broadcasts? _____
7. Explain how the radio lessons were correlated with the regular classroom instruction in your school _____
8. List the chief benefits the pupils derive from the radio lessons. _____
9. List the chief difficulties that were met in using the broadcasts. _____
10. What uses were made of your radio equipment in addition to receiving the programs of the Ohio School of the Air? _____
11. How does your afternoon recess period affect your use of the Ohio School of the Air? _____
12. Have you photographs of your equipment or of classes listening? _____

III—EVALUATION OF THE BROADCASTS—

Of the radio lessons received in your school, indicate their relative value by placing the proper letter in the parentheses at the left of the feature: E—excellent; G—good; F—fair; P—poor. On the lines following the feature explain briefly your reasons for the rating you give.

- | Features | Reasons for Rating given |
|---|--------------------------|
| () Stories for Primary Grades: | _____ |
| () Story Plays and Rhythmics: | _____ |
| () Art Appreciation: | _____ |
| () Health: | _____ |
| () Geography—Studies in our Own Country: | _____ |
| () Geography—Studies in Foreign Lands: | _____ |
| () Nature Study: | _____ |
| () History Dramalogs: | _____ |
| () General Science: | _____ |
| () Citizenship: | _____ |
| () Guidance | _____ |
| () Modern Adventure: | _____ |
| () Current Events: | _____ |
| () Our Government: | _____ |
| () Our Federal Government at work: | _____ |
| () English and Literature: | _____ |
| () Botany: | _____ |
| () Physics: | _____ |

IV—SUGGESTIONS FOR IMPROVING THE WORK OF THE OHIO SCHOOL OF THE AIR—

Subject Matter

1. In the radio lesson series you used, what additional topics would you like to have presented? _____
2. In what additional subjects might radio lessons be arranged to assist you? _____
3. List some of the topics in these subjects you would like to have presented? _____
4. Would you prefer that the broadcasts be limited to a few subjects superlatively presented? _____

If so, list in order of your preference the subjects that should be presented. _____

Methods

- 5. List some of the characteristics of the successful broadcasting teacher. _____
- 6. Does the average radio lesson provoke thinking by the pupils? _____
How might it be made more effective? _____

Objectives

- 7. In your opinion what should be the objective or objectives of the Ohio School of the Air? _____
- 8. In your opinion, is radio a valuable supplement to regular school instruction? _____ How might it be made more valuable? _____
- 9. List some additional suggestions for improving the work of the Ohio School of the Air. _____

Equipment

- 10. If your school has not had radio receiving equipment, during the present school year, to what is this fact due? _____
 - 11. If your school has not had radio receiving equipment, do you plan to have equipment next year? _____
- If so, estimate the number of pupils that will listen in. _____

Note: If you have had photographs taken will you send us prints for use in the Courier, in exhibits and in newspaper and magazine articles? We need pictures from every listening school.

OHIO SCHOOL OF THE AIR

REPORT FOR 1929-30*

N. B. This report covers one-half the schools listening in the spring of 1930.

1. Radio Equipment

1. Number of battery sets	50
2. Number of unit electric sets	372
<hr/>	
Total number of unit sets	422
3. Number of rooms served by centralized radio equipment	2249
Total number of rooms served without moving equipment	2671
4. Total number of microphones	75
Total number of phonographic attachments ..	102
Total number of switchboards	108

**Prepared by Research Director, Ohio School of the Air*

5. Number sets installed previous to—	
(a) January 1, 1929	132
(b) January 1, 1930.....	244
(c) Since January 1, 1930	81
	457
Total	457

6. Makes of radio sets—	
	No. Sets
(A)	69
(B)	68
(C)	60
(D)	38
(E)	22
(F)	13
(G)	12
(H)	11
Other makes	72

8. How satisfactory is the equipment? Excellent 250, Good 48, Fair 40, and Poor 11.

9. Number of Schools that plan to have additional equipment next year 90

10. Number of additional pupils that will listen ..16,638

11. Uses of the Radio Lessons

1. Number of pupils that listened	
First Grade	10,107
Second Grade	9,435
Third Grade	9,834
Fourth Grade	9,757
Fifth Grade	10,092
Sixth Grade	10,477
Seventh Grade	10,622
Eighth Grade	9,297
Ninth Grade	6,782
Tenth Grade	3,701
Eleventh Grade	3,051
Twelfth Grade	2,480
Grade not given	7,137
Total	102,772

2. Number of Instances that Broadcasts were received in

Classrooms	288
Auditoriums	182
Music Rooms	3
Study Hall	3
Radio Room	3
Hall	2
Basement	1
Special Room	1
Office	1
Dining Room	1
3. Average number of minutes pupils listened per week	41.98
4. Number of weeks (average) that the Ohio School of the Air programs were received during the school year 1929-30	23.18

HOW RADIO EQUIPMENT WAS OBTAINED BY SCHOOLS

Material taken from the Annual Report during a Special Study made in 1930.

Board of Education	82
Parent-Teacher Associations	79
School Entertainments	74
Pupils raised funds	48
Paper Sales	26
School Funds	26
Gift	26
Donation of Senior Class	20
Mothers Clubs	10
School Clubs	7
Public Subscription	6
Community Club	6
Generosity of Dealer	6
Sale of Magazines	5
Music Club	4
Teachers Building Funds.....	3
Loaned by principal	3
Athletic Fund	2

Radio Club, Alumni, Home and School Association,
Property of Supt., Different organizations, Saving Funds,
Spring Festival, Extra Curricular Fund, Christmas Fund
each 1

RELATIVE NUMBER OF CLASSES USING THE BROADCASTS

As determined by the relative number of reports.
From Special Study made in 1930.

SERIES	NUMBER OF REPORTS FROM TEACHERS and PRINCIPALS
Geography (Own Country)	351
Stories	310
Story Plays and Rhythmics	309
Geography (Foreign)	286
Nature Study	277
Mound Builders	265
Current Events	227
History Dramalogs	220
Art Appreciation	194
Health	184
Literature	182
Citizenship	117
Drama	106
Physics	92
Music	92
Chemistry	88

THE RELATIVE VALUE OF THE DIFFERENT FEATURES BROADCAST

As determined by reports from principals who used the broadcasts.
Ranked in order from the highest down.

FEATURES	Assembled Values		Fair	Percentage Values
	Excellent	Good		
Geography (Own Country) ..	59.30	40.70	—	90.93
Geography (Foreign)	52.52	47.48	—	90.252
Art	31.91	68.09	—	88.191
Current Events	29.19	70.81	—	87.919
Nature Study	27.09	72.91	—	87.719
Citizenship	26.78	73.22	—	87.678
Health	21.77	78.23	—	87.187

Stories for Primary Grades....	8.24	98.66	—	85.824
Mound Builders	18.96	81.04	—	86.896
Literature	14.08	85.92	—	86.408
Story Plays and Rhythmics	11.59	88.41	—	86.159
Stories for Primary Grades....	8.24	98.66	—	85.824
Physics	1.32	98.68	—	85.161
History Dramalogs		100.00	—	85.000
Music		89.62	10.38	83.962
Chemistry		78.38	21.62	82.838
Drama		73.87	26.13	82.387
French		54.76	45.24	80.476

CHARACTERISTICS OF A SUCCESSFUL BROADCAST-
ING TEACHER

Summary of replies taken from the Annual Report
During a special study made in 1930.

Voice		Deliberate Manner	1
Good Voice	48	Kindness	1
Pleasing Voice	39	Complete Self Possession	1
Clear Voice	33	Alert	1
Well modulated Voice	9	Conversational Manner	1
Low Voice	5		
Strong Voice	3	Material	
Expressive Voice	2	Well outlined and plan-	
Heavy Voice	1	ned	15
Audible Voice	1	Suitable Topics	7
Attractive Full Voice ..	1	Well organized sum-	
Voice Control	1	mary	6
		Detailed explanation ...	6
Speech		Brevity of material	4
Good Enunciation	45	Tell personal incidents	3
Slow Speech	25	Stimulating material ...	3
Distinct Speech	25	New material	3
Good Inflection	4	Illustrations	2
Intonation Varied	1	Good material	2
Clear Expression	2		
Clear Cut Language ...	1	Method	
Concentrated Speech ...	1	Keep on child's level ...	34
Good Diction	1	Simplicity of language	24
		Repetition	6
Manner		Vocabulary	5
Concise Presentation ...	4	Emphasis	3
Cheerfulness	2	Excellent delivery	2
Snappily Presented.....	2	Definite aim	2
Recognize Children	1	Easy to follow	1
Sympathetic	1	Time for thinking	1

Speaks to the point	1	Ability	
Well presented	1	Knowledge of subject ..	23
Personality		Classroom experience ..	9
Interesting	21	Understanding of pupils	8
Humor	17	Story-telling ability	2
Pleasing personality	15	Resourceful	1
Enthusiasm	8	Dramatic ability	1
Imagination	1		

A CONTROLLED EXPERIMENT

Wisconsin. During 1930 an experiment was made by Wisconsin, using as its field the schools of Dane County, Wisconsin. Its purpose was to determine whether children in grade schools can be educated by means of supplementary radio talks as well as they can by supplementary talks given by teachers in the classroom. Dr. H. L. Ewbank of the Department of Speech of the University of Wisconsin, was in charge and the broadcasting was done over station WHA.

Control Schools. In the words of Dr. Ewbank, "Twenty-five experimental schools were chosen by the County Superintendents as providing a cross section of the desired group. A group of twenty-five control schools as nearly like the twenty-five experimental schools as possible was also chosen. These control schools did not receive the broadcasts but were taught the subjects in the usual manner. The children concerned were those in the sixth, seventh, and eighth grades."

The Broadcast. "Current events were broadcast Mondays, Wednesdays, and Fridays from 1:00 to 1:15 P. M. and Music lessons Tuesdays and Thursdays from 1:00 to 1:20 P. M. In the lessons in Current Events students in both experimental and control groups were provided with the same study materials. We found that many of the schools were already supplied with the magazine "Current Events," and, therefore, decided to use that publication as the basis for our broadcasts.

Testing. "Students in the control schools studied and recited on the materials in the magazines, spending the same amount of time as was given to the radio lessons. The

teachers were urged not to spend extra time or do any extra coaching, but to conduct the classes as though the experiment were not in progress. Teachers in the radio schools were instructed not to drill the students in the information given in the radio lessons."

Concluding The Experiment. Examinations were given to both groups at the end of four and one-half weeks and later at the end of the experiment. Each examination consisted of one hundred statements to be marked "T" or "F" for "True" or "False." Fifty statements were taken direct from the magazine and fifty from the broadcast.

In the case of the music the results were tested in three ways:

1. The making of a scrap book of music information.
2. A check on the effectiveness of teaching rhythm exercises and songs.
3. Comparison of scores made in experiment and control groups at beginning and close of course.

CONCLUSIONS

1. Radio lessons were highly successful in teaching music, judged by the progress made.

2. They were almost equally successful when compared with whatever other instruction was given to the members of the control group.

Benefits. The results of the Current Events series were not quite so definite, due in a large measure it was thought, to the fact that different people gave that series whereas the music was conducted by the same individuals. However, on the basis of their results the Wisconsin experimenters concluded that the radio lessons taught the materials somewhat better than they were taught by the teachers without the aid of the radio. In general they concluded that the broadcasts were especially valuable in expanding the pupils' interest in people, things, and events. This resulted in fuller reading of newspapers, magazines, and

books. It enlivened discussions. It created an interest on the part of the parents so that many of them listened in.

Equalization of Opportunity. Especially in the schools more distant from the city, children expressed their appreciation of the radio as a means of equalizing educational opportunity. They said: "We don't have a chance to play in school orchestras or bands, or even to have musical instruments or teachers in the use of them, but this gives us a chance to know about these instruments and music and to want to learn to play and to take part in musical organizations."

Such experiments as the Wisconsin one should be repeated and still further effort made to arrive at a fair evaluation of radio as compared with other supplements of classroom instruction. In the meantime, as will be pointed out in Chapter IX, the existing broadcasts for schools must be improved as much as adequate support and management can make possible. The finest research, if dealing with broadcasting that could easily be improved, will be largely wasted. Research's largest service begins when the broadcast has been enriched as much as money, conscientious effort and good judgment can accomplish. Even so, the field will be large and research of great importance.



R. C. HIGGY
Director of WEAO
Ohio State University

Radio is becoming recognized as a wonderful extension of the work of any University.

CHAPTER VIII

THE REUNION OF HOME AND SCHOOL

An Important Factor. We have emphasized that participation and not mere listening is the goal of classroom radio. The daily mail emphasizes the fact that the listening results in motivation of effort, not only in the schoolroom but also in the home and the shop. A perusal of the letters, thousands of which have been studied, shows how the merest chance listening results in "doing something." The listener voluntarily participates in the movement. Of course women predominate among home listeners. They listen regularly. The housewife takes notes on the school broadcasts and discusses them with her children. She sends in suggestions for new features, new speakers, or helpful criticisms on lessons as given. And most important, she aggressively promotes the equipping of her local school.

Support of Parents Needed. In fact radio education might have added new listeners so slowly, without the voluntarily proffered support of thousands of mothers, that it would today be in a much less certain stage of acceptance than it is. In the very nature of the situation, busy school executives and classroom teachers had much less opportunity of listening than had the home listener. If their school was unequipped, (less than 1% of them were in 1929) and they had not yet come into contact with a teacher whose classes were already listening, they were inclined to think what they had heard of school radio was mere newspaper talk or dealer propaganda for the sale of sets. Even after the conferences and conventions began to give the subject attention, and after the profession's own per-

iodicals dignified it by serious discussion of its potentialities, the movement met considerable indifference, skepticism and belittlement.

THE HOME AND SHOP LISTENER TO THE RESCUE

Parents Respond. But like the baseball pitcher who knocks out winning runs for his team, radio saved itself by ministering to the homes of the nation directly. Not only mothers, who of course can listen to a daytime broadcast in greatest number, but also other members of the family listened. Night time workers, telegraph operators in lonely towers, captains on lake and ocean vessels, and other men during illness, listened, were convinced of its value and became promoters of radio education. Radio, while directing its program to the classroom, simultaneously carried its case straight to the court of last resort, the fathers and mothers for whom the whole educational fabric is woven. Their interest in education is often deeper than that of the educationalist, though admittedly the school man may be the better informed.

Shop Listeners. We should not forget the "shop" listener, nor even the traveller, since the equipping of automobiles is becoming common. Restaurants, dry goods stores, hardware stores, music stores, garages, gasoline stations and a thousand other varieties of places of business are day time listeners. Many of them report that a two o'clock school broadcast finds them free to listen. Even though a customer comes in, the audience is merely increased, such is the interest in Geography presented by an expert or a History Dramalog that turns dates into drama.

Hotels. While at first flush it might seem that few guests in a hotel could or would listen at ten o'clock in the morning or two in the afternoon, yet the Damrosch Lessons in Music, the American School of the Air, the WMAQ school broadcasts, and the Ohio School of the Air, all report considerable appreciation from such hotel room and hotel lobby listeners. The interest is not as general as that in a

strictly humorous or entertainment feature such as Amos 'n Andy but it is unquestionably a strong one.

A Cross-Section. A study of the letter heads used in writing to Schools of the Air is quite illuminating. Every manner of industry, business calling, vocation and avocation is represented. In succession one may pick up, interspersed with letters from teachers and pupils, a letter from a farm wife, dealer in antiques, druggist, school board member, railroad employee, tire repairman, dry goods merchant, lawyer, contractor, former teacher, nightwatchman, dog raiser, poultry man, hotel clerk, truck gardener, lecturer, physician's wife, hardware merchant, cripple, taxicab driver, poet or would-be poet, blind person, stockman or traveling salesman. In the course of a few months the list becomes almost a directory of vocations.

Homes First. Such letters come not only from communities whose schools are equipped, but also from hundreds whose schools are not yet listening. Less than half of our schools are as yet equipped. Every such letter is an evidence of the generality of interest in education by radio, and an indication that some day the schools of that particular community will also be in the audience.

Former Teachers Active. Especially active are the former teachers. They voluntarily promote the idea in their communities and account for much of the growth in classroom listening. Their enthusiasm in the process of education causes them to welcome educational broadcasts with joy. Thus one writes: "I used to be a teacher, but now I am a very busy farm mother. Our school does not as yet have a radio, but I shall do all I can so that they may have one soon. Will you please send me a copy of the School of the Air Courier?"

And another note cheerfully written:

"I am a school teacher but am not in the school-room. My health has failed and I am forced to remain at home, but believe me, I am listening in on the School of the Air every day. I am taking notes and passing them on to worthy children who have not the privilege of listening in."

PRESS RELEASES

Other Mediums. Schools of the Air should not rely entirely upon the radio to reach the home listeners. Of course a great many people do happen to hear an initial school program and then, taking note that it is a regular daily feature at the same time, they become regular listeners. But it is not well to consider radio and the press separately. They assist each other. Although there is some disposition at the present writing for a jealousy to develop, yet it would seem that in the last analysis there is no occasion for quarrels among books, magazines, newspapers, motion pictures and radio. Each has an element of superiority in some phase of service.

The man who has seen a baseball game is more avid to read the account of the game than if he had not witnessed it. Radio, dealing with things of which people have read, is likewise more interesting. In corollary the majority of people read with increased zest, items to which radio has called their attention.

Advance Information. Those schools of the air which have made the most rapid progress have used press releases extensively. These take the nature of advance notices of radio series, releases concerning single programs, and sometimes reports concerning the response of the listeners. Since the cost of sending such a series of lesson leaflets as the Ohio School of the Air Courier (230 pgs.) would be prohibitive, press releases, going as they do in the case of Ohio, to five hundred newspapers each week, succeed in acquainting additional millions with the School of the Air.

Magazines—Meetings. Then there are magazines of many kinds interested in education by radio. It is worth the time of the Schools of the Air to submit articles to them as often as possible. Then there is the especial cultivation of the audience through various organizations such as the Parent-Teacher Associations, Federations of Women's Clubs, and so forth. Such organizations not only include the announcements in their publications, but often times



—*Courtesy Crosley Radio Corporation.*

MRS. D. B. FOSTER, *Bloomington, Ind.*
A Blind Listener and a Devoted Pupil



MRS. MARY McCONNELL, *Mt. Sterling Ill.*
—*Mother of Dr. W. R. McConnell*

Approaching the century mark but interested in learning of modern things and modern ways.

have them made verbally at local, state and other meetings. This spreads the gospel most effectively.

By a combination of lesson leaflets, newspapers, magazines, publicity and announcements in meetings and on the air, it is possible to build up a special audience much larger than that which would be provided in the ordinary hit and miss broadcasting. This is shown conclusively in the mail which reaches schools of the air.

Small Percent Report. To correctly number the listeners to school radio is impossible. The author has in various meetings asked for a show of hands on the question, "Are you listening to the Ohio School of the Air." The show of hands is, in every case much larger than one might expect. Scores of homes out of every hundred apparently listen with considerable regularity. And yet the added question "Have you ever written a letter to the Ohio School of the Air" causes few or no hands to be raised. They listen, appreciate, and enthusiastically claim they profit greatly—yet they do not write. This fact is one of the walls to be climbed in promoting a program of organized adult education.

Yet these same people do make their weight count. The following letter, which comes from a superintendent, H. T. Kittle, Kinsman, Ohio, is quite typical:

"Some new teachers came into the staff at Kinsman this year and I enjoyed watching their conversion to radio. They evidently considered that they had no time to tune in the School of the Air. I said nothing. As I expected would happen, the people of the town unwittingly but effectively gave them the radio viewpoint. For example, one mother chanced to meet one of the teachers on the street after school and immediately remarked, "Wasn't that a fine radio lesson today! Your grade certainly must have received a lot of good from that broadcast." That teacher soon began to tune in and has become an enthusiastic user of the Ohio School of the Air.

All the radio programs need is a fair hearing. There are few people who can teach geography like McConnell does, or health like Anna Drake or Rhythmics like the Smile Lady. We like the other courses, too. HistoryDramalogs have made history seem more real to our pupils. The noted men and

women who have come to my classrooms by radio have made my job more interesting and more successful. Keep up the School of the Air."

The following letters are fraught with significance not only in classroom but also in adult education. In the words of F. J. Prout, Superintendent of Schools, Sandusky, Ohio:

"We are very happy over our results from the second year of the Ohio School of the Air. There is a real stimulation from these programs. You may be interested to know that the pupils interest is being transferred to the homes. A recent survey indicates that these School of the Air programs are being received in over thirteen hundred homes. In the evenings, parents and pupils are checking each other on the programs of the afternoon. This looks like a genuine case of adult education."

In the words of G. E. Carr, Superintendent of Public Schools, Logan, Ohio:

"Our tabulated report shows that 465 families in Logan listened to the programs of the Ohio School of the Air. This is probably about 40% of the families. It seems to me that this is high and shows that the programs are very much worth while. We hope that funds will be appropriated in order that the work may be continued."

HOW CITIES EQUIP

A Safe Procedure. The ordinary procedure in equipping of the schools of a community is for a single set to be installed. Then a few rooms are added. Later, sets are installed in added buildings. The pudding having been tasted and found good, the remaining schools are equipped. And through it all, the parent's friendliness to the idea hastens the process. Home use of radio will continue to result in the growth of school use, and it is therefore well to consider them together. This has been the most encouraging phase of the growth. It is a safe procedure. Already so many schools are listening that the cost of each lesson per pupil is but a fraction of a cent (figures from Ohio School of the Air).

HOME AUDIENCE OUTNUMBERS SCHOOL GROUP

Periods of Rapid Growth. The Ohio broadcasts had an initial school audience, in January, 1928, of 75,000. Many schools listened over borrowed sets. After a few



A CLASS OF CRIPPLED CHILDREN LISTENING-IN
A radio lesson brings joy - variety.

weeks the number began to grow—apparently at the end of a test period. From that day to this the growth has been steady, the heaviest accretions coming at the beginning and at the middle of the school year. This situation is no doubt caused by the greater ease of working radio into the schedule at those times without disruption of the regular routine.

The Schoolroom audience at the end of its third full year had reached 360,000. Unquestionably the number of home listeners was much larger. While schools in 408 cities in Ohio and approximately an equal number of cities in other states were identified in daily and annual reports (See chapter VII for blanks), yet there was a home audience not only in the above mentioned cities but also in hundreds of additional communities. While the extreme shortage of school funds during 1931-32 caused a slowing down of the rate of growth, nevertheless scores of new schools

equipped and many others improved or increased their equipment.

THE TASTE OF THE HOME AUDIENCE

Radio Stations Awaken. The advent of school broadcasts gave a new estimate of the taste of the daytime home listeners. Very early in the broadcasting to schools it became evident that the housewife and others were delighted at the change of radio diet. Words of congratulation came daily to radio stations WLW and WEAO, and to the School of the Air. While nearly all were in favor of household talks and music, they expressed displeasure with the extent to which such programs had been allowed to monopolize daytime broadcasts. This fact must have become immediately apparent to advertisers for they began trying to buy sponsorship of the hour or the privilege of announcements. They learned that while jazz would continue to be in demand, yet there was a revulsion against the overdose of it being presented on nearly all stations, and a very real need for educative features given entertainingly. Radio was to become a workhorse part of the time, instead of remaining merely a circus pony.

Foreign-born listeners report again and again their appreciation of history and geography lessons on the radio. In the words of a Muncie, Indiana, woman:

"I am very much interested in Dr. McConnell's talks on other countries. Being sixteen years old when I came to my newly adopted country, my history on other countries is limited. While I am only a homemaker, I doubt if anybody enjoys these talks as much as I do. I am always history-hungry, eager all the time for such talks. You will wonder why. Well, I have three kiddies in school, one a senior in High School, another a Junior High girl, and a boy in grade school. When they talk about other countries how delightful for mother to be able to join them."

Native-born people who in their youth were denied a fair chance for an education, follow the school broadcasts in methodical fashion. Thus a man in Coshocton, Ohio, writes:

"I am a retired Pennsylvania Railroad Ticket Agent; served my Company 47½ years, from messenger to Telegraph Operator, Clerk, and Ticket

agent. Leaving school early in life to help support my mother and family of five, I now deem it a great pleasure in my home to hear and record the fine lectures and music of the Ohio School of the Air.

"In three months time, I have recorded 45 pages of notes on lectures, which I consider very valuable towards an unfinished education."

And a mother says:

"It is very interesting to me, and I listen from start to finish and get something out of every period. I am always listening for sixth grade work, and try to pass it on to my boy. I find it very difficult to help him in his school work. Being a McGuffey pupil, most of my books are only a memory. When I help him with his school work he says that is the old way, and he wants the new way. How is the mother of today to learn this new way without being taught? I wonder if your School of the Air isn't going to be a real help to us?"

Still another mother thanks educational broadcasts for the help they afford her:

"I must tell you how thankful I am for the School of the Air. I have two children that can't go to the Public School and must teach them at home. I have to take much of my time to help my little girl. The public school is three and a half miles for my children to walk twice a day. It is very hard for me, as my husband leaves for work before daylight and don't get home until after dark. I only got through the eighth grade. I get very blue over the boy, and take all the time I can with him. Because your programs help me I sure thank you."

The Convalescent. Then there are the active people who for a short time are held to the home by illness. Radio is welcomed by nearly all of them, especially during convalescence. Some of them write saying that while they like music, they were becoming tired of tuning in station after station only to find beauty talks or jazz. Then the schools of the air came to their rescue.

A letter on the letterhead of a Business and Professional Women's Club brought a detailed report on all the features offered by the School of the Air, with the following prefaced explanation:

"It was your radio programs that nearly saved my life (at least my disposition) during a scarlet fever epidemic our schools experienced in February, during which time I was myself a victim of the disease. Quarantine and convalescence were in no sense a punishment, and my release was a sad term-



A RADIO LESSON FOR A HOME-BOUND CHILD
Shut-ins Consider Radio a Gift Straight from Heaven.



JACKIE COOGAN
Being interviewed—to the delight of the little cripple and thousands of other children.

ination to several weeks of Ohio programs. If you remember, I am an Ohioan, teaching in Kentucky, so I have more than one reason to enjoy the program."

The home listener is just as avid as the youngster.

Witness:

"I just can hardly wait for two P. M. to come. I turn on at one-thirty to be sure I will not miss or forget to turn on at two P. M. I enjoy all the programs, especially Miss Gabbard, Dr. McConnell, and the Smile Lady.

"I advertise your programs all I can. So many have expressed themselves and said, 'I am so glad you told me about the School of the Air; I never would have thought of turning on.' All report it wonderful. Makes me feel like a school girl when I listen. We never get too old to learn. Keep it up. It is wonderful."

This is very similar to the case of the little boy in the following excerpt from a letter from the Madison School in Sandusky, Ohio:

"When Dr. McConnell presents his geography talks, the interest is keen at school and the sick

ones at home tune in when able. One boy who was sick refused to go home because he would miss Dr. McConnell."

Many mothers are keenly appreciative of the way in which school broadcasts bring back to them their place as a peer to the men folks in mental things:

"When all the work is done for a family of five, and time is taken to attend to the varied interests of the kiddies and father, the time mother has left for her own use is more a theory than a reality.

"What a pleasure to sit for an hour and enjoy the School of the Air, even though one must take along the potatoes to pare or the socks to darn. And how one shines at the dinner table, telling this about Chile, that about Civil Government, or an anecdote about Cicero or Milton.

"Where can I get a copy of Volk's Lincoln? I shall come to class next Tuesday with nothing except that and my note-book. Wishing the School of the Air an ever-widening field of influence."

Parochial and special schools and the people concerned in their welfare are pleased at the chance to share with the public schools in hearing school broadcasts. In the words of Father Herman, Marietta, Ohio:

"We surely enjoy the School of the Air. I have just placed a fine new radio in our new St. Mary's School, so be sure to mail us your program at once. I listened in all last year and it was so interesting and splendid that I decided to place a radio in the school. I thank you for what you are giving to Ohio and the Nation."

Program directors of womens clubs, Chambers of Commerce, Rotary, Kiwanis, and many other organizations, listen and write in for program materials. In the words of Mrs. G. J. Cahoon, Avon, Ohio:

"I can't tell you how much your work over the air is enjoyed by the kiddies, big and little. I used the games in our Cradle Roll at Sunday School. If you are sending out copies of your work this year I should like two copies, one for my assistant and one for myself."

But there is heartache in the mail of the School of the Air; the tug and pull of it being all the greater because the correspondents carry their burdens so bravely:

"Oh! How glad I am that school has started again, and that you are on the ether once more. I have gained much knowledge and entertainment from the programs you have broadcast. I would

have been a Freshman this year had it not been for spinal trouble which is keeping me flat on my back for probably a year.

"I am not permitted to read and I often find time dragging wearily along, but now I have found a solution to this problem—I spent all of my waking hours near the radio and the School of the Air is one of my favorite programs."

A year later he writes:

"I am indeed getting a wonderful lot of good from the Washington part of your fine programs. Dad wanted Mother, Sis and I all to go with him to his school for one day this week and it would have been a change and a good basket dinner but I said, "No, Dad, I have my own school to see to and I can't afford to miss even a session." So you see I am one of your most interested scholars. Dad says each evening when he gets home, "Well, what did you learn today?" I put in hours telling him all sorts of interesting things I have learned about for his school's benefit as he teaches in a rural school and they do not have the benefit of the radio school. I send my thanks to you for your untiring efforts and success." R. V. S.—A Crippled Young Man, Apple Grove, Ohio.

Can you see the dear old people who wrote:

"We, my husband and I, are old folks (86 years) and just love to hear your programs of "The School of the Air." We are nearly blind but do not need our eyes to hear your programs."

"Perhaps I had better tell you I am sixty-three years old and have spent thirty-seven years in a wheel chair—a cripple from Arthritis Deformans, and for the last five years have been blind. The School of the Air is one of my greatest pleasures."

And they write long newsy letters, these shut-ins. The following is from a four page letter from a Kentucky woman:

"Precious memories of these days abide though I am past sixty years of age—an invalid in a wheel chair for four years past. It seems to me I can really absorb more from Professor McConnell's Geography lessons than I could learn from the book in hours. What a wonderful thing to have such a teacher for hundreds of thousands of listeners.

"I feel so enthused over the plan. I wish our Kentucky schools would all get a radio and listen in to your worthwhile programs. I just missed the visit to the Senate last year. I wish I could go with you sometime this year. I enjoy every feature."

Likewise an Indiana woman writes at length her appreciation for each feature, saying in part:

"I was stricken with infantile paralysis when I was beginning the 8th year of school and have

been more or less of a shut-in ever since. I am deeply interested in things educational and since getting a radio a year ago have greatly enjoyed the many educational features presented to the radio audience. The School of the Air is certainly a great adventure in pioneering along educational lines."

A SPECIAL GIFT FROM GOD

The Blind. Just as motion pictures have sweetened the life of the deaf, so has radio been a veritable gift from God to the blind. None are so appreciative of it as those who must live in darkness. One elderly man writes letters of good cheer, folding his pages accordion fashion and then writing on each pleat, thus guiding the hand which his eyes cannot assist. One strong hearted wife of seventy-eight years of age types out letters of good will to the School of the Air—her own blessings and those of her blind husband of eighty.

The following letter is typical.

"It would be nothing short of rudeness were I to continue to daily receive the benefits of your highly instructive school without at least once acknowledging my indebtedness to you. I've been an attentive pupil of the school of the air for several years, and I hereby wish to render a few words of appreciation and gratitude to the entire staff and faculty for the privilege that I am enjoying. I am the president of the local blind association which has a membership of 65. I voice the sentiments of most of the members of our association. "Radio to us blind people is a light shining in the darkness and it is such programs as you are producing over Station WLW that keep this light shining in our souls. I wish your institution the highest degree of success and the blessing of God upon your work. Pardon my signing with the typewriter." Fred Simminger, Ft. Wayne, Ind.

And then there is the blind woman, bedfast for twenty years and in darkness even longer. She thus expresses in verse her claims that she can see:

"I listened to my radio day after day,
The voices there I learned to know,
'Tis in the strangest, newest way.

A mere name does not mean a thing,
With personality unknown,
But then to me these voices bring
A personality their own.

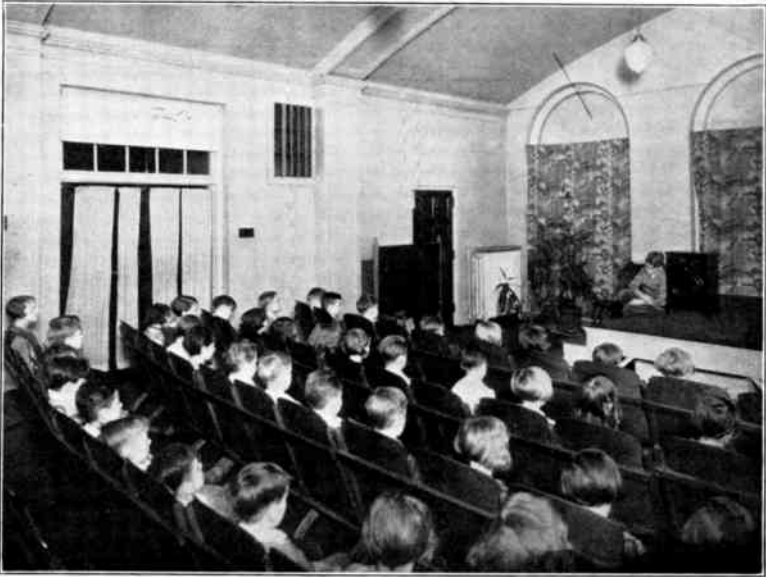
Just as the eye will search the face
To read what Life has written there,
The ear has won an equal place
In helping read Life everywhere.
—*Excerpts from "My Spiritual Radio" by Nellie Patterson,
of Dayton, Ohio.*

THE MAGIC LINK

Rekindled Hearth-Fires. Thus in wondrous fashion does mysterious radio link the school, the home and the shop. It ties them into a closer bond of mutually possessed information. It gives them a sharing in finer aspirations. It rekindles in some degree the hearthfire.

When son and daughter take part in some great national event whose broadcast they heard in the classroom, mother has heard in the living room at home, father has heard at the shop, and perhaps still another member has heard on his radio set as he sped along the highway in his automobile—well, it's already being done and the results are good. It is being used for attainment of knowledge and culture just as the automobile is used to permit us to travel farther and faster.

Faith in Education. A greater knowledge of education and of educational institutions is coming. People who have hitherto felt themselves uninterested in their own schools, tho unwillingly paying taxes for their upkeep, should through radio catch the spirit of the times. School broadcasting has come to stay! The parents will not allow it to take a backward step. They want the magic link. They want the microphone to multiply the good things and send them broadcast.



A Proper Use of an Auditorium by a Small Group



—Courtesy Atwater Kent.

A Too Crowded Classroom

CHAPTER IX

THE FUTURE OF BROADCASTING TO SCHOOLS

Emphasis. We shall now consider the present status of education by radio, and the factors which determine the future. To the matter of propaganda and sponsorship we shall devote considerable attention because they are enormously important and unsolved problems.

Variation of Opinion. It may be foolhardy to make prophesies concerning the future of anything so new and embryonic as broadcasts for schools. There is ample room for differences of opinion.

The four schools of thought are as follows:

- (1) Those who consider it a fad and a failure.
- (2) Those who prophesy it will revolutionize education.
- (3) Those who are unconcerned.
- (4) Those who welcome it as one more effective educational tool.

Someone must certainly be mistaken.

Extreme Claims. One group, apparently a small one, is classing radio education as a fad. They think it will not last long—that it will slump. Another group, fortunately not a large one, has been predicting a spectacular development. They believe that the function of the classroom teacher will change. Perhaps there are a few who think the present day school room procedure will be displaced and an entirely new system of education ushered in.

Refutation. The contention that radio is a fad must await the passage of time to be disproved. At least the per-

son who advances the claim will not allow the proponents of radio education to argue its continuance from its history.

The Ohio School of the Air, aside from its initial audience which equipped and participated in faith and hope alone, has grown steadily from one school in a city, to five, and then oftentimes to complete coverage. This argues that radio is not a fad. The schools now equipped are administered by superintendents and principals who have listened, challenged, weighed and considered. Nothing can be safely argued from the equipping by the original group, except from the fact that they have continued to listen. These facts are quoted from the experience of the Ohio School of the Air largely because its efforts have been more intensive and its concrete results more available than those of the national broadcasts.

No Panaceas. The contention that radio broadcasting for schools is to meet a rapid expansion and that the teacher will be displaced, is all the more challenging because of the fact that the rapidity of growth in 1931 seems to give it encouragement. However, until television comes, radio is blind, and much advancement must be made in bridging this gap if it is to merit any considerable share of the school day. Moreover, television itself will not supply the entire lack. The interaction between teacher and pupil which is the acme of interesting class sessions is not possible between the teacher at the microphone and each separate group of pupils.

Aid to Correspondence Courses. In either of the above situations the classroom teacher remains of vital importance. The broadcasting teacher cannot be a substitute for the classroom teacher, except perhaps, in the case of the pupil who is unusually ambitious, industrious and capable. The type of child, which when left to his own devices will acquire an education, the type which will both begin and complete a correspondence course, would unquestionably find lessons by radio much easier and more inspiring than these older self-educative processes. In any event instruc-

tion by radio will need to be supplemented by printed materials, and individual guidance provided by correspondence.

Supplementary. Quite possibly the day may come when courses by radio will be added to those which smaller schools have been able to provide by having a teacher on their staff. In such cases an instructor who does not claim to be qualified to teach a certain subject may attend the radio lectures with the pupils and assist them in following the instructions of the teacher at the microphone. In other words, the radio may be used to supplement the curriculum and to add expert teachers in desired subjects. The classroom teacher will acquire training while in service.

The Apathetic. But there are yet two other schools of belief among educators. A very considerable percentage have not yet become interested enough to feel any real concern about the matter. This group is rapidly decreasing in number, due to the attention being given radio in the press and in the teachers conventions, carrying the endorsement of school broadcasts by teachers and by thousands of home listeners. Those hitherto apathetic are joining the ranks of the fourth and final group into which we have divided the educators.

Limitations. They join the ranks of those who believe that radio education has a very important function, in a limited portion of the field. They consider it equally foolish to exclude all broadcasts on the one hand or to over-enthusiastically allot to radio too large a share of the school day. To them radio is not a fad and not a pedagogical panacea. They expect it to be a distinct help to the teacher but a source of new responsibility as well. They believe that radio education will undergo a steady determined growth, and have already set themselves to the task of directing it into its greatest channels of service to the classroom. They are its real friends and their number is rapidly growing. They are studying the radio in open-minded and hopeful fashion.

WHAT FACTORS DETERMINE THE FUTURE?

- (a) Further awakening of professional interest.
- (b) The organization of a definite articulated system of national, regional and local broadcasts.
- (c) Continued avoidance of propaganda.
- (d) Steady building on the present foundation of successful experience.

Professional Interest. Let us consider the above factors in order. The further awakening of professional interest in educational broadcasting seems assured. The period of indifference and lethargy is ending for the simple reason that many of the recognized leaders of the profession have already been won. Some are won only to the extent of giving it a fair and open trial. This has so far proved to be sufficient. The making of extreme claims concerning the future of school radio has been curbed. The movement is thus relieved of the opposition which these extreme enthusiasts were engendering.

Pooling of Resources. The friendly co-operation of many agencies seems assured. It is quite in the realm of probability that the National Education Association, the Department of Superintendence, the United States Office of Education, many State Departments of Education, Colleges and Universities, city and county superintendents of schools and countless leaders of national progress, will pool their resources of leadership and make of radio education one of the most progressive and aggressive programs ever attempted. The result should be the definite articulation of educational programs, national, regional and local.

Solution of Time Difficulty. Certain programs can and should be on a national scale. If the problem introduced by the four-hour-time-gap from East to West cannot be solved otherwise, and quite possibly it cannot, it can be overcome by a single repetition of any given program. Thus a program can be made to fit eastern and central time. Repeated two hours later at the same point of origin, it will

reach the schools in mountain and Pacific time at a satisfactory hour.

Regional Broadcasts. Also, the regional broadcasters of educational programs should find the type and amount of participation that pleases them. Even though a number of features are reaching their listeners through chain broadcasts, there are many subjects left for regional stations, such as the larger stations really are. They cannot easily draw the galaxy of talent which it is possible to attract to a national broadcast. But they can supplement what is thus given. They can add features of limited or special geographic or historic appeal that would be out of place in a national broadcast. They can easily avoid competition with chain broadcasts which are likely to continue as once-a-week features and can supplement them wherever there is sufficient demand from their field.

Local Broadcasts. The same principle of division of programs that should largely govern division of function between national and regional broadcasts, also applies to the division of regional and local broadcasts. Thus there are weak-powered stations which cannot successfully serve a large area. Their thinking and planning is local. They can do an intensive job of reaching the schools in their city or county with broadcasts conceived and provided by the city or county superintendent of schools. Special features of intense local interest but of limited interest elsewhere, properly belong on such stations. By limiting the invited audience to his own schools the city, county or even the state superintendent in some cases, can make the broadcasting station an effective link in his school system. He can keep the programs synchronized with all other school work as is not possible with regional or national programs.

A DIFFICULT TASK

Cooperation. It will require considerable experimentation and friendly consultation among the three groups to even approximate the wisest division of field and function. If the three types of broadcasters work in harmony from the

outset, it will be possible to offer to schools everywhere, a well balanced supply of broadcasts for school use. Due to the present movements toward pooling resources, it seems probable that useless overlapping, competition, and confusion which normally attend the advent of any new method or tool, may be avoided in the case of schools of the air.

Drafting Talent. This is all the more important because of the fact that the local and regional schools of the air should be to the national schools of the air what the minor baseball leagues are to the major leagues. The local broadcasts should, in the ordinary course of events, discover some talent that is supremely good. Such talent is too valuable to be with-held from regional and national use. Likewise the regional efforts should furnish talent to the national.

Friction. This process will not at all times be a happy one. The smaller school of the air will resent "having its players drafted by the big leagues." Nevertheless, it will be done. Logic will demand it for the greatest good to the greatest number. Moreover, increased salary inducements will attract the successful radio-teacher to the larger field. The sifting process will go on and continual improvement will result. This does not mean that all will agree on the relative success of any two competing teachers. Variety of opinion in such matters will quite surely continue to prevail.

CONTINUED AVOIDANCE OF PROPAGANDA

A Worthy Audience. The exclusion of propaganda from school broadcasts has a vital bearing on the development of school radio. In the beginning there was little concern. The audience was not yet considered worth propagandizing. Times have changed. The Ohio School of the Air, for example, had not long been on the air until advertisers awoke to the fact that it was reaching an audience many times as large as they had thought an educational program could possibly attract. They realized that such programs appealed not only to classrooms but also to homes interested in childhood or in self-improvement, and

that scores of thousands of mothers and other members of the family were listening in the home. Then it occurred to them that no doubt these listeners were even a better buying audience than is attracted by the ordinary program of jazz music.

Comparison with Press. Result—they wanted to buy time—a word—an announcement on the Ohio School of the Air. Crosleys considered the carrying of advertising on such a program in the same light that a large newspaper would consider the printing of advertisements on its front page. They never asked the Ohio Department of Education for permission to accept commercial sponsoring. They considered the School of the Air and their commercial accounts to be as completely separate as front page news and back-page display advertising. The School of the Air made a new group of friends for them. They could reach these friends with sponsored programs at other times but not during a school broadcast.

Avoidance of Prejudice. However, commercial propaganda, which we shall consider later, is not the only kind feared by educators. They constantly request that some way be evolved of protecting school broadcasts from religious, social and political prejudices. This is quite fitting and proper. The time to set the safeguards is upon us. We are a nation of special pleaders. Few of us are judicially minded. We are always propagandizing. Our newspapers, our magazines, our books, our personal contacts, are full of it. It is too much to expect that radio will be entirely free from it. Radio is such a powerful instrument, however, that we must protect it in every way possible.

What Is To Be Feared? Is all propaganda bad? Shall thrift talks be avoided because the banker wants them? Shall Jane Addams be excluded because someone classifies her as an internationalist, or Charles M. Schwab because he represents Big Business? Shall all consideration of religious questions be ruled out? Or shall "Proper Care of Food" be obliged to leave out mention of refrigeration because the makers of refrigerators may profit? Shall the

propagandists for "Meat Eating" or "Fruit Eating" both be excluded? Shall the subject of prohibition be ignored? And tariffs, foreign relations, strikes, unemployment, public ownership versus private ownership—shall they be tabooed subjects on all school broadcasts? These are but a few of the points at which the natural difference in viewpoints may cause one faction or another to declare that a program is bearing religious, social, political or commercial propaganda.

Discrimination. Were we, on the one hand, to eliminate all discussion of such topics on school broadcasts we would certainly destroy much of their value. On the other hand, the broadcasts of powerful stations and of chains of stations are so far reaching that the harm done by false teaching on any subject should not be lightly minimized. Perhaps this is especially true of school programs since they have an audience of children who have not yet acquired much discrimination and who, therefore, accept without question the false with the true. And yet, their teacher is on hand to help them to discriminate! She can safeguard them much more surely in this than she can in their general reading, attendance at the theatres and the like.

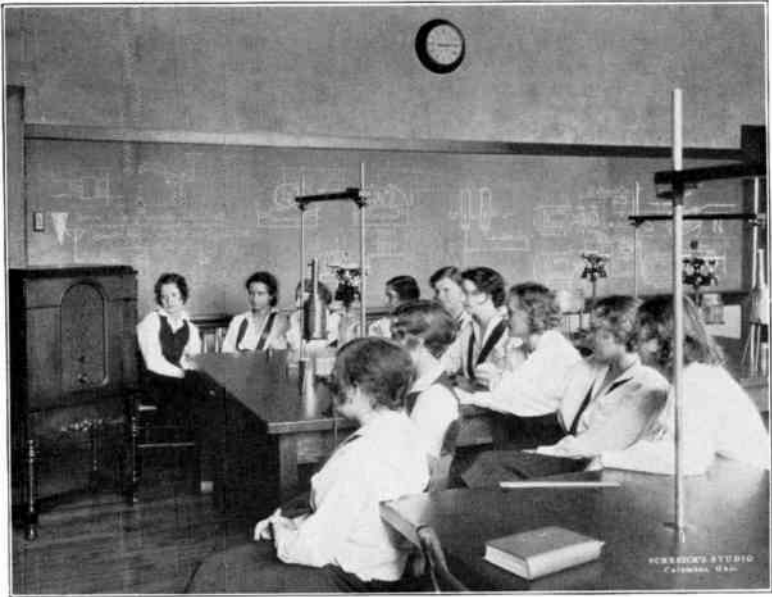
What Are the Criteria? What can we learn from the schools' attitude towards propaganda reaching them through pamphlets and other mediums? It would seem that we can learn much, but no final answer. Superintendents differ widely on such matters as the following: drink milk campaigns, thrift campaigns, magazine circulation campaigns and other plans to earn money for school purposes, use of health charts and pamphlets issued by life insurance companies, use of leaflets issued by fruit growers, meat producers, toothpaste companies, etc. Perhaps we can agree on a few fundamental considerations:

- (1) To exclude all which might be called propaganda would withhold support from many worthy movements.
- (2) The broadcasts do not yet and may never claim to be inclusive educational mediums. They can, therefore, quite logically exclude doubtful or dangerous subjects

- and individuals on the score that there is time only for material of unusual and proven value.
- (3) The good of the boy and girl is the final basis of choice. If children should be taught to eat more fruit the "propaganda for the fruit-growers" accusation may be borne lightly by the broadcasters. This responsibility is no different than is entailed by all teaching of the choice of food, dress, morals, politics and what not.
 - (4) In all controversial questions care should be taken to present both sides of the argument. Or still better, speakers on both sides of the proposition should be heard. Such debaters should be as evenly matched as possible. Radio could do much in affording children an opportunity to hear important issues debated. The drama of combat is a far greater teaching medium than desultory drill.
 - (5) A definite leadership of local, regional and national broadcasts is needed in order that propaganda may be adequately controlled. This should be provided by some such organization as the suggested National School of the Air. When superintendents or teachers believe that a broadcast is carrying objectionable subject matter or propaganda, they can "tune out." Their defense is complete and immediate. If they state their objections and their stand is justified, the school board or national group having censorship responsibilities will demand of the broadcaster and enforce the necessary change.

Exclusion Unlikely. Quite apparently we shall never be able to do more than approximate the exclusion of propaganda. No regional or national committee for that purpose will ever be able to satisfy the most critical individuals. The promotion of even the most fundamental ideals and the most widely accepted movements will not be acceptable to all. If such a board of censorship is timorous the programs will be flat and innocuous.

Critics Numerous. Such a board is open to criticism from the thousands of people who seldom look inside a



Parochial Schools Enjoy Listening
St. Joseph Academy, Columbus, Ohio



Pupils of the Frank A. Day Junior High School, Newtonville, Massachusetts are heard by the entire school. The public address feature of centralized equipment may become the avenue of new and valuable training.

school text book but who do listen to school broadcasts. The problem is, therefore, a more widespread one than if it applied only to books. On the other hand the radio program is more nearly evanescent. It lacks the permanency of the printed page. Some claim that it is, however, so much more effective in spite of its fleeting nature, that both its teaching of truth and its teaching of falsehood are permanent as regards the pupil. They would be permanent, unless corrected or modified by the teacher.

THE PARAMOUNT ISSUE

Truth. What is the paramount issue? It is that truth shall not be aborted in the interest of any selfish aim, whether political, social, religious or commercial. In what form and in what manner may such unfair promotion of selfish aims endanger school broadcasts? It may come frankly—stating its purpose, or it may come in disguise. It may dominate a broadcast or occupy but a sentence or a paragraph. For our present purposes we will include but two general classes of aims.

- (1) Not-for-profit promotion of ideas and ideals not generally accepted by the public. This includes the bickerings of political parties, the contending of religious beliefs, and a wide variety of differences on all manner of social questions.
- (2) For-profit-promotion, or commercial advertising. This may take the form of:
 - (a) Mere identifying of the sponsor.
 - (b) Direct exploitation of the product.
 - (c) An interweaving of the sales message into dialog, story or song, as "Sox-Sox-We're the Interwoven pair."

A Problem. The handling accorded commercial propaganda has as yet been used but little in the promotion of the "not for profit" propaganda. This is quite likely due to the very fact that money is lacking, or that a less evident type of propaganda is desirable. Without attempting to decide the issue, we will present the problem of sponsorship—

that is, paying for programs on either the selfish or unselfish basis.

Comparative Economy. One group of educators would exclude all sponsorship. They say that such huge sums are regularly spent on education that no help should be needed to do such a comparatively inexpensive job of teaching as can be done by the radio. They quote figures showing that the annual budget of a small city would be sufficient to bring a program in front of the microphone, a program so good as to be worthy of being heard by the schools throughout the nation.

Independence. "Why," they contend, "should one of the largest, and certainly one of the most important industries in the world—education—be dependent on the bounty of any individual or group of individuals. Since teaching by radio is miraculously inexpensive, it should be possible for the educationalists to keep education by radio entirely under their control, without fear or favor of anyone." Some such proponents of the self-sufficiency of the educators are wishers only. But others are workers and are attempting to bring about such a co-operative relationship among national, state and local leaders as will free the school-broadcasting of the future from dependence upon any sponsorship, however good.

THE PROBLEM OF FINANCING

Three Plans. Nevertheless, it should be pointed out that no clear plan of levying on all, and thus becoming free from the entanglements that follow the acceptance of gifts from the few, have been evolved. There are three general plans for the financing of schools of the air.

- (a) Government appropriations.
- (b) Campaigns for funds.
- (c) Sponsorship.

At this point the proponents of governmental control point out that a monopoly by Uncle Sam will no doubt be preferable to the monopoly of broadcasting they claim is already upon us. In the words of Judge Ira Robinson:

"No one has the right to devote a radio license exclusively to his private use. Rightly, this is the doctrine of the present radio law. Every

citizen, particularly the educator, must be alert to maintain that doctrine, for it is in direct accord with true democracy. No particular group must ever dominate radio; it must be open to all. In this connection, no one has shown greater foresight than did Herbert Hoover in 1925 before radio had developed so that its great public usefulness could be generally recognized as it is now. As Secretary of Commerce, testifying before the House Committee which had under consideration the making of the present Radio Act, he said:

“The question of monopoly in radio communication must be squarely met. It is inconceivable that the American people will allow this newborn system of communication to fall exclusively into the power of any individual, group, or combination.

“Radio communication is not to be considered as merely a business carried on for private gain, for private advertising, or for entertainment of the curious. It is a public concern impressed with the public trust and to be considered primarily from the standpoint of public interest to the same extent and upon the basis of the same general principles as our other public utilities.

“Despite this early and prophetic warning, it cannot be denied that a monopoly of radio is now insistently claimed by a group and that its power and influence are so subtle and effective as to portend the greatest danger to the fundamentals of our government. No greater issue presents itself to the citizenry. A monopoly of mere property may not be so bad, but a monopoly of the voice and expression of the people is quite a different thing. The doctrine of free speech must be preserved. The use of the air for all, not for the few, must be protected. Shall the big business interests have the air, and the average man be denied it? It does not in reason suffice that he may hear what others say to him; he also has the natural right to speak.

“That radio has great educational worth goes without saying; for it is but the human voice at long range and may be the voice of an instructor, whether school teacher, preacher, or statesman. One good lesson from a single instructor may reach millions of listeners.”

—JUDGE IRA E. ROBINSON in speech at Ohio Institute on Radio Education, 1930.

Commissioner Robinson thus points out a great danger facing all broadcasting. The adequate consideration of the matter would require a book, not merely a portion of a chapter. Further, it is the faith of the author that some one of the plans for the raising of funds for national, regional and local schools of the air will remove school broadcasts from the threatened domination by monopolies.

Campaigns—Endowment. If the funds come from a large number of sources, with no one source contributing such a large share that it might control expenditures in the interest of its own selfish aims, the danger will be avoided. Such plans for raising funds by widespread public subscription require much time, effort and expense to even carry them thru to an initial launching. Some such plans consider only the raising of current expense funds and others boldly broach the matter of a large endowment. There must first be organized a controlling body that is widely acceptable to those who are to be solicited for funds. Manifestly this procedure will take considerable time! Accordingly, we shall consider the more imminent problem of sponsorship.

SPONSORSHIP

Purpose. Departing from those who eschew all sponsorship, let us consider the beliefs of those who admit part or all of it. Sponsorship of radio programs is for a purpose. The purse-string control is evident. The person or the organization or the company in paying for the broadcasts openly admits that some type of good will or satisfaction is wanted. It may be, monetarily speaking, a completely unselfish one, or it may seek an immediate cash dividend. The sponsor may be content with the mere satisfaction of having some name of his choice as the identification of the program, or he may demand the last ounce of flesh in the way of exploiting some pet idea or sales talk. Of course, the radio station usually tries to defend the sponsor from ill-advised use of the privilege and the consequent breeding of ill-will instead of good-will, for both sponsor and station.

Acceptability. Few, if any, of those who favor sponsorship of school programs would accept it from all sources.

They would taboo many, but there would be a wide variety of opinion as to any sources' acceptability or lack of it. However, there are some who do not fear the source of the funds if they are given outright. They are like the preacher who was stopped by a saloon-keeper in the pre-prohibition days. The saloon-keeper noted that his arch-enemy, the village preacher and leader of the dry forces in a local-option fight, was coming down the street. He took a twenty dollar bill from the till, called all his cronies to watch the fun and stepped onto the sidewalk in front of the preacher. Bowing low, he at the same time offered the preacher the twenty dollar bill for his campaign fund. To the surprise of the saloon-keeper the preacher grabbed it and to the merriment of the onlookers, said, "It is time that bill is working for the Lord."

The Chief Fear. Other educators have little faith in the value of funds from sources they consider contaminating, even though the donor apparently relinquishes direction of how the funds shall be spent. Unquestionably there is a widespread feeling that all advertising should be eliminated from any program intended for school listening. Educators fear that should the bars be let down at all, the tendency would be for more and more advertising to be poured into the classroom, and that the sources of the funds would become more and more questionable.

Basis of Admittance. Not a few educators, however, have said when asked about sponsorship, "if to have radio programs for schools require it, accept sponsorship of reputable organizations or concerns." Such educators have not hesitated to admit to their classrooms the programs sponsored by the Standard Oil Company over a California station, and by the Grigsby-Grunow Company over the Columbia Chain. In both cases the sponsors declare that the advertising is harmless. Apparently everyone in California knows that the "Standard School Broadcasts" are paid for with Standard Oil money. No attempt is made to advertise any product or develop good will other than by

the fact that the broadcasts exist through the willingness of the Standard Oil Company to pay for them.

Announcements. During the early days of the American School of the Air, the announcement of sponsorship at the close of the broadcast included a brief "plug" for the Grigsby-Grunow Company. Some schools tuned out before this advertisement was introduced. Those who did not tune out at the end of the teaching program apparently did not seriously object to the closing announcement.

Criteria. This brings us to a consideration of the criteria of acceptability of sponsorship. In order that we may bring the matter into focus, let us consider which of the following would be acceptable as sponsors, granting that they ask for no direct advertising for themselves or their product except that their name as sponsor be announced. Only a few of the many which might be named, are included in this suggestive list:

Group I.—

- United States Government
- Political Parties
- National League of Women Voters
- The Roosevelt Memorial Association
- The Daughters of the American Revolution
- The League for World Peace
- The Foreign Policy Association
- The Pan American Union

Group II.—

- Methodist Episcopal Church (or any other denomination)
- The National Council of the Y. M. C. A. and Y. W. C. A.
- The Young Mens Hebrew Association
- The Holy Name Society
- The Society of Theosophists

Group III.—

- Boy Scouts, Girl Scouts, Campfire Girls, etc.
- The National Congress of Parent-Teacher Associations

The National Federation of Music Clubs
 The Rotary, Kiwanis (and similar clubs)
 The Anti-Saloon League
 Personal Liberty League
 The Anti-Tobacco League
 Society for the Prevention of Cruelty to Animals
 The United States Chamber of Commerce
 The American Federation of Labor

Group IV.—

Text-book Publishers
 Magazine and Newspaper Publishers
 Manufacturers of Radio Sets
 Manufacturers of School Supplies
 Producers of food, clothing, automobiles, home furnishings, toilet articles, etc.
 Manufacturers of cigars and cigarettes
 Public Utility Companies
 Insurance Companies
 Banks and Brokerage Houses
 Foundations and Funds

Degrees of Acceptability. The above lists may serve to call forth the criteria which we immediately begin to apply. Some on the list were no doubt acceptable and others quite repugnant. Perhaps no two of us would exactly agree. What questions did we ask?

1. For what does the sponsor's name stand and is it good or bad?
2. Why does he desire to sponsor a broadcast?
3. Is it a legitimate desire?
4. When does he reach the fulfillment of his desire?

Answers. The first measuring stick we apply quickly. We are likely, if we know the organization or company at all, to be immediately friendly or unfriendly. The answer to the second is nearly always, "To develop a good will or personal satisfaction." But we must make this exception. Oftentimes donors, interested only in helping a good cause, would prefer that their names be withheld. But necessity demands their announcement. Anonymous contributors are

suspected of having deeply insidious designs, of desiring to put across shrewdly hidden propaganda. Those whose ways are evil have always sought the darkness. Anonymity is therefore suspected. This is quite logical. Propaganda when shrewdly hidden may be as effective as it is insidious, and is therefore to be guarded against.

The Third Question. We may answer affirmatively if we are in sympathy with the group whose good will is to be enhanced by being "angel" to the broadcast. Or we may admit that their desire to enhance their own good name is natural but nevertheless oppose their doing so.

A MOST IMPORTANT QUESTION

The Sponsor's Goal. When does the sponsor reach the fulfillment of his desire? In the case of the radio set manufacturer the claim is made that the big objective is to further radio progress as a whole and that the set maker has reached his goal when he has equipped the school, and therefore has no desire to inject any propaganda into the broadcast. Some advertisers realize fully that an unwanted or unnecessary repetition of a trade name may harm instead of help an advertised company. On this account the Crosley Radio Corporation requested the Ohio School of the Air to leave the word Crosley out of all announcements, not desiring to be open to the accusation of cheapening the broadcasts through the introduction of commercialism.

Sales Talks Taboo. If, however, the sponsor wants to press his opportunity and put across a sales talk as a part of each broadcast—well—the schools have already indicated that such an attempt would result in the loss of a large share of the classroom listeners. The skeptics are at this writing on the lookout for a growth of commercialism in school broadcasts. Some oppose the attaching of any sponsor's name. In view of this, let us see what we can learn from school practice in regard to gifts, chairs, endowments, text books, etc.

LEARNING FROM ESTABLISHED CUSTOMS

Books. First, we would not ask a publisher to leave his name and address out of his book. That is a badge of his pride and a service to everyone who might want to obtain a copy of the book. Nor would we ask that trademarks be prohibited. They fix responsibility. Is the same claim true of the making known of the sponsor or producer of the radio program?

Endowments. Secondly, chairs are endowed and the name of the donor preserved and perpetuated in loving memory and frequent recognition. The practice is not often questioned unless the donor be one with unsavory name.

Buildings. And lastly, when a building is erected the brass plate at the doorway tells the world through all the years that Mr. So-and-So was the donor. Should the sponsor of a radio program be subjected to any more rigid standards than the donor of a building or the founder of a university? The radio program reaches more widely, but it can be tuned out, just the same as a person can stay away from the donated building. The difference is more largely one of the comparative effectiveness of the building and of the radio, than it is one of difference in morals. The radio will be more heartily criticized because it is so all-permeating, ever-present.

A Matter of Taste. There is a lesson, however, for the radio sponsor in the consideration of the name-plate on the building. In the first place the donor seldom dictates that any name-plate at all shall herald his name to the beholder. The recipients of the money do that in willing gratitude. Still further, the donor of the building would not be so bold or so unreasonable as to ask that his name be blazoned in forty-foot letters on each wall of the building. To do so would breed ill-will rather than good-will. If radio sponsors are wise they will content themselves with the small engraved tablet at the entrance to the building—a brief modest statement that the program is through their courtesy.

Definite Standards Needed. It is generally thought in educational circles that the avoidance of propaganda must

be continued. The classroom doors must not be caused to slam shut in the face of radio because selfish creators of divisive opinion, and chasers of dollars, are elbowing their way in. Rather, sponsorship must be studied and more definite standards set, or it will be excluded altogether.

BUILDING ON PRESENT FOUNDATIONS

Of the factors which determine the future we have already considered the following:

- (a) Further awakening of professional interest.
- (b) The organization of a definite articulated system of national, regional and local broadcasts.
- (c) Continued avoidance of propaganda.
- Only one remains:
- (d) Steady building on the present foundation of successful experience.

There Must be a Steady Growth. In some phases the improvements may come easily. In others the cost in effort will be large. (1) Better programs must come. (2) Better transmission is needed in some areas. (3) Better classroom participation is the third and perhaps the greatest avenue of improvement.

Back of the problem of providing better programs are two distinct needs:

- (1) Research.
- (2) Better Financing.

Radio Deserves a Fair Chance. The importance of research and the consideration of opportunities in that field have been covered in Chapter VII. But there is a more fundamental need. No school programs yet broadcast have been as good as they could have been made with adequate financing. All schools of the air have, up to and including 1932, been woefully understaffed. They have been conducted by beginners who have not at all had the time or the opportunity to do the best they already knew how to do. The administration has been a work of love in many cases—an added duty on top of older and more mandatory duties. Likewise the teachers at the microphone have been should-

ering the task as an extra burden to be borne in addition to other and regular work. Virtually all, both administrators and teaching staff, have been unpaid or decidedly underpaid.

Inescapable Proof. That any measure of success has been attained under such conditions is in itself a distinct proof that education by radio has great inherent merit. Research is needed. A daily check-up on results is of practical and immediate usefulness. But the measurements require only a yardstick as yet. To appeal for vernier calipers at the present time is a bit premature. As long as the following are needed by the schools of the air, the first demand is that they be supplied:

- (1) Adequate funds to control broadcasting facilities.
- (2) Adequate administrative staffs.
- (3) Adequate teaching force, (a) experienced (b) properly remunerated, (c) having adequate time in which to prepare and rehearse.
- (4) Adequate funds for printing, telephone facilities and general expense.
- (5) Adequate funds for field service.

Research Must Serve. To try to measure results by involved and minute research at the present stage of development is not wise or of much value to the future of radio education. Study of the outcomes achieved by schools of the air and especially their shortcomings, is not conducive to improvement when it applies to those faults which could have been removed by those in charge had their work been adequately staffed and financed. Research for research sake may delight the researcher but practical study can be just as intriguing.

Inherent Hazards. Some difficulties are inherent in radio. These should be segregated and attacked separately. The problem should be simplified by providing every item which business judgment demands. Thus adequate financing, making possible good administration and good teachers at the microphone, will permit the attainment of some goals never yet approached. Practical research should then add

its contribution in disclosing further avenues of improvement. These improvements must come in (1) broadcasting, (2) in classroom use of broadcasts and (3) in home and community use.

DIRECT IMPROVEMENT ON THE PART OF THE EDUCATIONAL BROADCASTER

- (a) Better lesson leaflets—addition of pictorials.
- (b) Better dramatizations—teaching by dialog and dramalog.
- (c) Better grading, through use of word lists, re-vamping, etc.
- (d) More thorough rehearsing.
- (e) More help to microphone teacher in bridging the blindness gap.
- (f) More help to microphone teacher in solving the “lack of interaction difficulty.”

Improved Leaflets. There is a vast and virgin field in bettering the lesson leaflets. Already the teamwork done by the teachers at the microphone and in the classroom has stilled many of the fears and answered many of the objections to radio. There is an opportunity to harness two giants and put them to work. One of them we have known for a long time but have not used his help in formal education. The first is an adequate supply of pictures, the second is radio.

Visual Accompaniments. An adequate supply of pictures, especially for use in geography, history, art and the sciences has never yet reached the classroom. The finest art work in amount and kind is more apparent on the newsstand than on the school-desk. The cuts in text books have improved considerably but they are too often small low-line half-tones. Yet the rotogravure process could bring its larger, more pleasing, more detailed pictures at a price so low that every home could have the more intimate understanding of things which pictures alone afford the less imaginative of us.

Parallel Efforts. Moreover, the educational pictorial magazine could tell the story in picture of the radio broad-

cast of the week ahead, thus making each incomparably more valuable. The captions would be only long enough to make the picture clear to those who might miss the broadcast. The distribution problem could be solved. Bundle orders of the pictorial could be shipped to the school for distribution to those who had subscribed, and also for sale by students to every interested home in the community.

A WONDERFUL BY-PRODUCT

Adult Education. With such a medium there would come for the first time an effective beginning toward adult education by radio. Such education is not, as some university-dominated folks believe, likely to succeed on a plane of post-graduate college work. Such an audience would be too small. It will rather be more nearly parallel to the broadcast for grade schools and high schools.

Dramatizations. There is need for the turning of many themes and truths out of the didactic into the dramatic form in order that true motivation of activity will result instead of mere verbalization. Character education, health and other subjects can unquestionably be more effectively taught by the dramalog. Geography can be made more interesting when turned into travelog form. The production of such dramatizations will grow in importance.

Grading. More thorough grading of materials is on the way. More revamping in the interest of lucidity is needed. Word lists should enable the radio teacher to choose words intelligible to the desired audience.

Barn-Storming. It is possible to rehearse every feature through a type of "barn-storming." The radio teacher speaks over the microphone in a principal's office and then checks on his results, including every item that enters into a truly successful broadcast. He thus tries out his script on different age pupils under varying circumstances and then goes to the "big broadcast" better prepared.

Techniques. The rehearsing mentioned above, together with the counsel of the director of the school of the air, assists the teacher at the microphone in bridging the

blindness-gap. He knows better how to time his pauses, to put his requests, and so forth. In other words, he learns the technique of asking a co-operation that the classroom teacher can readily deliver in the teaching of the lesson.

Interaction. This also applies to the finest of all techniques—that of overcoming the lack of interaction between himself and each separate class. He learns to put questions, to jokingly suggest the wrong answer, the answer which is usually given, and then to evolve the correct one. When he knows the typical reactions of children to the message he is bringing, he can attain a closeness to them not at first seeming possible.

IMPROVEMENT IN CLASSROOM PARTICIPATION

- (a) Bettering of school equipment.
- (b) Improving of classroom preparation.
More complete use of lesson leaflets—pictorials, collateral readings, etc., arousing of active curiosity.
- (c) Increasing Classroom Participation during the broadcast—whole hearted receptivity.
- (d) Synchronizing of visual aids such as charts, stereopticons, movies and talkies.
- (e) More careful fixation of values of broadcasts.
- (f) Better use of out-of-school-time programs.

Equipment. Where faulty results are being met, the fault is sometimes one merely of equipment. Schools are beginning to realize that cast-off equipment is not good enough and that they should have the best they can afford. The pleasing qualities of modern loudspeakers are removing the early criticism of radio as being 'too mechanical and displeasing.' In larger schools the trend is toward central receiving sets with radio, phonograph, microphone, and switchboard in the principal's office and loud speakers in each classroom—in the cafeteria, auditorium and study halls.

Teacher Most Important. By far the greatest opportunity of improvement is to substitute interested, organized

participation for the occasional, haphazard and halfhearted listening allowed in some schools. Radio education faces no danger so great as the failure that results from the teacher using radio as a complete substitute for effort on her own part. If she is alert she will take part in the broadcast and enjoy it. Otherwise she should not tune in.

FIELD SERVICE NEEDED

Promotion. To accomplish this active participation by the teacher will require either a long slow period of gradual education on "how to listen" through instructions by radio, through printed materials and teachers meetings, or a field service that will more quickly give the needed information and inspiration. A monthly Radio Teachers' Meeting has been instituted by the Ohio School of the Air, during which such matters are emphasized. But this can not be expected to suffice. Moreover, in the very nature of education by radio there is a tendency for dissatisfied listeners to merely cease listening. This leaves them convinced that radio is not worth while as a classroom aid, even though the difficulty was almost entirely due to the unprepared, haphazard or listless manner in which they made their trial.

Field Workers. Furthermore, experience is proving it necessary that someone convey to the teachers with least originality and initiative a knowledge of the seemingly apparent methods and means of adapting broadcasts to school use. While teachers meetings serve as a clearing house for such methods, the present day schools of the air feel the need of a field service which will hasten the process. Such field workers would listen with the pupils and the teachers, observe the sources of difficulty and then in conference with the teachers singly and as a group give them every possible assistance. At the present stage of development, such field men would be indulging in the finest type of research. They would be gathering basic data of incal-

culable value to the movement—of value to broadcasters, superintendents, principals, and teachers.

Synchronization. Further progress should be made not only by adding the pictorials before mentioned, but also by a synchronization of radio broadcasts with reading circle requirements, lantern slides and movies where the latter are sufficiently available to justify the procedure.

Fixation of Values. The variety and enthusiasm of 'follow-up' work must be increased. Schools must accord the same value to radio-received information as to that obtained from the text-books. The pupil must understand that tests, reviews and examinations will hold him accountable for the teaching content of all broadcasts. To do otherwise will be fatal.

Reporting. Still another virgin field is the use of special and unscheduled broadcasts provided by sources other than definite schools of the air. The use of these and of night-time broadcasts to be reported at school the next day has much in store for the alert teacher. **In fact it would be ludicrous to study H. G. Wells out of a book and then to make no effort to hear him**, whether at school or at home. To fail to show this interest would prove that the teaching from a book was missing its chief goal. So little can be learned in school that the arousing of an active and long-enduring interest on the part of the pupil becomes the greatest goal of all. Radio has much to offer to the teacher who is not so book-obsessed that she fails to use it.

IMPROVEMENT THROUGH HOME USERS OF BROADCASTS

- (a) Radio P. T. A. Forums.
- (b) Linking of pupils family to his school and to his neighbors.
- (c) Increased understanding of present aims and methods.
- (d) Greater willingness to vote improvements in local school system.

- (e) Use of the Pictorial for individual self improvement.
- (f) Development of adult education broadcasts.

A Magic Link. The radio is a magic link of common experience in education, bringing together again the home and the school, which were separated with the advent of the present system. And with the home and the school are linked all other individuals and organizations. The day of mass infusion is here. It has not been rightfully welcomed as yet. If the educator welcomes it he will find that his ideals will be spread more effectively than ever before. His classroom work will be still more resultful and the Magic Link will draw into the educative process many groups not hitherto active and some not even friendly.

We refer here to the possibility of increasing the educational content of radio programs in general and of the accomplishment of schools of the air in particular. Special services are also possible.

Parent-Teacher Forums. The Ohio School of the Air has added a monthly P. T. A. "Round-the-Speaker" addressed by leaders in child training and presenting question and answer periods in which all may take part by letter, telegram or telephone. All these contacts bring about increased understanding of modern aims and methods and a greater willingness to vote for improvements.

A New Day. The pictorial mentioned above will be an added link of home, school and community. Should it become a weekly guest wherever a radio is owned, a new day in adult education will have arrived. Then the teachers who send their message into our schools in the afternoons may speak again in the evening to those who could not listen in the daytime. Courses for those who want to attain an elementary education, a high school training, will then be well enough organized and have enough pupils to justify the assignment of those periods of the radio stations' time.

TELEVISION

The Proper Attitude. When the eye and the ear have been re-married in television, then we shall indeed be challenged to open wide the school door. There will be no "blindness gap" to be bridged. The wealth of illustrative material of the science laboratory as well as the vocal message of the scientist will reach even the poorest unequipped school. A travelling televisor and microphone can take the youth of the nation through art galleries, factories, field and forest. There will be but a small deficiency in such teaching—the "interaction" of teacher and pupil may yet remain quite largely a function of the classroom.

The coming of television will necessitate a new radio technique. While it is making its uncertain growth toward practical usefulness, we will be wise to develop the powers of our present medium. Already we have a great blessing in our present radio.

The World a Classroom. Who can vision the significance of the fact that distance for the ear has been annihilated; that by voice the world becomes one neighborhood; that no matter what the size of the school or where it is located, the great of all the earth may visit the pupil in his own classroom. So far as those influences that may be made effective through the voice are concerned, the roof of the classroom has been blown off and the walls have been set on the circumference of the globe.



A Story Circle



EDWARD BYRON
Director of Programs
For the Crosley Stations and loyal
friend of the Ohio School of the
Air



HARRY ESWINE, Professor
At Ohio State University and much
loved teacher of Nature-Lore—
by radio.



A "COURIER" ILLUSTRATION OF A DRAMATIZATION
"The Land of Hearts Desire" broadcast by the Schuster-Martin Players
of Cincinnati, Ohio

INDEX

- Abbot, Grace44, 94
 Ability of Talent104, 105, 106, 107, 206
 208-215, 218-220
 Adaptation155
 Addams, Jane104, 245
 Administrators67, 70, 71
 Adult EducationSee Parent Education
 Adventure and Exploration44, 94
 AdvertisingSee Sponsorship
 Advisory Committee on Education by
 Radio53-55
 American School of the Air49, 50, 97,
 160, 167
 Arithmetic19-26, 141-142
 Art Appreciation20, 34, 38, 39, 46,
 50, 52, 167, 218
 Association of Land Grant Colleges53, 55
 Atlanta21
 Audience20, 22, 41, 218, 228-237
 Auditorium Listening21, 145, 148
 Babson, Roger65
 Bagley, William C.26, 49
 Baker, Ida M.XII, 26, 141-142
 Baritone Mfg. Co.XII, 145, 188
 Bathurst, EffieXII, 104-106
 Beard, Dr. C. A.44, 95
 Bibliographies, Use of160, 167, 186
 Biographical Sketches168, 174, 184
 Botany46, 214
 Broadcast, PoemX
 Bushman, Annette145
 Byron, Edw.267
 California19
 Campbell, Anne44, 59
 Carr, G. E.229
 Carter, RuthXII
 Censorship245, 249, 252, 258
 Central Receiving EquipmentXII, 99, 112
 145, 149, 153, 176, 248
 Chain programs35, 36, 37, 49, 50
 Charters W W58
 Chemistry42, 218, 219
 Chicago19, 27, 28, 166
 Cincinnati Schools39, 95, 176
 Citizenship and Civil Government32, 34, 39,
 40, 42, 44, 45, 46, 218
 Clark, John75
 Classroom Teachers67, 71, 72, 73
 Cleveland25, 26, 27, 141-142
 Clifton, John L.III, 37, 48, 53, 54, 81,
 160-161
 Columbia Broadcasting System49, 50,
 97, 167
 Condon, Dr. Randall J.24
 Conferences19, 21, 43, 45, 56, 57, 58, 204
 Connecticut21
 Convalescents232
 Cooke, Edmund VanceX, 44, 122
 Cooper, Myers Y.48
 Cooper, William John8, 44, 53
 Correspondence Courses240
 Courier, Ohio School of the Air
 See Lesson Leaflets
 Crabtree, J. W.8, 44
 Crane, A. G.54
 Chronological Chart60
 Crosley, Powell Jr.V
 Crosley Radio CorporationXII
 Current Events34, 42, 46, 50, 52, 118-123,
 168-170, 218
 Curricula83, 91See Lesson Leaflets
 Daake, HermanXII, 62, 82, 146
 Dale, Edgar142-144
 Davis, Norman56
 Dearborn, Ned45
 Dewey, John64, 65, 76
 Drake, Anna M.42, 46, 200, 228
 Drafting Talent244
 Damrosch, Walter35, 36, 37, 145, 193
 Dickson, VirgilXII
 Doak, Hon. William N.69
 Drama34, 36, 37, 39, 42, 46, 48, 49, 50, 80,
 132-140, 145, 189, 192, 208-212, 218, 261
 Du Puy, Wm. Atherton44
 EconomyIX, 41, 48, 70, 78, 79-80, 149, 222,
 237, 242, 250
 Educator Bdst. Equip. Co.XII, 99
 Effectiveness, Comparative79, 80, 147, 205,
 261, 266
 Elwood, John W.145
 Emotion, educating of101, 205
 And See Drama

- Equipment147, 153, 215, 218, 262
 Eswine, Harry E.128, 131, 170-172, 267
 Ewbank, H. L.XII, 220-221
 Farrand, Livingston56
 Federal Radio Commission55
 Federation of Womens Clubs39, 47, 204
 Field Service263-264
 Finance22, 28, 29, 31, 40, 41, 43, 47, 48,
 56, 58, 78, 79, 81, 100, 204, 250, 252
 Fisher, Dorothy Canfield44, 174
 Flint, Larry44
 Foster, Mrs. D. B.227
 French42
 Future91, 239-266
- Gabbard, Bessie38, 39, 42, 46, 55, 233
 Gale, Zona44
 Garland, Hamlin44, 94
 Geography16, 19, 20, 27, 34, 39, 42, 46, 52,
 58, 123-128, 173, 218
 Georgia21
 Gillilan, Strickland44
 Glass, Meta56
 Grade Placement Chart93
 Grigsby-Grunow Co.96, 97, 253, 254, 261
 Guidance, Vocational and Life.....19, 34, 46, 50
- Haaren High School.....18
 Hanson, Earl44
 Hanson, Malcolm44
 Harrison, Margaret XII157, 193
 Hart, Albert Bushnell44
 Hayes, Ralph46, 56
 Health Talks.....34, 42, 52, 142-144, 185-186,
 194, 218
 Higgy, Robert XII54
 History19, 34, 42, 46, 49, 50, 52, 82,
 132-140, 208-212, 218
 Home Listeners.....41, 68, 76, 77, 223-237, 261
 Hoover, Herbert112, 251
- Ingalls, David S.44
 Inherent Hazards259
- Jenkins, Gwendolyn XII.....89, 106, 107
 Jenkins, C. Francis.....44-95
 Jones, Olive M.29-30
 Jones, Robison G.....12, 25, 81
- Kansas21
 Keith, Alice XI.....24, 35, 175
 Keller, J. O.54
 Kent, Atwater Mfg. Co. XII.....61, 175, 202
 Kittle, H. T.228
 Koon, C. M.XII, 56
 K. G. O.19
 K. S. A. C.21, 37
- Lamb, Gene44
 Learned, MargaretXII
 Legislation54, 250, 252
- Lesson Leaflets (including reprints) 38, 42, 50,
 160-165, 166-174, 184-186, 190, 193-
 194, 260
 Limitations of radio.....181, 188-189, 192, 241
 Lindsay, Vachel44
 Lischka, Chas. M.54
 Literature....19, 34, 42, 43, 44, 46, 50, 52, 174
 184, 218
 Little Red Schoolhouse19
 Log Book144
 Lumley, F. H.58
- McCracken, J. H.54
 Magic Link76, 265
 Magnaphone Co. XII.....150
 Malloch, Douglass184
 Markham, Edwin44-174
 Master Teachers91-92
 Mass Infusion64, 65
 McCarty, Harold B.51
 McConnell, W. R. 95, 227, 228, 231, 233, 235
 Method, Choice of Teaching109
 Miami University (See McConnell).....39
 Millikan, R. A.56
 Miscellaneous Broadcasts154-157
 Morgan, Joy Elmer IX, XII.....44, 55
 Motivation IX 71-76, 82, 154, 155, 158-160,
 161-165, 167-170, 180-185, 187, 192, 198-
 201, 207, 260-264
 Music 19, 20, 25, 34, 35, 36, 40, 42, 50, 89,
 113, 167, 193, 218
- National Advisory Council on Radio in Educa-
 tion55-56
 National Association of State Universities.....54
 National Committee on Education by Radio
 XII.....47, 54, 55, 56
 National Broadcasting Company35, 36, 37
 National Catholic Educational Association.....54
 National Council of State Superintendents.....54
 National Education Association VIII, XII
 National University Extension Association.....54
 New Jersey Schools18
 Nature.....34, 42, 46, 128-131, 170-172, 218
 Nicholson, Meredith44
 North Carolina51, 52
- Ohio State University (See W. E. A. O.)
 Operadio Manufacturing Co. XII.....150
- Pacific Coast S. of A. XII
 Parent Education 68, 76, 77, 261 (Also see
 Home Listeners)
 Parent-Teacher.....34, 39, 45, 109, 265
 Patterson, Nellie237
 Parochial schools234, 248
 Parrott, Hattie L.XII
 Participation, right conditions of 159-181 (Also
 see Motivation)
 Payne Fund III.....29, 56, 78, 86, 175
 Perry, Armstrong XII.....17, 24, 31, 175
 Physics.....34, 46, 190, 218

- Pickard, Sam20
 Pinchot, Gov. Gifford V28
 Pinchot, Gifford Bryce44
 Poetry X.....59, 199, 236, 237
 Powerful Penny, the Parable of.....79-80
 Prejudice, avoidance of 245 (See propaganda)
 Prout, F. J.229
 Propaganda244-250
 Public Address system (See Central Receiving Equipment)
 Publicity.....39, 226, 228
 Pupils, purposes of radio20, 68, 74, 75
 Pupils, samples of work.....198-201
 Radio Institute (See Conferences)
 Radio Industry68, 77, 78, 252-258
 Radio Teaching, deficiencies.....63, 90, 91, 101, 102, 107, 148, 177, 181-183, 259
 Radio Textbook25-27, 260-261
 Reading, Effective.....103, 110
 Reese, L. W. XII.....132, 140
 Recordings152, 201
 Rehearsals.....110, 111, 112, 261
 Reichelderfer, RoyXII
 Remuneration of radio teachers43, 100, 259
 Reports, annual212-215
 Daily165, 206
 Research.....47, 56, 58, 258, 259
 Retention, insuring.....189, 195-197
 Reviews, Tests and Examinations.....164, 195-197
 Robinson, Judge Ira E.....250-252
 Ries, Joseph.....175
 Rogers, Will66
 Rotogravure260-261
 Ruhmschussel, Alma.....112, 113, 183, 185-186, 228, 233, 234
 Rule, Dr. J. N.....54
 Rural Schools.....19, 20, 99, 147
 Sample Broadcasts117-144
 Sandburg, Carl44
 Sayre, Harrison M. XII.....168-170
 Schedules, Broadcasts.....31, 38, 42, 46, 50, 51, 52, 109
 Schuster-Martin School of Drama39, 267
 Score card
 —for Broadcasts206
 —for Talent104-107
 —for Equipment153
 Shaffer, Mrs. Hamilton 109 (See Parent-Teacher)
 Shut-ins, Blind, Aged, Crippled.....230-237
 Siders, W. R.44
 Simon, Ethel Peters 109 (See Parent-Teacher)
 Simplex Mfg. Co. XII150
 Skinner, B. O. XI
 Smith, T. N.54
 Sponsored programs252-258
 Spotsound151
 Stanley, Grace112
 Starr, Traip44
 Stefansson, Viljahlmur94
 Stuart Walker Players39
 Stories.....38, 39, 42, 46, 218
 Story Plays and Rhythmics.....39, 42, 46, 97, 165, 185-186, 218
 Surveys—Payne Fund—.....29-35
 Ohio85
 Sutton, Vida112
 Sutton, Dr. Willis A.....21, 24, 81
 Teaching, Talent.....39, 86, 91, 92, 94, 95, 98, 100, 101, 112, 122, 244
 Teachers, Instruction to161-165, 184-186
 Attitude of178, 182, 228-229
 Teachers reports (See reports)
 Teachers Meetings (See Conferences)
 Team-work159-165
 Television78, 79, 266
 Tigert, J. J.17
 Time98, 102
 Travel (See geography)
 Tyson, Levering56
 Umberger, H.55
 U. S. Office of Education VIII.....17, 44, 53, 56
 Value, Relative218-219
 Variation of Opinion239-257
 Visual aid.....27, 181-183, 188-189, 190, 192, 260, 261
 Vogel, Wm. H.38, 46, 95, 207
 Walls, W. A.122
 Waller, Judith XI26, 27
 W. E. A. O. XII.....31, 41, 80, 106, 107, 118, 231
 White, Ruth Young XII104
 Wilbur, Ray Lyman VI, VII53, 175
 Wisconsin51
 W. L. S.19, 20
 W. L. W. VII, VIII,, XI.....37, 41, 47, 109, 118, 175, 231, 236
 W. S. B.11
 W. T. A. M.25
 W. M. A. Q.27, 160, 166
 W. H. A.51

