

1973

A literature survey of educational radio and its role in education

Pamela Susan Dinville
University of Northern Iowa

Let us know how access to this document benefits you

Copyright ©1973 Pamela Susan Dinville

Follow this and additional works at: <https://scholarworks.uni.edu/grp>

Recommended Citation

Dinville, Pamela Susan, "A literature survey of educational radio and its role in education" (1973). *Graduate Research Papers*. 1959.

<https://scholarworks.uni.edu/grp/1959>

This Open Access Graduate Research Paper is brought to you for free and open access by the Student Work at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Offensive Materials Statement: Materials located in UNI ScholarWorks come from a broad range of sources and time periods. Some of these materials may contain offensive stereotypes, ideas, visuals, or language.

A literature survey of educational radio and its role in education

Find Additional Related Research in UNI ScholarWorks

To find related research in UNI ScholarWorks, go to the collection of [School Library Studies Graduate Research Papers](#) written by students in the [Division of School Library Studies](#), Department of Curriculum and Instruction, College of Education, at the University of Northern Iowa.

Abstract

The purpose of this paper is- to explore through the literature the medium called educational radio. The historical development and the present status of the medium has been surveyed with emphasis given to the development of instructional broadcasting. The survey demonstrates the effectiveness of instructional. radio, and 'defines the potential, problems, and probable future of the medium.

A LITERATURE SURVEY
OF EDUCATIONAL RADIO AND ITS
ROLE IN EDUCATION

A Research Paper
Presented to the
Faculty of the Library Science Department

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

Pamela Susan Dinville

December 14, 1973

Read and approved by

Charles Adams

Elizabeth Martin

Accepted by Department
Elizabeth Martin

Date

12/18/73

TABLE OF CONTENTS

Section	Page
1. INTRODUCTION.....	1
2. EDUCATIONAL RADIO.....	4
Development of the Schools of the Air.....	5
Introduction of the FM Broadcasting.....	7
Noncommercial Networks.....	8
Programs Distributors other than NPR.....	11
Present Status.....	12
3. INSTRUCTIONAL BROADCASTING.....	14
Historical Development.....	15
Formal Instruction for Adults.....	17
Recent In-School Instruction Production.....	17
Present Status of Instructional Radio.....	19
Potential and Problems.....	20
Technical Advancements.....	22
4. SUMMARY.....	23
Future of Educational Radio.....	26
BIBLIOGRAPHY.....	29

Section 1

INTRODUCTION

The development of the commercial radio-stations that most of us are familiar with today, began in the middle twenties with the first national network, the National Broadcasting Company, founded in 1926. These early commercial stations and networks carried, besides commercials, programming designed to appeal to the taste of the general public. Their main goal was profit and not the production of quality programming. There were, however, early experiments in the production of innovative and quality programs which were done by school and university owned educational stations.

Educational radio is still operating today and is providing a wider range of services, from instructional programming to entertainment and cultural enrichment. Until recently much of the broadcasting was limited to general information and cultural programming. With the passage of the Public Broadcasting Act and the formation of the Corporation for Public Broadcasting, there has been a change in format as well as a change in name for many educational stations. The new name, public radio, is being used by more and more radio stations each year.

The change in format for these public radio stations has basically included a broadening of the base of services offered. New programming is being provided for all types of listeners including minorities, elderly, and special interest groups. The development of the National Public Radio network has helped to give a broader scope to educational radio by providing a wider range of programming and more emphasis on the national production. The NPR and the CPB have given both support and direction to the development of educational broadcasting.¹

Though there is strong support and clear direction today, the development of educational radio in the past has been uneven with its role in the society and educational system lacking clear definition. The type and quality of service provided by educational radio varied considerably in the past and does so even today.

The purpose of this paper is to explore through the literature the medium called educational radio. The historical development and the present status of the medium has been surveyed with emphasis given to the development of instructional broadcasting. The survey demonstrates the effectiveness of instructional radio, and defines the potential, problems, and probable future of the medium.

For the purpose of clarity and uniformity, the term,

¹Corporation for Public Broadcasting, "What Is Public Radio" (Pamphlet, Washington, D.C.: n.n.)

public radio, will not be used. Not all educational stations have adopted the term, and most of the literature surveyed have continued to refer to noncommercial broadcasting as educational broadcasting. The term educational radio will be used and defined in its broadest definition to include both general services offered to the public and the more specific services offered to the student. Instructional broadcasting and instructional radio will be used for those types of programming and broadcasting designed for the systematic presentation of materials to students.

Section 2

EDUCATIONAL RADIO

Educational radio has been in existence almost as long as radio broadcasting has itself. The first educational radio station was established at the University of Wisconsin in 1919. By 1925 there were 171 educational radio stations being operated by educational institutions.² Although most of these were concerned with experimentation in the physical and engineering aspects of radio, early broadcasting included programs of general information, cultural, and some instructional programming.³ One of the earliest education programs was a music appreciation course broadcasted by the University of Wisconsin in 1921.⁴

Early experimentation was also done with in-school broadcasting. A pioneer of the "schools of the air" was a New York high school ^{which} who in 1923 began broadcasting a series

²Herman W. Land Associates, The Hidden Medium: Educational Radio, A Status Report (New York: Herman W. Land Associates, Inc., 1967), p. i. Hereafter referred to as Land Associates.

³Giraud Chester, Garnet R. Garrison, and Edgar E. Willis, Television and Radio (4th ed.; New York: Appleton-Century-Crofts, 1971), p. 234.

⁴Albert A. Reed, Radio Education Pioneering in the Midwest (Boston: Meador Publishing Co., 1932), p. 15.

in accountancy.⁵ Other experiments were tried by individual stations between 1924 and 1928. Many of these early attempts, however, failed because of inadequate funding and promotion.⁶

Development of the Schools of the Air

An attempt was made to establish a National School of the Air in 1927. The effort, headed by Benjamin Darrow, was not successful because it failed to gain the needed support in the National Education Association.⁷ This early attempt did lead, however, to the development of the first nationwide educational program, the Walter Damrosch Music Hour. The National Broadcasting Company developed and began broadcasts of the program in October of 1928. The second commercial network, the Columbia Broadcasting System, entered the field of educational broadcasting in 1930 with a series of programs collectively called the American School of the Air.⁸

The first statewide School of the Air was developed in Ohio in 1928 with Benjamin Darrow as its first director of educational broadcasting. Because of an extensive promotional campaign and financing by the state legislature, the Ohio School of the Air was successful. The first year's schedule contained such subjects as current events, stories for children, art appreciation, and literature.⁹

⁵Benjamin H. Darrow, Radio, the Assistant Teacher (Columbus, Ohio: R.G. Adams and Co., 1932), p. 18.

⁶Ibid., p. 60. ⁷Ibid., pp. 28-35.

⁸Carroll Atkinson, Education by Radio in American Schools (Nashville: George Peabody College for Teachers, 1938), pp. 40-41.

⁹Darrow, pp. 37-46.

Other schools of the air were being developed during this same period. The Wisconsin School of the Air, for example, was developed in 1931 after the University had carried out experiments which demonstrated the effectiveness of radio teaching.¹⁰

By 1932 seven major educational programs were being broadcasted: the Danrosch series, the American School of the Air, the Ohio School of the Air, the Pacific Coast School of the Air, the Wisconsin and North Carolina Schools of the Air, and the Chicago broadcasts.¹¹

The third commercial network, the Mutual Broadcasting System, began educational broadcasting in 1934 using programs obtained from their member stations.¹² As these commercial networks entered the field of educational broadcasting, educational stations found themselves unable to compete and began to decline in the early thirties. One third of the American stations in 1925 had been operated by educational institutions. By 1937 only thirty-eight were still on the air.¹³ By 1938 the majority of the programs used in the classroom were being produced and carried by the three major American networks.¹⁴

of how many?

In the thirties such organizations as the Advisory Committee on Education by Radio attempted to convince the Federal Communications Commission to allocate a fixed

¹⁰Ibid., pp. 51.

¹¹Ibid., p. 58.

¹²Atkinson, p. 38.

¹³Land Associates, p. i.

¹⁴Atkinson, p. 38.

percentage of the radio facilities to educational programming. Although the FCC recommended against this in 1935, in 1938 they did set aside certain AM channels between 41-42 megahertz for what was called then the curricular stations.¹⁵

Only a hardcore of some twenty-nine AM stations were able to remain on the air during the thirties and forties. Some stations, such as those associated with the state universities of Wisconsin, Iowa, Minnesota, Illinois, Ohio, and Oklahoma, were able to successfully compete with the commercial networks in producing quality educational programming.¹⁶

Introduction of the FM Broadcasting

Educational stations may have faded out altogether had it not been for the introduction of FM broadcasting in 1938. Regular FM broadcasting was authorized to start in 1941 and five channels were authorized at that time for noncommercial use. In 1945 the FCC reserved twenty FM channels between 88 and 92 megacycles for non-profit broadcasting. The number of educational stations began to increase markedly afterwards. Development of educational stations was further aided by the FCC authorization of ten watt operations. These low power stations with a broadcast radius of two to five miles could be established for a minimal expenditures. Radio

¹⁵Broadcasting Yearbook, 1973, Marketbook Issue (Washington, D. C.: Broadcasting Publications, 1973), p. C 45. Hereafter referred to as Broadcasting Yearbook.; Federal Communications Commission, "Educational Radio, 1972," FCC Information Bulletin (Washington, D. C.: U.S., Dept. of HEW, Office of Education, 1972), p. 4. Hereafter referred to as FCC.

¹⁶Chester, pp. 234-245.

broadcasting was thus brought into the range of small colleges and school systems as well as other community organizations.¹⁷

Noncommercial Networks

Several attempts were made in the early 1940s to develop statewide networks of educational radio stations. In 1944 ^{sp}Indiana failed in its attempt to establish such a network. The following year Wisconsin succeeded with the creation of its State Radio Council. The Council's purpose was to plan, develop, and conduct a state system of radio broadcasting for educational, informational, and public service. The first station of the network was established in 1947. By 1952 a complete network of eight stations had been completed.¹⁸ Since then three more stations have been added. Today Wisconsin has the only statewide network operated by a state agency.¹⁹

The passage of the 1967 Public Broadcasting Act revived interest in the development of state educational radio networks. More than half of the states in the following year were considering the development of such networks.²⁰ Minnesota has been one state to develop a state network through aid from foundation

¹⁷Broadcasting Yearbook, p. C 45.

¹⁸David E. Platts, "Current Status of Statewide Educational Radio Networks," Educational Broadcasting Review, II (June, 1968), p. 38.

¹⁹FCC, p. 14. ²⁰Platts, p. 37.

grants, contracts for special programs, and listener support.²¹ Other networks have been developed in Oregon, Kentucky, and Michigan.²²

In 1967 the Iowa legislature was considering developing a network of some fifteen low power FM stations to canvass the state. Though nothing was ever done with the above plan, there is presently consideration by interested groups of a plan for five high power transmitters using the facilities of the three state universities in addition to two transmitters to be developed in the western part of the state.²³

Up to 1950 no nationwide network had existed for educational radio stations. That year, with a grant from the Kellogg Foundation, the National Association of Educational Broadcasters established the first national tape network. The network was organized to distribute some 100 to 260 hours worth of recorded programs over a ten to twelve month period. Within five years the network had become self-sufficient.²⁴

The tape network had its headquarters in Urbana, Illinois. Programs were duplicated at high speed and sent through the mail to the member stations. The type of programming

²¹James Robertson and Gerald G. Yokom, "Educational Radio: The Fifty-Year-Old Adolescent. ERIC/EBR annual Review Paper," Educational Broadcasting Review, VII, (April, 1973), p. 112. (Microfiche)

²²FCC, p. 6.

²³Statement by Carl Jenkins, personal interview, December 7, 1973.

²⁴Land Associates, p. ii.

distributed included current information, physical science, arts and literature, social science, health, music, and children's programs. Some in-school programming was also provided.²⁵

In 1964 the NAEB reorganized to ~~for~~^{into} new divisional structures. One of these was the National Educational Radio, which combined the tape network and the radio station division. The NER became the public relations and money promotor with ^{its} their headquarters in Washington, D.C. The tape network, itself, remained in Urbana.²⁶

Another national organization was developed with the Public Broadcasting Act of 1967. The broadcasting act established the Corporation of Public Broadcasting which set up a national radio service, the National Public Radio network, in 1970.²⁷ Its purpose was to become a primary national noncommercial radio program network. Its goals have been to provide live interconnections and tape distribution, with member stations acting both as sources for programs as well as program disseminators.²⁸

The priorities of NPR are to provide quality programming through extended coverage of public events and acquisition and production of cultural programs; to establish a system of cooperative programming with member stations; to develop and distribute programs to specified network for minorities

²⁵Ibid., p. I, 23.

²⁶Ibid., pp. ii-iii.

²⁷Chester, p. 241.

²⁸FCC, p. 16.

and interest groups; and to establish foreign program exchange.²⁹

Recently the NER has ceased to exist. The NER gave up the tape dispersing part of its services to the NPR in 1971.³⁰ For a time it functioned solely as a lobbying organization. This was also discontinued and the organization was disbanded in early 1973. With the dropping of the subdivision, the NAEB operates now only as a professional organization with its membership restricted to individuals. The Association of Public Radio Stations (APRS) has become the representative organization of the educational stations and is supported by its membership. At the present time the NPR is the only national live interconnected network for educational stations in the United States.³¹

Program Distributors Other than NPR

There are, however, other program distributors for educational stations. The Broadcasting Foundation of America is a non-profit system whose objective is to make available programming to American stations from abroad. The BFA provides services to both commercial and educational stations.³²

The Eastern Educational Radio Network is a regional grouping of eight eastern stations who exchange taped programs and cooperate in production of some broadcasts. They have also experimented with live interconnect.³³ The Inter-

²⁹Ibid. ³⁰Ibid., p. 13.

³¹Statement made by Carl Jenkins, personal interview, November, 1973.

³²Land Associates, p. III, 6. ³³Ibid., p. III, 7.

collegiate Broadcasting System, which was formed in 1940, is an organization of college stations who share programming. They exchange around four and three-fourths hours of material per week. This system serves the carrier-current or closed circuit operations.³⁴

Present Status

There are presently over 500 FM and twenty-five AM educational stations on the air.³⁵ Of the FM stations, half are low power stations with the transmitting radius of two to five miles.³⁶ Seventy-two percent of the stations are licensed to colleges and universities; seventeen percent to public school systems; and the rest to educational and community organizations.³⁷

The type of programming carried by these stations vary^{ies} considerably. Educational programming includes instructional programs to teachers and students; and cultural, informational, public affairs, and entertainment programs to the general public.³⁸ The range of programming from individual stations vary^{ies} from full service stations which are meeting the needs of both the public and the classroom; and those stations which serve only as training stations for students.³⁹

³⁴Land Associates, p. I, 23. ³⁵FCC, p. 4.

³⁶Broadcasting Yearbook, p. C 45. ³⁷FCC, p. 5.

³⁸Ibid., p. 6. ³⁹Robertson, p. 108-109.

The program format of colleges and universities usually involves cultural enrichment, public relations, student training, and some student teaching.⁴⁰ There are some stations also offering instructional programs to schools, and adult courses for both credit and non-credit.

School districts-owned stations usually focus on direct teaching and supplementary instruction. Recent years have also seen these stations moving toward providing a wider range of services to the public. Non-profit institutions and public libraries are concerned with adult education and cultural enrichment. The stations owned by religious organizations are primarily concerned with informal adult and religious education.⁴¹

The most recent trend in educational radio has been a move to widen its range of services. There is a general realization on the part of broadcasters that the medium can rise to the future only by broadening its base of service to enable it to respond to the needs of the total society. Educational radio is moving to provide programming to special groups such as the disadvantaged, the elderly, and minorities where there is an existing media gap. Educational radio is also moving towards the day of full live network operation.⁴²

⁴⁰Land Associates, p. I, 5.

⁴¹Ibid. ⁴²Ibid., p. II, 5.

Section 3

INSTRUCTIONAL BROADCASTING

A valuable part of educational radio for schools and institutions of higher learning has been its instructional broadcasts. Instructional programming can be defined as those broadcasts designed for the systematic presentation of materials to students with specific learning objectives involved. Instructional broadcasting may be divided into three teaching approaches: direct teaching, supplementary, and enrichment programming. Direct teaching covers specifics in the curriculum. It provides the lessons plans, conducts the drills, and gives the tests. All the teacher is required to do is to follow the directions. Supplementary instruction covers only portions of the material specified by the curriculum and is used by teachers for their own purposes. The last form is enrichment which brings to the classroom resources not normally available, and which does not specifically fit into the curriculum.⁴³ Supplementary and enrichment programs have been the type most frequently carried by radio stations

⁴³ [Instructional Radio Task Force of the NER], "Radio's Role in Instruction. Report and Recommendations of the Instructional Radio Task Force of the National Educational Radio, a Division of the National Association of Educational Broadcasters" (Washington: U.S. Dept. of HEW, Office of Education, 1972), p. 23-24. Hereafter referred to as Task Force. (Microfiche)

and used in the classroom.

Historical Development

Instructional programming began in the early twenties with the University of Wisconsin's music appreciation course in 1921. Early successful programs were also produced in Cleveland and Chicago. In Cleveland, under the direction of Miss Alice Keith, a music appreciation course was carried over WTAM between 1926 and 1928. Miss Keith was also credited with the production of the first radio textbook which was used with her program. The station also experimented with (arithmetic and geography series in the later 1920s.⁴⁴

In Chicago, beginning in 1926, instructional programs were carried each week over WMQ. These programs included music, geography, social studies, science, math, history, poetry, and literature.⁴⁵

During the 1930s there was some development of "schools of the air" by universities such as Wisconsin, Illinois, and Ohio. Nineteen universities and colleges were broadcasting instructional programs in the late thirties.⁴⁶

The educational stations, as stated in the previous section, were declining in the thirties and instructional programming was being done mainly by the three large commercial networks. Programs carried by both the commercial networks and other educational stations generally included such

⁴⁴Darrow, p. 27. ⁴⁵Ibid., p. 27-28.

⁴⁶Atkinson, p. 59.

programs as history, geography, literature, science, and music.⁴⁷

Series were being carried for both secondary and elementary, though the major use may have been by elementary schools because of the rigid class schedules at the secondary level. Which ever the level, early radio educators placed emphasis on careful preparation of the class as well as the use of follow-up activities by both teachers and pupils to provide for effective use of the medium. Studies at that time indicated that radio was "...an effective medium for the acquisition of information." It could effectively modify attitudes and opinions of pupils, and stimulate new and deeper interest in various subject matters.⁴⁸

Interest in instructional broadcasting was revived with the development of FM broadcasting in the forties. In Iowa, for example, the University of Iowa, ^{which} who had previously carried programs for high school, began in 1948 to broadcast programs designed specifically for elementary schools. A series, entitled "Listen and Learn," was carried over both KSUI and WSUI and included ten fifteen minute programs a week.⁴⁹ Between 1953 and 1955 the Iowa State Teacher College developed two series of programs on Iowa history for elementary students.

⁴⁷Dept. of Elementary School Principals of the NEA, Radio and the Classroom (Washington: n. n., 1941), p. 47.

⁴⁸Ibid., p. 61-62.

⁴⁹Sam Leo Becker, "A Study of the Utilization, in the Elementary Schools of Johnson County, of WSUI-KSUI's 1948-1949 Listen and Learn series of Radio Broadcasts" (Unpublished Masters thesis, State University of Iowa, 1949), p. 55.

They were designed as supplementary instruction and were carried over WOI at Iowa State College.⁵⁰

Formal Instruction for Adults

Development of instructional programming for the college or adult student also began in the early 1920s. The University of Iowa began as early as 1924 to broadcast courses for credit through ^{its} their extension division. Instructional programming also included broadcasts from the regular classroom lectures. Such programming has continued to the present though it has never been done on a wide scale.

A survey done in 1965 indicated that of 141 colleges and universities, some twenty-two were broadcasting courses with seven of these offering credit.⁵¹ Universities involved in such programming included Ohio, Illinois, Wisconsin, and Iowa. Purdue has recently become involved in broadcasting courses for credit. They began their programs in 1970 and by 1972 were producing seventeen different credit courses.⁵²

Recent In-School Instructional Production

Though some production is still being done by universities

⁵⁰Robert Edward Davis, "A Study of Teacher Reaction to a Series of Radio Programs on Iowa History" (Unpublished Master's thesis, State University of Iowa, 1956), p. 50.

⁵¹Bernard Russi, Jr., "Teaching by Radio Today," The NAEB Journal (July-August, 1966), p. 48.

⁵²Task Force, p. 57.

for schools, most instructional programming is done by the school districts. Instructional programming has been produced by stations licensed to school boards such as those in Portland, Indianapolis, Cleveland, Chicago, and New York.⁵³

Though support for instructional radio for in-school use has not gained widespread support, successful operations can be found in such states as Oregon, Wisconsin, and Missouri. A survey of the Wisconsin School of the Air, which produces some eight hours of programming each week, is used by over 80% of 1490 schools.⁵⁴

In the state of Oregon, student radio listeners increased 20% between 1965 and 1968. The number of elementary schools using programs increased from eighty in 1965 to 318 in 1968.⁵⁵ One successful program in Oregon is an art course which was started in 1947. The course, designed for elementary students, attempts to stimulate the children's imagination and creativity through the audio sense. Such radio broadcasts avoid pure imitation that visual stimulation tends to produce.⁵⁶

⁵³Robertson, p. 109.

⁵⁴Delores A. Hegemann, "Report on the Wisconsin School of the Air Radio Survey Sent Out in 1969" (Washington, D.C.: U.S. Department of HEW, Office of Education, 1969), pp. 2-5, (Microfiche)

⁵⁵James B. Buch, "Oregon Projections, Appendix C. Vol. II, Plan for Managing the Development, Implementation and Operation of a Model Elementary Teacher Education Program" (Monmouth, Oregon: Oregon College of Education, 1970), p. 81.

⁵⁶James K. Carroll, "Art Education by Radio?" A-V Instruction (January, 1971), pp. 71-73.

Radio has been used successfully in language arts programs. In the St. Louis Public School system, an experimental program of vocabulary building successfully taught 800 new words to 2400 middle-grade student.⁵⁷ Another language arts program for kindergarten students in Long Beach, California used radio programming coordinated with picture books.⁵⁸

Present Status of Instructional Radio

That there has been recent successful efforts in instructional programming is evident by the above examples. Development of such programs has varied considerably from region to region with little being done in the Southwest, Southeast, and in some areas in the Plain and Rocky Mountain states. Though instructional radio programming is used more widely now than in pre-television days, its potential has not been recognized by most educators, administrators, and some radio broadcasters.

A survey, done by the NER Task force in 1971, found a "...profound discrepancy existing between the evident potential and actual use...[of instructional radio]." The survey indicated that no more than 25% of the noncommercial stations were using their facilities for instructional purposes.⁵⁹

⁵⁸ Frank Korman, "Innovations in Telecommunicative Technology; Implications for Education" ([Austin]: Texas University, Austin Center for Communicative Research, 1971), p. 71. (Microfiche)

⁵⁹ Godwin Chu and William Schramm. "Learning from Television, What the Research Says" (Stanford University, Cal.: Institute for Communicative Research, 1967), p. 159. (Microfiche)

Only eleven percent of the educational stations were considered as instructional stations. The remainder considered their function as providing information and culture to a general audience. Of the instructional radio stations, only 40% of those responding were involved in instructional broadcasting at the time of the survey while 59% had indicated that they had at one time or another carried instructional programming.⁶⁰

Problems and Potential of Instructional Radio

These figures seem to indicate that use of radio in instruction is not widespread. The examples of successful programming, however, indicate that radio is an effective tool in the educational process. Though the audio medium is not conducive to all learning situations, neither is any other form of media. For the educational system to be most effective media should be used in those areas where they are most applicable. Most educators have not used radio, however, either out of ignorance or disinterest. In addition to disinterest, instructional radio has not usually received adequate funding, staffing, and promotion which also hampers the type and quality of programming they can deliver.

The potential of radio in education lies, to a great extent, in its own uniqueness as a medium. The single sense aspect of radio can be an asset. Experiments have proven

⁶⁰ Richard O. Forsythe, "Instructional Radio: A Position Paper: A Series Two Paper from ERIC at Stanford" (Stanford University: ERIC Clearinghouse on Educational Media and Technology, 1970), p. 3. (Microfiche)

that a third, and sometimes the second sense channel, does not necessarily advance the learning process and in some situations, it can be a detriment. An average person cannot usually simulate information any faster than the one audio channel can deliver it.⁶¹ This is further substantiated by research that shows that while the use of visuals will improve the learning of manual tasks, in other situations images may be ~~odistractive~~ distractive and can impair learning. Mrs. Cecil Suffern, Assistant Director of Broadcasting for the New York City Board of Education, stated that some programs such as music, news, and drama are better done with radio and that television did not add a great deal to this type of instruction.⁶²

Radio is unique also because it involves the listener more so than other ~~mediums~~ ^{media} by stimulating his imagination. It requires the student to actively participate by filling in the image. In this way, radio is more creative than television and films. Radio is useful, too, in the teaching of listening skills. It can permit the use, also, of a variety of activities such as drawing, dancing, and singing.⁶³

Other characteristics that make radio adaptable to education include its timeliness and its ease of communication. The timeliness not only brings to the classroom information quickly, but also makes radio easy to adapt to new curricular

⁶¹Tasks Force, p. 30.

⁶²Land Associates, p. I. 21.

⁶³Chu, pp. 25-27.

changes and new teaching approaches. The ease of communication allows for the presentation of materials for large groups spread over a wide area. A final factor that favors radio over other broadcasting is that it is more economical. A radio program can be produced up to five times more economically than a comparable television program.

Technical Advancements

Recent technical advancements have increased the potential of educational radio both in instruction and in providing services to the general public. The most important may be multiplexing which allows for as many as four subchannels to be broadcasted along with the main FM channel. These subchannels will allow special broadcasts to be carried to special listening groups. Some disadvantages to multiplexing are that as you add an addition channel, quality of the broadcast goes down. The subchannels broadcasts also required a special receiver. However, the multiplexing system has been used successfully at the Albany Medical College to broadcast instruction to doctors out in the surrounding area. It has also been used for teacher education at the Ohio State University.⁶⁴

Multiplexing can also be used for information retrieval. The four subchannels could be used to provide two audio and two narrow-band control or printing channels. This then could be used to distribute materials and recordings electronically over the air to the school, home or to the media

⁶⁴Forsythe, p. 3.

center.⁶⁵

The FM transmission can also be combined with other devices. It could be used with a television screen to produce low scan television pictures. This involves filling the screen once every fifty seconds. This type of transmission could be done more economically than regular television programs and still combine visuals with the audio channel.⁶⁶ Radio can also be used with other electronic devices such as with the speaker-phone arrangement which allows for two-way communications. Both television and radio have in the past been criticized because of the one-way only signal. The speaker-phone arrangement gives this added flexibility.⁶⁷

⁶⁵Lloyd P. Morris, "Teleduction: Networks for Knowledge," Library Trends (April, 1971), p. 489-490.

⁶⁶Korman, p. 76. ⁶⁷Forsythe, p. 3.

Section 4

SUMMARY

The rise of educational radio has been difficult. Though there was rapid growth when the broadcasting medium was first introduced, most educational radio stations soon found themselves unable to compete with the strong commercial networks. During the 1930s all but thirty-eight of the AM educational stations were forced off the air.

The introduction of the FM broadcasting and the FCC's allocations for noncommercial radio in the 1940s stimulated the growth of educational broadcasting. Since World War II there has been a marked increase in FM licensing with the greatest increase coming within the last decade. Most of the noncommercial licenses have gone to universities and colleges.

The national educational networks have also aided in the development of educational broadcasting by providing its ^{desire} member stations with improved programs as well as with a variety. The ^{as} desirability of maintaining public or educational broadcasting was finally recognized by the federal government in 1967 with the passage of the Public Broadcasting Act and the development of the Corporation for Public Broadcasting. The Corporation has given a new direction to educational radio. Because of its early programming, educational radio drew only a limited audience. This has

been changed by the CPB by broadening the type of services and programming offered through the National Public Radio network and individual stations.

The development of instructional programming has followed and suffered from much the same problems as educational broadcasting as a whole. Both have suffered from inadequate funding, promotion, and staffing. Only through the continuing efforts of individuals and interested groups has it continued to be used to varying degrees throughout the history of educational radio.

The earliest broadcasting was not a nationwide effort. (It's) development has varied from region to region. Important broadcasting was done in such states as New York, Wisconsin and Ohio. Some states developed Schools of the Air during the late twenties and early thirties, with much of the programming being done by universities and school districts.

Instructional programming gained its broadest use as the commercial networks entered the field of educational broadcasting. Such broadcasts as the Danrosch series, and the American School of the Air, were carried over the national networks to most areas of the nation. When the national commercial networks dropped out of educational broadcasting no other efforts at national instructional broadcasting were attempted.

Universities and school districts ^{which} held broadcasting licenses continued to do some instructional broadcasting and production throughout the thirties and up to the present day.

Interest generated by educators has not always been high enough, however, to keep some broadcasts on the air. In Des Moines, for example, a series called "Mr. Achiever", was carried by KDPS which is owned by the Des Moines School district. The program, broadcasted in the mid-sixties, has been dropped and the station has gone to public service broadcasting only.

Though radio has been overshadowed by television in many areas, the development of instructional television has been, in a way, a boon to instructional radio. The interest in instructional television has increased interest in the other media including radio. Recent technical advancements have also increased the quality of services that can be provided by radio. Multiplexing has made it possible for FM stations to carry four ~~addition~~ programs in addition to the one major broadcast. The development of such systems as speaker-phone arrangements provides the medium with two-way communication. The ability to record and preserve recordings from radio broadcasts has also increased the flexibility of the medium for use in the classroom.

Future of Educational Radio

Because of the many changes in recent years in educational radio such as the development of national network, and technical improvements, it is difficult to predict the future of the medium in both the public and instructional spheres. Because of the federal support, the trend for

public radio will most likely be the continued growth of these stations and their audiences. The NPR will continue to grow in membership. The development of multiplexing, improved tape distribution and other technical advancements will continue to improve the quality of educational broadcasting to both the general public and to students.

The way for instructional broadcasting is not so clear. Though there are ample examples of successful operations in several states, the development of instructional radio will depend to a large part on educators and the demands placed by them on the educational radio stations.

The effectiveness of radio broadcasting has been demonstrated on a wide scale in states such as Wisconsin and Oregon. Instructional radio has proven its ability to perform well in many areas such as music, news, and radio dramas. It has also demonstrated its adaptability to such subjects as art and foreign language study.

It has also proven its ability and potential in less specific areas. The potential exists for instructional radio in its capacity to stimulate the imagination, to teach listening skills, to implement readily new curricular changes and approaches. Another asset is its timeliness and its relatively low production costs. The potential is truly there and waits only for the creative educator and broadcaster to bring it out.

The major obstacle to the development of instructional radio is that there are too few people with the willingness

to bring it about. Instructional programming is available though a variety of networks, both the national network and regional and individual distributors. Educators, for the most part, have not shown an interest in the me and wide scale use of instructional radio will not occur until they do.

BIBLIOGRAPHY

- Atkinson, Carroll. Education by Radio in American Schools. Nashville: George Peabody College for Teachers, 1938.
- Becker, Sam Leo. "A Study of the Utilization, in the Elementary Schools of Johnson County, of WSUI-KSUI's 1948-1949 Listen and Learn Series of Radio Broadcasts." Unpublished Master's thesis, State University of Iowa, 1949.
- Broadcasting Yearbook, 1973, Marketbook issue. Washington: Broadcasting Publishers, 1973.
- Carroll, James K. "Art Education By Radio?" A-V Instruction, January, 1971.
- Chester, Giraud, Garnet R. Garrison, and Edgar E. Willis. Television and Radio. 4th ed. New York: Appleton-Century-Crofts, 1971.
- Chu, Godwin C., and Wilbur Schramm. "Learning from Television, What the Research Says." Stanford University, Institute for Communicative Research, 1967. (Microfiche)
- Corporation for Public Broadcasting. "What Is Public Radio." Pamphlet. Washington, D.C.: n. n.
- Darrow, Benjamin H. Radio, the Assitant Teacher. Columbus, Ohio: R. G. Adams and Co., 1932.
- Davis, Robert Edward. "A Study of Radio Programs on Iowa Iowa History." Unpublished Master's thesis, State University of Iowa, 1956.
- Department of Elementary School Principals of the NEA, Radio and the Classroom. Washington, D.C.: n. n., 1941.
- Forsythe, Richard O. "Instructional Radio: A Position Paper. A Series Two Paper from ERIC at Stanford." Stanford University: ERIC Clearinghouse on Educational Media and Technology, 1970. (Microfiche)
- Hegemann, Delores A. "Report on the Wisconsin School of the Air Radio Survey Sent Out in January, 1969." Washington, D.C. : U.S. Dept. of HEW, Office of Education, 1969. (Microfiche)

Herman W. Land Associates. The Hidden Medium, Educational Radio. A Status Report. New York: Herman W. Land Associates, Inc., 1967.

[Instructional Radio Task Force of NER]. "Radio's Role in Instruction. Report and Recommendations of the Instructional Radio Task Force of the National Educational Radio, a Division of the National Association of Educational Broadcasters." Washington, D.C.: U.S. Dept. of HEW, Office of Education, 1972. (Microfiche)

Jenkins, Carl. Personal interview. November, 1973.

_____ Personal interview. December 7, 1973.

Korman, Frank. "Innovations in Telecommunication Technology; Implications for Education." Center for Communication Research, Austin: Texas University, 1971. (Microfiche)

Kottmeyer, William. "St. Louis Public School Vocabulary Development Projects: Radio in Language Growth for Study and Discussion." St. Louis Public School, 1970. (Microfiche)

Madden, Richard. "Educational Radio Bibliography, 1947-1967." Educational Broadcasting Review, (October, 1968), 66-79.

Morris, Lloyd P. "Teleduction: Networks for Knowledge." Library Trend, (April, 1971), 482-92.

Platts, David E. "Current Status of Statewide Educational Radio Networks." Educational Broadcasting Review, II (June, 1968), 37-44.

Reed, Albert A. Radio Education Pioneering in the Midwest. Boston: Meador Publishing Co., 1943.

Robertson, James, and Gerald G. Yokom. "Educational Radio: The Fifty-Year-Old Adolescent." ERIC/EBR Annual Review, Washington, D.C. : U.S. Department of HEW, Office of Education, 1973. (Microfiche)

Russi, Bernard, Jr. "Teaching by Radio Today." The NAEB Journal (July-August, 1966), pp. 47-50.

Tillery, Mabel, Director of KDPS Educational Radio. Personal correspondence between Ms. Tillery and the writer. n.d.

U.S., Department of Health, Education, and Welfare, Office of Education. "Educational Radio, 1972." Washington, D.C.: U.S. Dept. of HEW, Office of Education, 1972. (Microfiche)