RADIO EXTENSION COURSES BROADCAST FOR CREDIT

By

CARROLL ATKINSON, Ph.D. (Peabody)

Author of Education by Radio in American Schools,
Development of Radio Education Policies in American Public School Systems, American Universities
and Colleges That Have Held Broadcast
License, True Confessions of a Ph.D., etc.

II



BOSTON
MEADOR PUBLISHING COMPANY
MCMXLI

RADIO EXTENSION COURSES BROADCAST FOR CREDIT

Hattie and Luther NELSON MEMORIAL LIBRARY

Published in 1941

- I AMERICAN UNIVERSITIES AND COLLEGES THAT HAVE HELD BROADCAST LICENSE.
- II RADIO EXTENSION COURSES BROADCAST FOR CREDIT.

To be Published in 1942

- III RADIO PROGRAMS INTENDED FOR CLASSROOM USE.
- IV America's Outstanding Educational Radio Programs.

COPYRIGHT, 1941, BY EDWARD K. MEADOR

PRINTED IN THE UNITED STATES OF AMERICA

THE MEADOR PRESS, BOSTON, MASS.

A RADIO-EDUCATION BOOK DEDICATED TO:

the memory of the late

EDMUND H. HINSHAW, Congressman and Progressive Leader in the fight against "Uncle Ioe" Cannon.

IDA HINSHAW, Philanthropic Wife and Helper.

the living radio work of R. C. HIGGY, Director, WOSU, Ohio State University.

DR. I. OWEN HORSFALL, Director, Extension Division, University of Utah.

DR. BRUCE E. MAHAN, Director, Extension Division, State University of Iowa.

JAMES A. MOYER, Director, University Extension Division, Massachusetts Department of Education.

the living educational leadership of

DR. A. G. CRANE, formerly President, University of Wyoming.

DR. W. J. McConnell, President, North Texas State Teachers College.

DR. ROY L. SHAFFER, President, New Jersey State Teachers College.

DR. G. H. VANDE BOGART, President, Northern Montana College.

ACKNOWLEDGEMENTS

Acknowledgement is gratefully made to the following—without whose aid and patience with my persistence in running down the facts—this book would never have been worthy of being published:

Waldo Abbot, Director of Broadcasting, University of Michigan.

Dr. J. V. Breitwieser, Dean, School of Education, University of North Dakota.

Dr. Mark Burrows, Dean, School of Commerce and Secretarial Arts, Oglethorpe University.

Dr. Virgil E. Dickson, Superintendent of Schools, Berkeley, California.

T. C. Diers, formerly Director of Radio, University of Nebraska.

Harold Engel, Public Relations, WHA, University of Wisconsin.

James D. Finn, Director, Audio-Visual Education Service, Colorado State College of Education.

Dr. George Willard Frasier, President, Colorado State College of Education.

Helen B. Garrity, Supervisor, University Extension Classes, Massachusetts Department of Education.

Dr. Harlan W. Hamilton, Associate Professor of English, University of Akron.

Dr. Martin Hegland, Director, St. Olaf School of the Air, St. Olaf College.

R. C. Higgy, Director, WOSU, Ohio State University.

Dr. O. A. Hitchcock, Director of Radio, University of Akron. Dr. I. Owen Horsfall, Director, Extension Division, University of Utah.

Richard E. Huddleston, formerly Director, Division of Radio-Television, University of Southern California.

Dr. Harold G. Ingham, Director of Extension, University of Kansas.

Russell Ireland, formerly Program Director, Woodworth Studios, University of North Dakota.

Dr. Thornwell Jacobs, President, Oglethorpe University.

Dr. Bruce E. Mahan, Director, Extension Division, State University of Iowa.

Miss Medora M. Mason, Director of Publications, Fairmont State Teachers College.

7

James A. Moyer, Director, University Extension Division, Massachusetts Department of Education.

Don E. Petty, formerly Director of Radio, University of Southern California.

Major Garland Powell, Director, WRUF, University of Florida.

A. A. Reed, Director, University Extension Division, University of Nebraska.

B. C. Riley, Dean, General Extension Division, University of Florida.

Luke L. Roberts, formerly Director, KOAC, Oregon State System of Higher Education.

Mrs. Zelta Rodenwold, Director of Women's Programs, KOAC, Oregon State System of Higher Education.

Hywel C. Rowland, Head of Music Department, University of North Dakota.

R. Ray Scott, Director, Adult Education Division, University of Hawaii.

Miss Mildred I. Seaman, Assistant Program Director, KFKU, University of Kansas.

Harry Silke, University of Southern California.

Hale S. Sparks, Radio Administrator, University of California.

Fred G. Stevenson, in charge of Correspondence Study, Extension Service, University of Michigan.

H. Umberger, Dean and Director, Division of Extension, Kansas State College.

Mrs. Etta R. Washburn, Associate Director, Adult Education Division, University of Hawaii.

Dr. Arthur C. Watson, Professor of Philosophy and Education, Marietta College.

Miss Helen Williams, in charge of Correspondence Study, Extension Division, State University of Iowa.

E. W. Ziebarth, Director, Minnesota School of the Air, WLB, University of Minnesota.

Special acknowledgement is also made to Dr. S. E. Frost, Jr., concerning whose work I have been somewhat critical although he did a splendid job in preserving data that otherwise would have been irreparably lost.

—Carroll Atkinson.

TABLE OF CONTENTS	
	PAGE
Theory Persists Although Success of Experiments to Date Do Not Warrant Enthusiasm	11
Three Institutions Have Offered Certificates but Not Academic Credit for Radio Courses Kansas State College	20 20 23 29
Three Universities Have Supplemented Extension Courses with Radio Programs University of Minnesota University of Michigan University of North Dakota	35 36 37 40
Thirteen Institutions Have Broadcast Extension Courses for Academic Credit Massachusetts University Extension Division University of Nebraska State University of Iowa University of Kansas University of California University of Southern California University of Florida Oglethorpe University University of Utah Fairmont State Teachers College Oregon State System of Higher Education University of Hawaii University of Akron	41 47 54 59 68 70 76 82 85 93 100 103 107 115
Thoughts Concerning the Failure of Radio Extension "Credit" Courses to Function	119
Index—Subjects	125 127

LIST OF TABLES

		PAGE
Table 1	Radio Extension Courses Broadcast for Credit by Institutions of Higher Education	42
Table 2	Massachusetts University Extension Division Credit Courses, 1923-1936	49
Table 3	University of Nebraska Radio-Correspondence Courses, 1924–1933	60
Table 4	State University of Iowa Extension Division Radio - Correspondence Courses, 1925–1927	64
Table 5	University of Utah Extension Courses Subsidized by Utah Department of Public Instruction for Purposes of Teacher-Training by Radio, 1932– 1935	95

Radio Extension Courses Broadcast for Credit

Theory Persists Although Success of Experiments To

Date Do Not Warrant Enthusiasm

Theoretically, radio would seem to be an ideal tool for extension of university and college instruction whereby students in their own homes outside of working hours could earn official credit toward degrees or teaching certificates. Since 1923 this experiment has been tried more-or-less seriously by thirteen institutions of higher learning. Several others have played around with the idea. Despite the fact that the plan usually has been a flat failure, or, at best, only a mediocre success, the theory continues to invite new attempts to carry it out to a logical successful conclusion.

Cornell University (New York) and Luther College (Iowa), both operating their own broadcasting stations, now have such plans under consideration as a part of their future program schedules. The University of North Dakota also has considered the idea, as have several others. Typical is the comment of Harold Engel, Director of Public Relations, WHA, about the

University of Wisconsin policy:

WHA has never broadcast any University course for formal credit. There has been a feeling on the part of the University people that it should not be done. We have, at various times, encouraged certain departments to experiment with the idea, but we have never succeeded in persuading them to go ahead. The closest we have come to giving credit is the

recognition given to Wisconsin College of the Air listeners who successfully completed examinations in the various courses. In the last year or two we have even dropped away from that because it didn't seem to be particularly popular.

The fact stands out, like a sore thumb on an otherwise immaculately manicured hand, that there was only one "credit" course offered via radio during the 1940-41 academic year, and it failed to attract a single enrollment. Perhaps the right combination of radio showmanship and traditional instructional method eventually can be found so that formal college courses may be broadcast to large groups of interested listeners at the same time that credits toward degrees are being earned by those who desire them. Thus, theoretically, the educational services of institutions of higher learning might be extended to the masses in harmony with the American democratic ideals of equal opportunities for all who seek them.

Most surely, if such a project is ever to be successful, there must be a sensible compromise between radio and traditional methods. So long as professional educators continue to maintain a holier-than-thou conception that they possess exclusively the secret patented formula on how to improve the intellectual welfare of the human race without recognizing the necessity of changing from time-honored methods of the past to meet the highly increased tempo of modern times, just that long will they fail to see and to utilize the true educational possibilities of radio communication.

In the popular mind broadcasting dates back to the KDKA (Pittsburgh) presentation over the air of the Harding-Cox presidential election returns on November 2, 1920. It is not generally known that at least three state universities (Wisconsin, Minnesota, and North Dakota), and possibly others, had successfully transmitted both music and voice over the air prior to that date. It should also be recalled that alternating

current tubes, making possible the all-electric receiver for the home, were not introduced until 1925. The earphone days of radio began coming to a rapid end about the time that the National Broadcasting Company was organized on November 1, 1926. Strange as it may seem, there are still such sets in operation today in isolated localities just as there are "Model T" Fords on the highways—so slow is the process of complete change. This dating of the earphone era of broadcasting is especially significant when the reader is informed that seven of these thirteen serious attempts to broadcast academic courses for credit were made prior to 1930, while only one of these continued past the middle of the next decade.

These thirteen organized attempts to extend opportunities for the earning of academic credit via radio have been both varied and interesting. They have included a state educational department (Massachusetts) which assumes through its University Extension Division many of the service responsibilities usually carried on by a state university; eight state or territorial university organizations (Nebraska, Iowa, Kansas, California, Florida, Utah, Oregon, and Hawaii—listed in the chronological order of their attempts to broadcast "credit" courses); two privately controlled universities (Southern California and Oglethorpe); one municipally controlled university (Akron); and one state teachers college (Fairmont, West Virginia).

Also, in 1923, Marietta College (Ohio) received official approval from the Ohio Department of Education for its proposed plan to broadcast "credit" courses as a state-wide service. However, none went on the air. Three other state universities (Minnesota, Michigan, and North Dakota) have used radio programs to supplement their regular correspondence study services. These have differed from the thirteen listed as giving "credit" courses primarily in the degree of importance that has been placed upon the role of the radio instruc-

tion. Ohio State University since 1934 has had a plan whereby students may listen to organized instruction as presented over the air, then (after matriculation on the campus) take examinations in the same subjects for successful completion of which a limited amount of credits leading to a degree can be secured. St. Olaf College (Minnesota) in 1941 inaugurated a similar plan, details of which are still in the process of being worked out.

Marietta College (Ohio) held license to operate its own station for a period of one year, eight months, and twenty-three days beginning April 29, 1922. Dr. Arthur Clinton Watson, Professor of Philosophy and Education, was the faculty member most interested in the project. While limitations of the transmitting equipment and cost of the proposed project prevented actual operation of the station, its early history was unusual in that it made a serious attempt to establish a system of radio-correspondence courses for credit.

Dr. S. E. Frost, Jr., presents a picture of this early development:

Interest in radio at Marietta College dates from the time when a son of one of the faculty members at the College, who was "dabbling" in wireless, was given permission to use a room in the Science Building for his transmitter and receiving set. As the work of this young man developed and general interest in radio increased, members of the faculty saw the possibilities of using radio as a means of education and prevailed upon the College to take over the equipment.

Definite plans for radio education were developed. These included the conducting of college courses by a combination of correspondence and broadcasting. Syllabuses were to be supplied to all students and reference readings and illustrative material furnished by mail. It was believed that the broadcast lectures would establish a closer contact between students and instructors than is usually possible in correspondence teaching.

Formal approval of this plan was asked and obtained from

the State Department of Education, and considerable thought was given to details of the plan. Correspondence with teachers in neighboring villages revealed considerable interest in the courses proposed.

However, because of the limitations of the station's transmitting equipment, and because those who were in charge of the operation of the station had other duties in the College which did not permit them to devote the time to this project that was necessary for its success, the plan was never put into full operation.¹

Dr. Watson, eighteen years after Marietta College made this ambitious though abortive attempt to establish a comprehensive system of academic courses via radio, contributes the following:

The outstanding lesson which we learned was that in spite of some enthusiasm for the idea, it was really a much bigger idea than we thought, and called for much more financial and other forms of support than were available at the time. I proposed to the Board of Trustees that they should secure much wider broadcasting facilities and provide for more faculty assistance in attempting to carry out the proposed radio problem. But the idea seemed to be too "idealistic," and failed to receive the necessary backing.

The plan for which we obtained approval from the State Department of Education stipulated that credit, which might be given to any students for courses taken by radio, should be on a basis of examination and acceptable to our faculty as equal in academic rigor to any other form of extension course. It was part of our plan also to provide visual aids such as mimeographed outlines, etc., to be mailed to cooperating students before each broadcast lecture, and also review questions on previous lectures.

I believe that the article appearing in the Frost book was taken from a letter written by President Parsons, and so far as I know is correct as far as it goes.

¹ S. E. Frost, Jr., Education's Own Stations (Chicago: University of Chicago Press, 1937), p. 191. (This and following extracts are quoted by permission of the University of Chicago Press.)

Dr. Frost infers that the University of Colorado made the attempt to broadcast extension "credit" courses in 1924 during the time that institution was operating its own station. His statement follows:

Early in December of 1924 interest in the possibilities of radio as a teaching medium had become such on the campus of the University of Colorado that a meeting of the Extension Council was called to discuss a plan for the use of the station in the extension field. President George Norlin, of the University, appeared before the Council urging that the station be used for the broadcasting of important scientific and informational lectures and of wholesome entertainment....

During the session of 1924-25 ten programs were put on the air. These consisted of phonograph records, concerts by campus talent, talks by the president of the University and faculty members, athletic events, and "lessons" under the direction of the Extension Department of the University. Though little interest was shown in the "educational" programs, the response to dance orchestras and athletic events was good.²

Dr. Frost performed a valuable service in preserving in printed organized form many data concerning early history of educational broadcasting that otherwise would be irretrievably lost by this time. Unfortunately, as a research worker, he has been somewhat inclined to accept information from his correspondents without checking back to determine its reliability. The following from Clifford Houston, the present Director of that institution's Extension Division, bears out this judgment:

I have checked the information which appears on the sheet which you inclosed concerning the attempt by the University of Colorado to broadcast radio extension courses for credit. Dean Elmore Petersen, who was Director of the Extension Division at that time, and who directed the entire radio

² Ibid., pp. 67, 68.

experiment, states that the Extension Division did not attempt at any time to broadcast extension courses for credit. . . . Dean Petersen states that the University Radio Station never broadcasted "lessons" under the direction of the Extension Division.

Doctor Frost erred again in stating that the Colorado State Teachers College had actually conducted an extension course via radio in the winter of 1930. His statement reads:

Another venture in radio education made by the College was a "radio conference correspondence course" conducted from the campus in the form of lectures given weekly over Station KFKA during the winter quarter of 1930. Eligible students enrolled ahead of the scheduled time for the first lecture by paying the enrollment fee of \$5.50. This entitled them to study units and objective tests for each lecture. These materials were studied and the test prepared immediately following the lecture and mailed to the Extension Department of the College. Here they were corrected and graded and returned to the student for his further study. An examination was given at the end of the course. All qualified students completing the work and passing the examination were allowed two quarter-hour College credits.*

Although Doctor Frost reports this course as having gone on the air, with details as to its administration, the August 21, 1941, letter of James D. Finn, Director, Audio-Visual Education Service, Colorado State College of Education, definitely states that this course did not go on the air. His letter reads:

I have gone to considerable trouble attempting to locate the information you desire regarding the course purported to have been offered by Colorado State Teachers College during the winter quarter of 1930.

^{*} Ibid., p. 66.

We finally contacted Major George Irvin, now Assistant Director of Selective Service, who at that time was a member of our Extension Department. He states that while the announcement was issued and all preparation was made for the series and for the course, the project fizzled out due to the fact that very few rural schools were equipped with radio receivers. This projected course was pointed toward rural teachers, and since there was not a sufficient listening audience the project was discontinued.

I am enclosing a copy of the announcement sent out by Robert H. Morrison, then Director of the College Extension Department, prior to the projected course. Included also is a questionnaire which was to be filled out by interested parties.

Doctor Morrison's undated announcement addressed to all Weld County teachers gives further details of the plan which was never carried out, as follows:

Colorado State Teachers College is planning to use KFKA radio station in connection with an experimental correspondence-radio course to begin about February 1, 1930, and to continue for twelve weeks. This will be conducted as a correspondence course in a chosen subject supplemented by twelve radio lectures. The cost of the course, which will be for two hours credit, will be \$5.50 payable when the student enrolls.

The value of the additional feature, the radio conference, as is readily seen, will consist of the personal exposition by the instructor of the content of the course and the opportunity to clear up through detailed explanation typical difficulties which have been reported by students who are enrolled.

A questionnaire, with a return-address postage-paid envelop inclosed, was sent out in the promotion of this proposed offering of a radio extension "credit" course. It requested that the prospective student check one of three courses or make suggestion of an additional offering: (1) Improvement of Reading—Dr. Annie M.

McCowen, (2) Problems in Character and Moral Education—Dr. E. U. Rugg, and (3) Psychology of Elementary School Subjects—Dr. J. D. Heilman. A request also was made that the preferred hour for the radio course be checked, ranging from 4 to 5 through 9 to 10. Further information was elicited concerning whether there were available receiving sets in home, boarding place, schools, and the make of such sets.

A final word about this course offering College credit that never went on the air is given by President George Willard Frasier under whose administration the Colorado State Teachers College (now Colorado State College of Education) operated a standard broadcast station for a period of six years, ten months, and seven days beginning June 4, 1923. His August 22, 1941, letter reads:

I have checked very carefully the matter of the classes we talked about. I was in Denver Wednesday and talked to Major George Irvin. George told me the classes referred to were correspondence courses. These correspondence courses were sent out to the teachers and then they were to be supplemented by lectures over KFKA. George told me that the thing fell down because of the inability of the rural teachers, who were most interested in the course, to get suitable receiving sets. Of course, KFKA in 1930 was not the station that it now is. George said he did not know of a single person who completed the course through that arrangement and that a student had to do all of it by correspondence and not radio.

Thus, if Marietta College is eliminated as having planned but not acted, and the University of Colorado as never having seriously thought of broadcasting extension courses for credit, and Colorado State Teachers College as not putting its proposed courses on the air, there remain thirteen institutions of higher learning

that have made more-or-less serious attempts to further their formal instructional services whereby students may earn academic credits via radio toward degrees or teaching certificates. Before presenting in detail the history of these thirteen radio-credit-granting experiments, a brief examination should be made of the three institutions of higher learning that have issued certificates for radio courses but not direct academic credit, and then of the three universities that have supplemented extension courses with radio programs primarily as a service rather than a means of earning official credit.

Three Institutions Have Offered Certificates But Not Academic Credit for Radio Courses

Of these three, the Kansas State College experiment was made in the pioneer earphone days of broadcasting. Ohio State University initiated its plan in 1934, and it has continued until the present time with less emphasis being placed upon the certification feature in each succeeding year. The St. Olaf College (Minnesota) experiment was begun immediately prior to the publication of this book. In the case of both Ohio State University and St. Olaf College, the radio courses offer a somewhat indirect means toward the earning of official academic credit.

Kansas State College of Agriculture and Applied Science held initial license to operate a standard broadcast station for a period of three years, eight months, and thirteen days beginning April 6, 1922, with call letters being WTG. Today the College operates its own station, KSAC (Manhattan), being granted a special permit to begin operation December 1, 1924, although the station did not receive its first regular

license until January 27, 1925. There had been some experimental work in broadcasting weather reports as early as 1912 over a transmitter known as 9YV. This was temporarily discontinued during the World War but was resumed in 1919. Professor E. R. Lyon, of the Physics Department, took over the radio equipment in 1921. Soon thereafter the wireless 9YV was converted into the above-mentioned WTG, a 100-watt radio telephone station over which the spoken word and music were first sent out in 1921. Interest in broadcasting grew in the next two years, but the equipment needed was so expensive that campus officials despaired of getting the necessary appropriations.

At this time KFKB began operating at Milford with sufficient power to cover the entire state of Kansas quite effectively. Consequently, Professor Lyon, Sam Pickard, and L. C. Williams chipped in fifty dollars each to guarantee the first tolls, rented a long-distance telephone line to the Milford commercial station over which Kansas State College went on the air February 11, 1924. During this period of remote control broadcasting over KFKB, members of the College faculty presented series of lecture courses with listeners being enrolled for a ten-week period of twenty-five-minute radio lectures. This broadcast schedule ran five nights a week from 7:00 to 8:00 p.m., Monday through Friday.

Considerable advertising for the purpose of creating interest preceded the broadcasting of these courses. An effort was made to secure names of those who would actually follow the various offerings. In order to get this information, a mimeographed copy supplementing each radio lecture was sent the day following the broadcasting of that lecture to all those who had registered. At the end of these ten-week courses, brief examinations were given and certificates issued to those who successfully passed them. Verbatim copies of the lectures were sent to those who were enrolled. This pro-

cedure, when reception was far from reliable, served to verify the information that had been broadcast. In this way, also, maps or tables could be used to supplement the radio instruction.

Considerable advance publicity resulted in more than four hundred people being registered before the first program went on the air. There was no limit imposed regarding the number of courses each student could take. At the end of ten weeks, registrations had been received from all but nine of the American states. Among these registrants there were included thirtyeight from the Canadian provinces, taking a total of eighty-nine courses. The total registration included 967 students enrolled for 2,446 courses—an average of about 2.5 courses per individual. Since there were eight of these courses broadcast (two of these taking two broadcast periods per evening), this shows an average enrollment of about 306 per course, and an average of 171 individuals taking each course with but thirty-nine receiving certificates for each radio offering. Enrollments follow: (1) crops, 314; (2) livestock, 297; (3) dairying, 279; (4) poultry, 488; (5) agricultural economics, 251; (6) timely topics, none; (7) home economics, 353; and (8) engineering, 464. There is no record of the certificates in each course, only the fact that a total of 488 for eight courses were awarded, with 311 of the 967 individuals enrolled taking these examinations.

It should be noted that college credit was not granted for these early radio courses; only honorary certificates were awarded for their successful completion. There is reported to have been but little question in the minds of those directing these radio courses but that the program had genuine merit and had created much interest, but the administration believed it undesirable to continue this type of radio service. The plan was discontinued because of lack of financial support and personnel to conduct such an ambitious program. It should be re-

membered that at this early date there was but a small number of earphone type of receivers in the area.

The idea of presenting this type of educational radio program was continued but the certificate plan was abandoned. This systematized plan of courses with official recognition for their successful completion was in effect only during this one academic year. None have been given over KSAC since with the exception of one or two short telegraphers' courses with honorary certificates being awarded as the reward for successful accomplishment.

Dr. H. Umberger, Dean and Director of the Division of Extension, sums up this work as it was carried on during the pioneer days of radio as follows:

Unquestionably the broadcasting of these courses was meritorious and greatly beneficial to the rural people of Kansas and adjacent states at this early stage in the field of radio development. The enthusiastic reception shown by radio listeners was indicative of the degree of interest displayed in this new venture. Radio directors and administrators of such radio programs did not foresee the magnitude of the undertaking, or adequate finances and personnel probably would have been provided before an attempt was made to broadcast such elaborate courses. To be successful, courses by radio must be followed through from the arrangement of the course to the broadcasting of the course, and adequate copies of the materials broadcast as well as certificates (or some other means of culmination of the courses) should be provided enrollees.

Ohio State University operates its own station, WOSU (Columbus), having received its initial license on June 3, 1922, with the original call letters, WEAO, which were changed to the present ones September 1, 1933. Interest in radio communication is recorded as having begun in 1909 when the Department of Elec-

trical Engineering offered a course in radio and wireless telegraphy. At present (1941) there are about thirtyseven broadcasting hours each week with approximately

117 programs being originated.

In 1930-31 these educational broadcasts became more definitely organized. The name, "Ohio State University Radio School," was used that year in connection with three courses in which information, outlines, and supplementary reading assignments were suggested to listeners who had indicated an interest in the subjects being broadcast. Publicity was given through newspapers, radio announcements, and direct mail to workers in factories and institutions as well as to members of other groups who were believed to be interested. About two hundred copies of the supplementary material on each course were distributed to those who returned the registration cards. Considerable interest was evidenced throughout the broadcasting of these courses, but the number of people completing the entire schedule was small.

In 1934 the policy was begun of granting "proficiency" credit (after examination administered by the department concerned) for work completed in the radio college. This is the Ohio State University policy in effect today. Examinations are given and marks re-Each student must complete the assigned readings for the radio course. When such student becomes a resident of the campus, he may take proficiency examinations in those courses he has audited over the radio. If successful in passing the examination, he receives credit toward a degree. The University has adopted the policy of allowing these proficiency examinations in certain specified subjects, and will permit a maximum of thirty hours credit when such examinations are passed successfully. This credit, however, is not given directly for the radio work as such but requires both residence and examination.

The Ohio Emergency Junior Radio College was set

up in January, 1934, as part of the Ohio Emergency School Program. Quarters and radio facilities were furnished by Ohio State University. The faculty of the University appointed a committee to supervise the educational aspects of the program. This experiment in higher education by radio was made possible through the policies established September 26, 1933, by the Federal Emergency Relief Administration for the employment on a work-relief basis of needy, unemployed persons competent to teach unemployed and other adults in need of further general education so as to make them well-informed, responsible, and self-supporting citizens.

In order to carry out these policies, an educational control was set up in the Federal Emergency Relief Administration with personnel loaned by the U. S. Office of Education. University instructors presented these early radio courses. The work was voluntary, and they served without extra stipend. Unemployed teachers, under direction of the Works Progress Administration, served as supervisors of local discussion groups until 1936, at which time this policy was discontinued. At present (1941), supplementary materials (notes, explanations, and course outlines) are provided free. However, the usual University fees must be paid whenever the student takes an examination for proficiency credits in certain of the courses that are broadcast if they happen to be in the group of offerings where such credits are allowed. This cannot be done, of course, until residence has been established on the campus.

As a definite project, the Ohio Emergency Radio Junior College has facilitated program administration of WOSU. It now is the policy of the University administration that instructors, who before were too busy with heavy classroom schedules, may now be relieved of at least a part of that work to devote more time to their radio college activities. Created as an emergency pro-

ject, it has been partially financed by Federal Government aid. Three successive agencies have furnished money for printing and distribution costs. These have been the Federal Emergency Relief Administration, Civil Works Administration, and the non-emergency Works Progress Administration. Ohio State University has provided the radio station, instructors from the regular faculty, and the working facilities. The federal agencies have supplied clerical and field workers drawn from the ranks of the unemployed.

In the first five-year period of its operation, beginning with the winter quarter of 1934, the Radio Junior College offered sixty-six different courses a total of 121 times. Enrollments of radio students averaged 292 for each course offering, with considerable variation of popularity being shown among the subjects as broad-Ranked in order of the greatest to the least interest, the fields of learning stood as follows: (1) arts and crafts, (2) home economics, (3) agriculture, (4) science, (5) literature, (6) languages, (7) social studies, (8) personal development, (9) music, and (10) non-academic subjects. Seventeen thousand individuals were enrolled within this five-year period.

From the winter quarter beginning January 1, 1934, through the spring quarter of 1941 (the latest figures available prior to the publication of this book), there had been 173 of these Ohio State University Radio Junior College courses offered with a total enrollment in these twenty-eight quarter periods of 42,091. Within recent years many of these courses have been broadcast without asking for enrollments because there were no supplementary materials to be distributed. The following figures show the enrollment trends to date:

Winter, 1934 Spring, 1934 Fall, 1934	2,198
Winter, 1935	0.005
Spring, 1935	
Summer, 1935	4.00
Fall, 1935	
Winter, 1936	
Spring, 1936	
Summer, 1936	1,748
Fall, 1936	1,881
Winter, 1937	. 2,694
Spring, 1937	
Summer, 1937	
Fall, 1937	
Winter, 1938	,
Spring, 1938	
Summer, 1938	
Fall, 1938	
Winter, 1939	1,056
Spring, 1939	,
Summer, 1939	
Fall, 1939	
Winter, 1940	′~~
Spring, 1940	
Fall, 1940	
Winter, 1941	
Spring, 1941	. 549
TOTAL	42,091

This has meant an average of about 526 enrollments per quarter in the eight academic periods in which these Radio Junior College courses have been offered. It has been estimated that each individual enrolled, on the average, carries two courses or better so this would mean about 250 students per quarter have been systematically following the radio instruction. Because of the variety of titles given to course offerings, any division into subject fields at best must be an approximation.

The following figures are offered with this reservation in mind:

Agriculture (14 courses)	,078
Art (5 courses)	,217
Business Administration (3 courses)	321
Classical Language (1 course)	196
Education (9 courses)	,312
Engineering (3 courses)	535
English (19 courses)	,346
	378
Home Economics (14 courses) 4	,856
Music (25 courses) 2	,095
Nursing (2 courses)	343
Orientation (2 courses)	193
Philosophy (1 course)	399
Physical Education (3 courses)	737
Political Science (3 courses)	594
	,021
Psychology (7 courses)	,680
Science (4 courses)	501
Social Studies (14 courses)	,473
Sociology (7 courses)	,332
Spanish (14 courses) 4	,484
TOTAL 42	,091

Relative to this broadcasting development and the granting of proficiency credits as a result of radio instruction, R. C. Higgy, Director of WOSU, contributes the following:

We have given very little attention to the matter of preparing Radio Junior College students for regular University credit by proficiency examinations. We have no data on the number of students that have obtained credit in this manner as such opportunities are open to everyone enrolling in the University. The several departments where this could be possible have absolutely no record or information of any value to you. We do know that students in Romance Languages, Sociology, and Psychology have obtained what we call "EM" credit, likely being helped to some extent by the radio work.

A committee headed by Professor Ward Reeder has recently made an extensive study of this work and recommendations concerning its activity in the future. The report of this committee is not yet available but will be a valuable contribution to our work. It will be an evaluation study to determine what attitude and policy is to be followed in the future. With the withdrawal of support for this work from the various relief agencies which we have had continuously up to the last year, it will of course be necessary to provide additional funds to carry on the work as we have in the past.

We do not give credit of any kind for radio work. Credit is given only to students who enroll for residence work in the University upon satisfactory completion of proficiency examinations after they enroll on the campus. Any student can take such examinations to receive advance credit and we only call attention to this in our radio announcements. Recently we have refrained from making even this statement as we do not find many persons following the radio work interested in credit of any kind.

* * *

St. Olaf College owns and operates its own station, WCAL (Northfield, Minnesota), receiving its initial license to broadcast on May 6, 1922. When the ban was lifted on amateur radio at the close of the first World War, the Department of Physics began construction and operation of an experimental transmitter using the call letters, 9AMH. Professors Erik Hetle, H. R. Skifter, and Norris Glasoe performed most of this early work. In 1919 under new call letters, 9YAJ, new experiments were tried in voice transmission. Phonograph recordings also were broadcast. WCAL at the present time (1941) operates two studios—one on the campus and the other at the Augsburg Publishing House in Minneapolis. It shares daytime hours with WLB (Minneapolis), owned and operated by the University of Minnesota. The programs offered have been of an educational and religious nature, in keeping with the background of the College itself which is denominational.

The "St. Olaf School of the Air" was organized by a series of steps during the fall of 1940, and the first four courses were offered during the second semester of the 1940-41 academic year. A preliminary printed announcement described this plan of offering college courses via radio whereby academic credit may possibly be obtained for acceptable courses previously taken in the School of the Air after matriculation has been made in St. Olaf College. A statement published after the initial courses were already on the air reads, in part, as follows:

Throughout the years of its activity there have been broadcast over Radio Station WCAL, courses of lectures dealing with a variety of subjects. In the St. Olaf School of the Air, which was launched with the opening of the second semester of the present school year, an effort will be made to give somewhat more definiteness, direction, and organization than heretofore to lectures broadcast. There will thus be made available to the people of the Northwest in their homes the educational resources of St. Olaf College in increased degree.

The logic of the situation seems to call for this enterprise. In the faculty of St. Olaf College are available richness of scholarship and culture; throughout the Northwest are a great many people eager for knowledge and intellectual stimulation; and in WCAL we have a wonderful instrument for bringing these elements together. As a project in adult education and as an extension of the program of Christian education to which St. Olaf College is dedicated, the School of the Air would seem, therefore, to hold possibilities of large usefulness.

The plan of the St. Olaf School of the Air is as follows:

Types of Courses Broadcast:

(1) Some regular college courses suitable for broadcasting.

- (2) Semester courses of one period of thirty minutes a week planned especially for broadcasting.
- (3) Summer courses of one-half semester duration, thirty minutes a week.

Procedure:

- (1) Upon request an outline or syllabus of each course with suggestions for reading is sent out in advance of the course.
- (2) The lectures in the course are broadcast over WCAL.
- (3) At the close of each set of courses examinations are given. Recognition of the Work:
- (1) Upon the satisfactory completion of a course a certificate of achievement from the St. Olaf School of the Air is given.
- (2) Upon the satisfactory completion of thirty units of instruction a diploma from the St. Olaf School of the Air is given.
 - (NOTE: A unit of instruction is a semester course of one period of thirty minutes a week. Regular college courses count as two units a semester per hour broadcast. Summer courses count as one-half unit.)
- (3) Credits earned in the School of the Air do not count toward graduation from St. Olaf College. However, individuals who matriculate as regular students at St. Olaf College may consult the registrar of the college as to possible arrangements whereby college credits may be obtained for acceptable courses previously taken in the School of the Air.

Fees:

There are no fees for courses in the School of the Air. However, since WCAL is largely dependent for its operation upon freewill contributions from friends, the station will gladly receive gifts from persons who take the courses and the examinations. Such persons may wish to become members of the WCAL Sponsor group, which is made up of those individuals, families or organizations who contribute \$5.00 or more in any one year.

Persons who want to make good use of their time, who are eager for more knowledge, who want to follow out a definite plan of listening and reading, and who desire to increase their powers for interesting conversation will profit by taking one or more of the courses in the St. Olaf School of the Air.

Former students in St. Olaf may wish thus to continue or renew their connections with the College. Others also may appreciate having their attention called to the opportunities afforded by the School of the Air.⁸

Dr. Martin Hegland, Director of WCAL and the man principally responsible for the establishment of the St. Olaf School of the Air, presents his own version of how this new broadcasting development was established as follows:

As Director of Radio Station WCAL at St. Olaf College, I have long been interested in the possibility of a School of the Air as a project in Adult Education. To a considerable extent I have been influenced in my thinking by my interest in the magnificent work in the field of Adult Education being done by the Peoples High Schools of Denmark, and other countries, which I had an opportunity to study at firsthand while a graduate student in Teachers College, Columbia University.

When radio became a common thing, it occurred to me that it possessed wonderful possibilities for usefulness in the field of Adult Education. As a part of our WCAL program we have, of course, from time to time given series of lecture courses dealing with a variety of subjects. The idea with the School of the Air would be to give somewhat more of organization and direction to such lectures. Early in the fall of 1940 I, therefore, worked out a tentative plan for a School of the Air in connection with WCAL and submitted this plan to our Radio Board which consists of the Director and Manager of WCAL, the President, Business Manager, and Treasurer of St. Olaf College.

The plan was then submitted to the Educational Policies Council of the Faculty of the College, the members of which offered suggestions and modifications in the plan. After revision the plan was then submitted to the Faculty and was approved by them in principle. It was decided that the details were to be worked out by the Executive Board of the School of the Air, which according to the plan approved is

⁸ WCAL a Lutheran Radio Station, (no date), p. 3.

constituted as follows: the WCAL Board, the Registrar of the College, and three advisory members from the Faculty chosen by the following groups—the Language group, the Natural Science group, and the Social Science group.

The administration of the project was placed in the hands of a Director of the School of the Air, the WCAL staff, and the Executive Board described above. Following the action by the Faculty, the Executive Board met and elected me as Director of the School, and approved the series of the four courses set forth in the first bulletin of the St. Olaf School of the Air to be given during the second semester of the school year 1940-41.

The original plan called for supervised examinations, but for various reasons the conclusion was reached that this method was too cumbersome. This plan, therefore, has been modified. It should be remembered that the purpose of the St. Olaf School of the Air is not so much to earn academic credit as it is to encourage thoughtful listening. However, the work done is recognized as follows:

- (1) If evidence of thoughtful listening to a good percentage of the broadcasts in a given course is offered, a *Gertificate of Achievement* from the St. Olaf School of the Air is given. Either one of the following is accepted as such evidence:
 - (a) Answers to examination questions sent directly to the listener in which the notes on lectures or any other material may be made use of.
 - (b) A statement of about 500 words stating in a general way what the listener has learned from the course, or what it has meant to him or her.
- (2) When enough Gertificates of Achievement have been accumulated to represent thirty units of instruction, a Diploma from the St. Olaf School of the Air is given.
- (3) As stated in the announcement, Credits earned in the School of the Air do not count toward graduation from St. Olaf College. However, individuals who matriculate as regular students at St. Olaf College may consult the Registrar of the College as to possible arrangements whereby college credit may be obtained for acceptable courses previously taken in the School of the Air.

The question as to how the Registrar may proceed in evaluating courses of the School of the Air for possible credit

towards graduation from College is still to be decided. The thought, however, is that when a student has matriculated at St. Olaf College as a regular student and has demonstrated his ability to do College work of satisfactory quality, then the question may be taken up as to any possible credit for work previously done in the School of the Air. Naturally, any such credit would have to conform to the College regulations as to majors and minors, advanced work, and all other regulations governing graduation from St. Olaf College. The thought is that each individual case would be treated on its own merits.

As far as response to the opportunities offered by the School of the Air during its first half-year on the air is concerned, it may be stated that somewhat more than 300 people wrote in for outlines of the courses or other information. Naturally, it is impossible to tell just how many people are following these courses, but evidence at hand indicates that the number is far larger than the 300 or more people who have written in for information.

Enrollment is made in the "School of the Air" by checking the name of the course desired on a postcard, then mailing it. An outline or syllabus, intended to be helpful in following the lectures and doing the reading, is then sent to the enrollee. During the second semester of the 1940-41 academic year, beginning January 26, 1941, the following initial four courses were given:

"Notable Hymns and Hymn Writers" by Professor Paul Maurice Glasoe, Ph.D., Sundays, 2:30—3:00 p.m.

"The Development of Modern Norway" by Professor Karen Larsen, Litt.D., Tuesdays and Thursdays, 8:50—9:30 a.m.

"Community Social Problems" by Professor Carl August Mellby, Ph.D., Thursdays, 3:30—4:00 p.m.

"Books of Today" by Professor George Weida Spohn, Ph.D., Saturdays, 9:00—9:30 a.m.

During June and July, 1941, there were offered five courses over a period of eight weeks as follows: (1)

"Our Neighbors to the South," (2) "Masterpieces of Hymnology," (3) "Nature Rambles," (4) "Eight Great Books," and (5) "The Progress of Christian Work in China." These summer courses, shorter in length, count only as one-half unit whereas the courses broadcast for a semester are credited as two-unit offerings.

There are no reliable figures as to the number of people who have followed these courses, but who were not sufficiently interested in the idea of earning honorary certificates to present required proof of work accomplished. Likewise, any development of these certificates into College credit, of course, is a matter for the future to decide. As this book goes to press, the following incomplete data indicate the extent to which the "St. Olaf School of the Air" plan of systematized radio instruction has been developed. There were twenty-one different persons meeting the requirements necessary to be awarded a certificate of achievement. Some took all four courses. The break-down of these figures shows the following:

Notable Hymns and Hymn Writers	12
Development of Modern Norway	8
Community Social Problems	8
_	
TOTAL	40

Three Universities Have Supplemented Extension Courses with Radio Programs

Three of the American State Universities have broadcast supplementary lectures as an aid to correspondence-study students. University of Minnesota operates its own station, WLB (Minneapolis), having received its initial license to broadcast on January 13, 1922—thus sharing with the University of Wisconsin station, WHA (Madison), the honor of being the first educational institution stations to be licensed for long-wave standard transmission in the United States.

The German courses over the air started in the fall of 1928. These were a service of the General Extension Division. There were thirty broadcasts each year, with the texts used being those of the regular German classes. An attempt was made to use the direct teaching method, and as much of the instruction as possible was in the German language. The use of English was limited to the explanations of the grammatical points that might otherwise not be understood by the students if presented in German. Listeners were advised to buy a textbook, and many reported that they did so. There were no means of estimating the audience response and size except by the number of letters received. Consequently, today there is no accurate record of what that response may have been. These courses were taught by Professor Oscar G. Burkhard, of the Department of German, until 1938 when they were discontinued. No University credit was granted for this work.

E. W. Ziebarth, Director of the Minnesota School of

the Air, covers this point as follows:

As to the policy of granting credit for courses broadcast over the air, I should be inclined to state our position in this way. It has been our impression that credit courses taught by radio were unsatisfactory at best; and that the primary purpose of educational broadcasting should probably be to provide motivation; to bring otherwise inaccessible information to students both in and out of the classroom; to develop appreciation and perhaps to aid in the formation and modification of attitudes. These objectives, of course, have been frequently stated, but I feel that it does no harm to re-state them.

Broadcasting of classroom lectures at the University of Minnesota was begun with Asher N. Christensen's "Problems and Functions of American Government" in 1938. At this time other courses were also broadcast from the classroom by Professor George P. Conger on the "Problems of Philosophy." Another course has been taught on the air on "Modern Philosophy" by Anthony Castell, of the Department of Philosophy. Professor Harold C. Deutsch, of the Department of History, gave a classroom broadcast on "Twentieth Century Europe" which had considerable audience response. Professor Frederick B. Skinner broadcast a summer course in "Psychology of Literature"; F. Stewart Chapin offered one over the air in sociology on "Problems in Housing"; Professor Arthur W. Marget, of the Business School, taught one air course in "Theory of Business Cycles"; Professor Lawrence D. Steefel broadcast a course on "Europe in the Middle Nineteenth Century"; and David Mandelbaum, of the Department of Anthropology, has been broadcasting lectures in "Introduction to Anthropology." None of these classroom lecture series have carried credit, but have been intended primarily for the general public as adult education offerings.

* * *

University of Michigan held license to operate its own station for a period of one year, six months, and two days beginning January 14, 1924. Broadcasting activities had begun in 1921 when faculty members were invited to speak over WWJ (Detroit). It was in 1923 that students and faculty members in the College of Engineering built a radio transmitter which was licensed to broadcast as WCBC. Programs were put on the air for local listeners, and a request was made to the Board of Regents for funds with which to build a more efficient station, and also for annual appropri-

ations to maintain it. The money was not forthcoming so the license to operate a station was allowed to lapse. It then was decided to make use of facilities of commercial stations rather than to make further attempts to continue operation of University-owned equipment. Following this decision Professor Waldo Abbot was appointed Director of Broadcasting, charged with the responsibility of arranging for programs over facilities of Detroit commercial stations. Since 1934 this radio work has been a part of the University of Michigan Extension Service.

The WPA Correspondence Study Department was established as a project of the University of Michigan Extension Service in January, 1936. The "freshman colleges," which had been established by the Civil Works Administration and continued by the Works Progress Administration, were diminishing in size. This project was set up to take care of the interests of high school graduates who could not attend college. Correspondence course outlines were prepared by a staff of former "freshman college" teachers under the direction of the University departments of instruction in Literary College courses of the freshman year. In the matter of foreign languages, these courses were supplemented by phonograph records prepared by the respective foreign language departments on the campus.

Fred G. Stevenson, in charge of Correspondence Study of the Extension Service, contributes the follow-

ing information about this work:

The University now has no radio station of its own, but has a certain time allotment on a large station of nearby Detroit, with which the campus broadcasting station has direct-wire connections. Arrangements were made with the Director of Broadcasting to give time for broadcasts by the

^{4 &}quot;Freshman college" was the name given to a WPA project for giving indigent high school graduates an opportunity to do college work in their local high schools. This was a rather general practice throughout the country and therefore was not peculiar to the state of Michigan.

faculty sponsors of these correspondence courses. All correspondence students were notified in advance of the time of these broadcasts. The talks were more largely inspirational and informative than directly concerned with instruction in the course—the latter being handled entirely by correspondence.

The principal part of this work lasted from 1936 to 1938. These supplementary broadcasts were all in the field of foreign languages—one each in German, French, and Spanish. The programs were given in English primarily to stimulate the students. Among the people who spoke were Michael S. Pargment, Professor of French, who gave the first talk; Aloysius J. Gaiss, Professor of German; and Herbert A. Kenyon, Professor of Spanish. Our intention had been to make use of the radio to help our correspondence students, but only a few broadcasts were given.

The students were not given credit for listening to the radio talks. They sent in the necessary lessons for correction, and those who wished credit had to take the validating examination at the end of the course. We had pronunciation records made in our broadcasting laboratory which were supplied to students in these languages. No records were kept of student listening but I should guess this number to be between 1,500 and 2,000. This estimate is based upon the total number of students enrolled in the courses at that time, and others who participated in general adult education classes throughout the state, who are notified at the time of these broadcasts.

Because of the limited amount of time over WJR and the many demands for it, the broadcasting feature of our correspondence work had to be discontinued after less than two years, but each school term we do have several general radio talks on adult education and opportunities for study by correspondence which bring in a great many enrollments.

In my judgment a good combination should be worked out between radio and correspondence instruction. Our attempts from 1936 to 1938 looked forward to something of that sort which could be extended to various departments. We started with the foreign languages because we thought it was necessary for the students to hear the actual language which they were studying. We expected then to go forward in other fields. I doubt if there is any possibility of this sort of thing

except where institutions have their own broadcasting stations and therefore are not limited in the amount of time they have on the air.

University of North Dakota operates its own station, KFJM (Grand Forks), receiving its initial license on August 13, 1923. This was a development from the pioneer work of Professor A. H. Taylor (Head of the Department of Physics until late in 1917 when he resigned to enter the U. S. Naval Service) who broadcast weather reports in Morse code. It was on March 11, 1917, that Professor Taylor first transmitted voice and music to a listening audience. Later he carried on a conversation with Columbia University experimenters in New York City in what is claimed to have been the first long-distance transmission of voices by radio in the United States.

The experiment was made in 1939 to broadcast extension courses for credit. This is described by Russell Ireland, formerly Program Director of the Woodworth Studios on the campus, as follows:

In January, 1939, we began a series of programs in cooperation with the Division of Correspondence Study by which we hoped to contact students taking work with the Division and present lectures by the instructors who handled their correspondence work. In these lectures the instructors tried to answer the questions which occurred most frequently in their courses. Students were notified of the time of these broadcasts by form letters sent out by the Correspondence Division.

These broadcasts were not entirely successful. In my opinion, the main reason for this is the fact that our professors, whom we asked to take part in this program, had too many other duties in connection with their regular classes at the University. In addition to this we had no funds with which to carry on any kind of an extensive research, or even the funds necessary for student assistants and stenographic help.

A further statement of the University of North

Dakota broadcasting policy relative to "credit" courses is made by Hywel C. Rowland, Head of the Music Department, as follows:

We have not offered any radio extension courses for credit over this station although we have considered doing so several times. For a number of years, Professor George A. Abbott has given a series of lectures, "Science from the Sidelines," and I have just completed my fifth annual series of lectures on "Music Appreciation," illustrated by recordings, from this station—a total of one hundred and sixty such programs. However, we have not made regular credit courses out of these.

Thirteen Institutions Have Broadcast Extension Courses for Academic Credit

Unfortunately because Oglethorpe University (Georgia)—with its proposed plan of offering an entire higher education via radio—apparently has no system of records upon which even an approximate estimate can be made of the extension courses it broadcast for credit, no exact total figure of the number of these offerings in the United States can be made. Omitting Oglethorpe from consideration, the total radio extension courses broadcast to date has been 140—most surely not much more than 150 if the comparatively small Georgia institution's figures were included.

Enrollment figures are missing from both Oglethorpe and the University of Nebraska. These have amounted to 9,399—or considering the unknown number of Nebraska and Oglethorpe, it is safe to say that these enrollments in "credit" courses over the air have been somewhat less than 10,000. Five of the thirteen institutions have no record of the number of students who received official credit for this air instruction, therefore, there are considerable more than the 1614 as certified by those eight institutions that could furnish data. A conservatively rough estimate would be that about 20 per cent of those enrolled received credit. Table 1 shows these data.

TABLE 1

RADIO EXTENSION COURSES BROADCAST FOR CREDIT BY INSTITUTIONS OF HIGHER EDUCATION

Name of Institution	Years When Broadcast	Total Number of	Total Enrollment in All	Total Receiving Academic	Pct. of Enrollment Receiving
Massachusetts University	;	535,700	535.70	***************************************	ina /o
Extension Division	1923-36	4 8	7,952	632	8.0
University of Nebraska	1924-33	22	No record	No record	No record
State University of Iowa	1925-27	35	372	272	73.1
University of Kansas	1925	7	57	No record	No record
University of California	1927	-	65	36	54.6
University of Southern					
California	1928-30	15	99	No record	No record
University of Florida	1929-30		177	141	85.3
Oglethorpe University	1931-35	No record	No record	No record	No record
University of Utah	1932-36	4	462	312	67.5
Fairmont State Teachers					
College	1933		78	20	89.7
Oregon State System of					
Higher Education	1935-40	4	15	4	26.7
University of Hawaii	1935-40	80	156	142	91.0
University of Akron	1939	1	15	5	33.3
TOTALS		140	9,414	1,614	17.1

^{*} Estimated figure would be higher if data were complete.

An arbitrary subjective classification of the radio "credit" courses show some interesting facts. Again, it is unfortunate that Oglethorpe University (with its alleged "hundreds" of radio course students) has been unable to furnish data relative to the curricular offerings that actually went on the air. The classification of the 140 courses as broadcast by the other twelve institutions of higher learning shows the following:

English and Literature	7
Foreign Languages	9
French 8	
Spanish 8	
German 3	
Political Science and Business Administration 1'	7
Psychology	Ś
Education	2
Music 10)
History)
	5
Science 4	ļ
	3
Radio	3
Bible	2
Sociology	2
Home Economics	Ĺ

A significant fact should be pointed out in connection with the earlier broadcasting of "credit" courses. In the pioneer days of radio before there were so many stations and before those that were operating had made such an efficient development in the sale of time on the air, "credit" students and other listeners were scattered all over the United States. As radio communication became more localized and the frequency channels more thickly occupied, audiences have become limited more and more to the immediate area of the broadcaster, except, of course, in network broadcasting. Likewise, in the earlier days of broadcasting when it was a feat

about which to brag even to get a station on a receiving set, people were not so "choosey" about their programs. Educational offerings did not have the competition of expensively produced dramatizations or highly paid commentators now crowding the air.

As commercial broadcasting became more important, and profits in operating a station more sizeable, then time on the air for these extension courses became more difficult to secure. During the first few years of the Massachusetts University Extension Division courses, for example, this service was heard here and there over most of the United States and Canada; in their final years they were practically limited to New England alone. Broadcasting of these "credit" courses ended when it became almost impossible to secure such time on the air in which students would be listening.

In the study of the University of Nebraska experiment, the best example is shown of how commercial commitments gradually crowded out the "credit" course offerings with their more limited audience appeal. One extension course, as a matter of fact, was taken off the air after it had been scheduled, students enrolled, and other preparations made, because a network-sponsored program demanded the time originally assigned to the University. On the other hand, the State University of Iowa (operating its own station and thus having practically unlimited time) made a thorough job of its "credit" experiment, kept careful records, and when it was convinced after a two-year trial that its campusoperated station could use its time to better advantage, dropped the effort to serve extension students who might wish to listen to lectures that supplemented the regular correspondence work. A noteworthy fact is that one Iowa student was enabled to complete his college education because of these radio offerings, and being bedridden, received his degree over the air—a typical "Ripley Believe It or Not" story.

Oglethorpe University's experience gives a very

good picture of the disillusionment that has been so common in the educational approach to radio. A low-powered radio station with a very limited coverage was expected to be a source of income to the University. It actually was an ever-increasing expense, even after it was forced to solicit commercial advertising as a source of revenue. Students were expected to take limitless advantages of the opportunity to obtain a college education while sitting in a comfortable chair at home. To protect the scholastic reputation of the University, requirements for radio credits were made very high. Those enrolled were visioned as eagerly reaching out for the words of wisdom as dropped by faculty members in fifty-minute doses.

The old humbug that has persisted in academic circles that efficient learning occurs when a student scribbles down notes as they sluff out, more or less distinctly, from the professor's mouth showed itself with a bang in the Oglethorpe instructions to radio students to mail in immediately the notes on the lecture heard over the air. It has been one of those ridiculous fallacies in education that notes taken from the impromptu remarks of an instructor can compare in organization and clarity with a well-planned, long-thought-out-in-advance, result-of-experience textbook presentation.

The University of Utah is the only one of the thirteen that paid for its time on the air. In cooperation with both the Utah Department of Public Instruction and the Salt Lake City Public Schools, with a \$900 subsidy from the former, four "credit" courses were broadcast over one of America's most powerful stations, KSL. These were intended primarily as a service to teachers in remote areas—individuals, who because of their isolation, could not attend regular extension courses. Although intended for rural teachers, who usually got to bed early, they were broadcast late at night in the time made available by the commercial station.

It should be noted that the University of Hawaii radio courses over a five-year period have had the largest percentage of successful completions among those enrolled of any of the thirteen institutions that have broadcast "credit" courses. Hawaii's service has been unique in that it has been primarily inspired by a desire to help those teachers who are located on the various small islands and thus are isolated from the cultural and educational advantages of Honolulu. In the initial course offered, for example, three-fourths of those enrolled lived on these smaller islands. One might visualize the necessity of an ambitious teacher (after a tiresome day's work) rowing her own boat to Honolulu in order to gain units necessary for a degree.

The University of Akron (Ohio) is the thirteenth and final institution to date to have attempted broadcasting formal courses for credit. An English course was offered in the fall of 1939 over the local Columbia Broadcasting System outlet—therefore, a busy station crowded with network features. A unique plan of using electrical transcriptions of the voices of the poets themselves giving renditions of their own works was proposed but ran into some copyright difficulties. Enrollment was disappointing, only fifteen signing up of whom but five earned credit. The University, moreover, had difficulty in reconciling its standards of scholarly presentation with the showmanship type of presentation common over the air.

* * *

The following summaries have been checked several times by officials of the institutions whose work is being described. Their examination shows a strange conglomeration of details. The experiment in many cases apparently was considered so unimportant at the time that but few records have been left. It is a curious and finger-pointing-with-shame fact that the registrar's

offices in some of our best-known universities do not have their records in such a form that they can tell how many students actually received credit as a result of the radio instruction. Many of the present data are dependent upon memories of individuals. The following are given in chronological order in which the attempts to broadcast these "credit" courses have been made.

Massachusetts University Extension Division, 1923—1936

The organization of the Massachusetts State Department of Education differs from that of most other state educational departments in a smuch as there is no state university—hence the State Department assumes duties that a university might otherwise perform. Consequently, when there was a need felt for extension activities (both correspondence courses and classes conducted by instructors), a University Extension Division was established in 1915 by an Act of the Massachusetts Legislature. This new unit was made a part of the State Department of Education. Each year since its establishment the Legislature has granted an appropriation for the maintenance of the University Extension Division. All fees for courses, educational services, and any other income collected by this Division go directly into the State Treasury.

Following this legislative action, the University Extension Division was established in 1916 with James A. Moyer as its Director. A plan for broadcasting educational lectures for credit was devised in the fall of 1923. The first course had an enrollment of but three students in those earphone days. During the slightly more than eleven years that this work was carried on over standard long-wave station, WBZ, enrollments

ranged from zero in twelve courses to 632 in a 1924 offering of "Contemporary American Literature." In these forty-six WBZ radio courses, there was a total enrollment of 7,734 (average, 168 per course) and a total of but 617 (average, 13.4 per course) who received official credit. In other words, only 7.98 of those enrolled received University Extension Division credit. The heyday of the popularity of these offerings was prior to 1930, after which date enrollments reached the one-hundred mark but once. Academic credit apparently was but a minor part of this radio service.

History of the growth and development of these Division of University Extension radio courses over standard long-wave station, WBZ, and the two experimental short-wave courses presented over W1XAL is shown in Table 2. With the exception of the final two short-wave courses, all this broadcasting was over WBZ, now a 50,000-watt NBC Blue Network station in Boston. Before WBZ had established its Boston station, the earlier courses were given from its Springfield studios. During the first three years of this pioneer educational broadcasting venture, statistics show that enrollments had been received from more than half the American states and from all the Canadian provinces.

Excerpts from a 1936 bulletin describe this development as follows:

Early the Massachusetts Division of University Extension, in which since 1916 when it was first established, nearly 550,000 adult students have been enrolled, saw the utility of radio for purposes of sound instruction.

In the fall of 1923, James A. Moyer, Director of the Division of University Extension, himself an authority on radio communication and recently author of a textbook on the subject, with Dennis A. Dooley, Supervisor of University Extension classes, devised a plan for broadcasting educational lectures.

Arrangements were made with George H. Jaspert, Director of Station WBZ, Westinghouse Electric Company. As

TABLE 2

MASSACHUSETTS UNIVERSITY EXTENSION DIVISION CREDIT COURSES, 1923—1936 Date of First Title of Course No. of Students

Date of Firs		_NOo	j Stuaents	
Lecture		Enrolled	l—Receivi	ng
			Gredit	
V	VBZ (Standard Long-wave Sta	ation)		
Oct. 16, 1923	Household Management			0
Oct. 23, 1923	Radio Reception for Amateurs			ŏ
March 6, 1924				ō
Nov. 3, 1924	Contemporary American Literature			
Nov. 7, 1924	Appreciation of Music			38
Jan. 6, 1925				
Jan. 7, 1925	Short Story Writing			30 14
Jan. 8, 1925	French Conversation and Literatur			
	The Making of a Music Lover			0
March 2, 1925	Chief English Writers of Our Day			
March 4, 1925	French Conversation and Literatur			8
March 5, 1925	Business Psychology			35
Oct. 26, 1925	Psychology of Understanding Peop			17
Oct. 29, 1925	Backgrounds of English Literature			0
Jan. 5, 1926	Literary Values in New Books			32
Jan. 8, 1926	Appreciation of Music			18
March 9, 1926	Journalism	. 235		39
March 12, 1926	New Developments in Economics.	. 96		0
Oct. 18, 1926	Essentials of Drama	. 143	1	11
Oct. 21, 1926	Appreciation of Symphonies			4
Jan. 17, 1927	Real Estate Law, Part I		4	48
Jan. 20, 1927	Psychology of Personal Problems .	. 264		21
March 11, 1927	Real Estate Law. Part II	. 482		14
March 17, 1927	Recent Books	142	1	10
Oct. 13, 1927	Genealogy of the Novel	204		14
Oct. 23, 1927	Real Estate Law, Part I			33
Jan. 5, 1928	Real Estate Law, Part II	429		25
Jan. 17, 1928	Psychology of Your Boy and Girl .			6
Jan. 18, 1928	Appreciation of Symphonic Music.			ŏ
March 20, 1929	American Literature	. 266		ŏ
Oct. 18, 1929	Proportials of the Deems	. 88		5
Jan. 21, 1930	Essentials of the Drama			16
Sept. 30, 1930	Conversational French			
Oct. 23, 1930	Conversational French			1
Jan. 13, 1931	Appreciation of Music			5
Jan. 29, 1931	Conversational French			6
Oct. 20, 1931	Mental Hygiene		· · · · · · · ·	7
	Psychology of Your Boy and Girl.			0
Oct. 21, 1931	Music Appreciation			0
Nov. 1, 1931	Psychology of Today	. 15		1
Dec. 1, 1931	Psychology of Personality	. 10		0
Oct. 19, 1932	Real Estate Law			5
Oct. 20, 1932	Modern American Biography	. 42		5
an. 18, 1933	Cultured English, Part I and II	. 74		6
an. 19, 1933	Mental Hygiene	. 23		3
Dec. 4, 1933	Piano Playing			0
Feb. 17, 1934	Art in America		1	2
Oct. 13, 1934	Art in America			3
	Total Enrollment in 46 Courses			-
	W1XAL (Short-wave Station		01	•
an. 13, 1936	Modern Radio, Part I			7
	Modern Radio, Part II	. 128		8
,				-

part of the pre-arranged plan, Mr. Dooley on September 20, 1923, gave a talk on the possibilities of Massachusetts University Extension Radio courses, urging his listeners to write and express their ideas and their wants in this direction. The results of this talk were many letters suggesting possible subjects.

It is interesting to look back over the experience of the Massachusetts Division of University Extension... In the four years since September, 1923, forty-six courses of eight lessons each have been given by special lecturers and college professors from Station WBZ. There is every indication of an increasing interest in this Radio activity, which is certainly unique in this, that it is supported entirely and directly by the Radio audiences. Although these courses are under the auspices of the Commonwealth of Massachusetts, there is no special endowment for them, and there is no subscribed advertising connected with this feature. The lecturers are paid for their services, and the expenses are met from the enrollment fees sent in by persons who plan to follow the course of study.

University Extension courses by radio are new enough to excite considerable wonder when they are mentioned for the first time, but they are old enough to warrant the statement that they are no longer an experiment. In forty-six courses almost 8,000 persons have enrolled as students. The number of those who have listened-in on the lectures is of course unknown. It is safe to say, however, that these have been the largest classes ever conducted by any educational institution in America. Students were enrolled from every state in the Union east of the Mississippi River and from every province in Canada and from Newfoundland. At least five persons in England and Scotland consistently received the lectures and reported a summary of the lesson material. Hundreds of letters of commendation have been received from appreciative listeners, and hopes have been expressed that the plan would be continued.

Students in former courses have been widely representative of American interests: the mayor of a city in Louisiana, the minister of agriculture of a province in Canada, clergymen of all denominations, Catholic sisters in convents in Wisconsin and Maryland, school teachers and school officials, mothers and fathers of young families who are unable to leave home

in the evening, and people on farms and in remote sections, one a rancher in the Province of Alberta, fifty miles south of Calgary. Their occupations are motley. Barbers, electricians, grocery clerks and merchants, lawyers, politicians, baseball players, and just plain people, men and women all answered the voice which came as it were out of nothing.

Of course anyone with a radio may listen to the lectures without payment of any fee. Those persons, however, who desire to follow a serious program of study are invited to enroll as students. The process of enrollment is simple since it consists of merely sending name, address, and one dollar to University Extension, State House, Boston. Only enrolled students appear in the above record.

In every course there has been prepared special text material for home study. Students are directed to prepare written exercises which are sent in for correction by the lecturer. At the end of each course certificates are awarded to those whose work is considered satisfactory. As an inducement for excellent work the three best papers in a course are read over the radio, and the names on the honor roll are announced.

In the years during which these courses have been given by radio, there is at least one notable change in the radio audience served by this single Station. The number of listeners has materially increased. The territory served by this Station has become relatively limited. In the first two years it was not at all unusual to have students enrolled from very distant places. This would indicate an ability on their part to pick up with consistency a Station from one thousand to two thousand miles away. Louisiana, Texas, and Montana found the program of WBZ attractive. With the increase in the number of Stations serving local communities, the present interest in these courses is confined almost entirely to New England and New York as is indicated by the table showing the distribution of radio students.

It would indeed be a proper development to have these courses given on a chain of stations extending westward and southward. For every station added to the chain there would be an expansion of interest which would definitely be reflected in a unique development of educational activities in America. To be entertained is to pass time in an enjoyable

manner. To be educated is to live fully. What is there on the radio program which has influence to stimulate, guide, and direct people so much as a properly arranged offering of educational courses conducted by the most notable educators in the country. Thousands and thousands of persons have a hunger for education which must be satisfied. Thousands and thousands of persons will respond to a suggestion of following a course of instruction when the suggestion is possible for them as to time, circumstance, and money, and for every person so definitely served there will be a hundred others drinking in at least the substance of the best educational matter America can supply. Here at least is an opportunity for an endowment whose usefulness will literally be without measure. Thirty million people in America comprise the present radio audience. It will be sixty million before very long. Neither school nor college, nor university, nor chataugua, restricted as each is to the number of persons who could be properly accommodated is ever given the freedom of expansion which is open to the University of the Air, whose campus is the ether of the earth, whose audience waits for learning, learning, learning.5

No radio courses were given in the 1934-35 academic year after a single offering was made in October, 1934. Due to commercial commitments that were continuously increasing, WBZ found itself unable to continue granting afternoon or evening time for these series of "credit" courses. Experiments therefore were begun with the facilities of short-wave station, W1XAL (now WRUL and WRUW), owned and operated by the World Wide Broadcasting Foundation, a non-profit organization formed to "foster international understanding and to promote enlightenment of individuals throughout the world." In the spring of 1935 a few test lectures were broadcast over this station. As a result of their success, a course on "Modern Radio" (consisting of eight weekly broadcasts) was started in

Massachusetts Department of Education University Extension Division, *Modern Radio*, January 6, 1936, mimeographed, pp. 1-2, 3, 11, 16.

January, 1936, and was followed by a second series in more advanced phases of the same subject in March, 1936. There were ninety enrolled in "Modern Radio I," and 128 in "Modern Radio II"—a total enrollment for the two courses of 218 (or 109 average per course). However, only fifteen (or 6.88 per cent) received credit in these two short-wave courses. Added to the total enrollment of the forty-six radio courses given over WBZ, statistics show that there were 7,952 enrolled in these forty-eight Massachusetts Department of Education radio courses with but 632 (or 7.95 per cent) receiving academic credit for the work accomplished.

The outline of the first of these short-wave radio

offerings reads, in part, as follows:

The first section of the course will be given in eight lectures on Monday evenings, beginning January 6, 1936, from 7:00 to 8:00 p.m., (Eastern Standard Time) on 604 megacycles. Each lecture will include a ten-minute period during which questions submitted by students in the course will be answered. The instructor is Mr. C. Davis Belcher, formerly radio inspector with the radio division of the U.S. Department of Commerce, and also a radio engineer for the U. S. Coast Guard and Geodetic Service. When a student enrolls, he will receive an outline and a set of eight prints of drawings illustrating the lectures. The charge for the outline and prints is \$1 for each section of the course. Students who intend to apply for the University Extension certificate must obtain satisfactory grades in eight written lessons; an additional charge of \$1 for each section of the course is made for such certification.6

Mr. Moyer, who has been Director of the Division of University Extension since its establishment in 1916, and under whose direction these radio credit courses have been developed, sums up the present status of

⁶ Ibid., p. 1.

Department of Education broadcasting work as follows:

Since 1935 practically all the broadcasting time available to the Division of University Extension, without charge, has been quite generally limited to morning or afternoon hours with only occasional evening time. Assurance has seldom been obtained of regular continuance of the broadcasts at set hours on particular days of any period of time. As irregular time allotments are not suitable for the conduct of courses by radio, the Division has been using this available radio time for announcements of its extension classes and home study courses as well as for informational talks on various activities of the State Department of Education. It is interesting to note that in 1938-39, thirteen radio stations in Massachusetts gave to the Division, without charge, thirty-six and onequarter hours of broadcasting time for 145 broadcasts; and in 1939-40 this free time was increased to fifty-eight and three quarters hours for 235 broadcasts.

University of Nebraska, 1924—1933

University of Nebraska held license to operate its own standard broadcast station for a period of four years, ten months, and fifteen days beginning June 16, 1922. Experimentation of what then was termed "wireless" was begun soon after the first announcement of Guglielmo Marconi's work in 1895. In fact, the University of Nebraska is credited as being one of the four American institutions of higher learning to have started this radio communications work before 1900—the others being Tulane University of Louisiana, Wittenberg College (Ohio), and University of Arkansas. Much of this early wireless enthusiasm represented efforts of interested students. However, when a radio station was established on the campus, the University

designated a faculty member to be responsible for its operation. Daily weather and road reports, news items, government health bulletins, time signals, and later, faculty talks were regularly scheduled broadcasting services of the University-operated transmitter, WFAV, during its existence.

Of the twenty-two radio-correspondence courses that were broadcast over a period of nine academic years, only the initial one was given over the University-owned equipment. Presentation of these twenty-two courses over the air was made by six faculty members. Unfortunately, the University Extension Division has kept no separate record of the number of students enrolled in each of these radio-correspondence courses or the number who received official University credit—no effort having been made to distinguish between those who made use of the radio lectures and others who did the required correspondence work without listening to the instructor in his weekly radio presentation. The broadcasting was primarily a supplementary service to the more traditional extension work, especially in the later broadcasting of foreign languages.

A bulletin under title, RADIO-CORRESPOND-ENCE COURSE in Business English and Letter Writing, described the first radio "credit" course offering as

follows:

The Extension Division of the University of Nebraska presents to the people of the state exceptional opportunities for home study. A course now offered for the first time is a Radio-Correspondence Course in Business English and Letter Writing, conducted by Professor Maurice H. Weseen of the College of Business Administration. Enrollment is open to all and registration is now under way.

Radio lectures will be broadcasted Thursday evenings at 7 o'clock, beginning December 4, 1924, from the University

of Nebraska station, WFAV, 275 wave length.

Professor Maurice H. Weseen, of the College of Business Administration of the University of Nebraska, is a very successful teacher of practical, everyday English. He has been able to bring to the business needs of this most important subject a helpfulness that is deeply appreciated. Mr. Weseen is an authority on the theory and practice of teaching business English. His text, Everyday Uses of English, which is made the basis of this course, is having a wide use and is being very favorably received.

Advantages of Correspondence Study

The advantages of correspondence study are many. The student may study when and where he pleases; he does not need to leave home; he loses no time from his occupation; he utilizes time that otherwise might be wasted; he gets individual instruction and personal attention from competent instructors; he gains valuable information and training at a very small cost. To these advantages is now added the opportunity of hearing a radio lecture on each lesson.

Appeals to Business Men

The Radio-Correspondence Course in Business English and Letter Writing will appeal to business men who wish to improve their letters and make them truly representative. Better letters mean more successful business transactions. An increasingly proportion of business affairs is carried on by means of letters. The best letters get the best results.

Appeals to Teachers of English

This course will also appeal to teachers of English in general and to teachers of Business English and commercial branches in particular. There is a scarcity of competent instructors in this field and those who prepare themselves will not lack opportunities to utilize their knowledge and training.

Appeals to All Seeking Advancement

This course will appeal to all who are seeking promotion and advancement. Letters play a part in every phase of modern life. Those who write better-than-average letters are soon discovered and given wider opportunities, for every institution is seeking men with ability and training in correspondence.

University Credit

Two hours of University credit will be given to those who complete the course satisfactorily. Announcements and assignments will be sent out by the Extension Division to enrolled students. All lessons should be sent to this office. Every lesson will be read, graded, and returned to the student with helpful comments.

Cost of the Course

The fee for the course is \$12.50, including text and supplies. There will be a refund of \$1.35 for any who wish to return the book in good condition within two weeks after the completion of the course.

Registration Form

Place
Name (Full)
(Not initials, but the name for which the initial stands.
Also maiden name of women, if married.)
Occupation
If you have matriculated in the University of Nebraska
give date or receipt number
Students may carry work without being matriculated.
Credits will be kept on file indefinitely in the office of the
University Extension Division. They can be transferred to
the office of the Registrar for official record only on matricu-
lation.
Extension course previously carried
Object of taking this course
(Degree advancement in vocation, etc.)

Broadcasting was continued over University-operated WFAV until September 15, 1925, when arrangements

A, Lincoln, Nebraska.7

Return this registration, with the fee of \$12.50, to the University Extension Division, A. A. Reed, Director, Station

⁷ University Extension News, IV, No. 29, pp. 1-4. (November 12, 1929.)

were made for programs over KFAB (Lincoln), a higher-powered commercial station then owned by the Nebraska Buick Automobile Company. After this date the radio-correspondence courses were educational features of KFAB. WFAV continued to broadcast music programs each Friday at midnight for about a year and a half. Its operation was discontinued on March 3, 1927, and shortly thereafter it was dismantled. The first season's schedule over KFAB included five separate periods on Mondays, Tuesdays, Wednesdays, and Fridays—two of which were radio-correspondence courses. Also, weather reports were given each week day morning at 9:30 a.m. at a time when such services were still unusual.

On Tuesday, November 10, 1925, Professor Weseen again began offering his "Business English" course, with the lectures over KFAB lasting from 8:05 to 10:30 p.m., and ending on May 13, 1926, after twenty presentations were made over the air. The first program of this series is said to have brought responses from twenty-nine states. During this same academic year Dr. Frederick A. Stuff, Professor of English, conducted a correspondence course via radio under title, "Interpretation of the Book of Job." Table 3 indicates the year-by-year development of these "credit" course offerings until their discontinuance on May 25, 1933.

KFAB became affiliated with the Columbia Broad-casting System on January 10, 1932. This network affiliation soon made more commercial demands for time. Frequent changes in the University of Nebraska broadcasting schedule resulted. Some programs were suspended and others were postponed to later time to permit network features the right of way. This condition disturbed the University faculty members who had been contributing their services without compensation. A change of ownership of the station brought further eliminations, and all afternoon programs were dropped with the reason being given that the material

on the University broadcasts did not fit the policy of the station. This situation naturally meant the end of extension courses broadcast for credit because of the limited audience for this type of offering unless a new plan, recently proposed, for distribution of electrical transcriptions among Nebraska's smaller stations can be fitted into the University Extension Division's service work.

STATE UNIVERSITY OF IOWA, 1925—1927

The State University of Iowa operates its own station, WSUI (Iowa City), having received the initial license to maintain a standard broadcast station on June 26, 1922—with the original call letters being WHAA until changed on January 29, 1925. Campus radio activities had begun in 1911 before broadcasting stations were licensed as such. Numerous experiments were carried on, including communication work over an experimental station. In 1921 Carl Menzer, at that time private owner of a small radio station and an alumnus of the University, was placed in charge of this broadcasting. He had full responsibility for all operations during the early years of the University station. As the broadcasting activities expanded, control was placed in the University Extension Division. there was appointed a University Radio Board, consisting of nine faculty members plus the Director of the Extension Division and Mr. Menzer (as Director-Announcer). With Dr. Bruce E. Mahan, Director of the Extension Division, as chairman, this Radio Board has continued to determine the policies of the station.

Beginning in the Spring semester of 1925 the University began broadcasting some of its correspondence courses for credit. A selected group from the faculty

TABLE 3

University of Nebraska Radio-Correspondence Courses, Broadcast from 1924-1933

Enrollment No. Credit	No record	No record No record	No record No record	No record No record No record	No record	No record No record
Times on the Air	24	20 16	20 12	5(*) 15 20	15	10
Day and Hour of Broadcast	Thursday, 7:00-9:30 p.m.	Tuesday, 8:05-10:30 p.m. Wednesday, 3:00-3:30 p.m.	Tuesday, 8:05-10:30 p.m. Friday, 3:00-3:30 p.m.	Tuesday, 7:30-10:00 p.m. Friday, 3:00-3:30 p.m. Thursday, 3:00-3:30 p.m.	Tuesday, 2:30-3:00 p.m.	Tuesday, 2:30-3:00 p.m. Thursday, 3:00-3:30 p.m.
Instructor	1924-25 Prof. M. Wescen	1925-26 Prof. M. Weseen Dr. F. A. Stuff	1926-27 Prof. M. Weseen Dr. F. A. Stuff	1927-28 Prof. M. Wescen Dr. F. A. Stuff Dr. J. E. A. Alexis	Prof. P. H. Grummann	1928-29 Prof. P. H. Grummann Dr. J. E. A. Alexis
Title of Course	Business English	Business English Book of Job	Business English Study of the Novel	Business English Study of the Novel Beginning Spanish Musical Dermas of	Richard Wagner	Ibsen's Dramas Beginning Spanish
Date of Initial Lecture	Dec. 4, 1924	Nov. 10, 1925 Feb. 10, 1926	Nov. 9, 1926 Nov. 17, 1926	Nov. 1, 1927 Feb. 4, 1927 Dec. 8, 1927 Feb. 14, 1928	100 11 100	Oct. 2, 1928 Oct. 4, 1928

No record	No record	No record No record No record	No record No record No record	No record No record
20	20	50 50 50	20 20 20	70 70 70 70
Thursday, 3:00-3:30 p.m.	Thursday, 2:30-3:00 p.m.	Thursday, 2:30-3:00 p.m. Saturday, 2:30-3:00 p.m. Wednesday, 2:30-3:00 p.m.	Wednesday, 2:30-3:00 p.m. Saturday, 2:30-3:00 p.m. Thursday, 2:30-3:00 p.m.	Thursday, 2:30-3:00 p.m. Saturday, 2:30-3:00 p.m. Wednesday, 2:30-3:00 p.m.
1929-30 Dr. J. E. A. Alexis	Prof. M. Weseen	1930-31 Dr. W. K. Pfeiler Dr. J. E. A. Alexis Prof. E. V. Telle	1931-32 Prof. E. V. Telle Dr. J. E. A. Alexis Dr. W. K. Pfeiler	1932-33 Dr. W. K. Pfeiler Dr. J. E. A. Alexis Prof. E. V. Telle
Beginning Spanish	Better English for Everyday Use	Beginning German Beginning Spanish Beginning French	Beginning French Beginning Spanish Beginning German	Beginning German Beginning Spanish Beginning French
Sept. 30, 1929	Dec. 5, 1929	Oct. 1, 1930 Oct. 10, 1930 March 4, 1931	Sept. 23, 1931 Sept. 27, 1931 Nov. 1, 1931	Sept. 12, 1932 Sept. 24, 1932 Sept. 29, 1932

^(*) Discontinued at request of KFAB to make room for commercial feature.

presented these from the studios during evening hours. The courses were set up on the same basis as the more traditional correspondence-study work. The rate of tuition was the same, namely, four dollars a credit hour with a two-dollar enrollment fee. Since all thirty-five of the radio courses offered were allotted two hours of University credit upon successful completion of the requirements, a single course cost the student ten dollars while each additional course taken during the same semester cost eight dollars. There were twelve lectures in each radio course, with the length of the broadcast being twenty minutes.

One student, Clifford S. Lideen, of Burlington, Iowa, was granted a degree by radio. He had completed about three and a half years of his University work when he was seriously disabled in service during the World War. Although confined to his bed, this young man was able to complete enough courses by radio to fulfill the requirements for the B.A. degree, which was granted him via radio at the Convocation in June, 1925. Mr. Lideen is still living, a helpless cripple with arthritis, now totally blind. These radio credit extension courses had made it possible to fulfill his ambitions for a university education, and at least reap the satisfaction from this accomplishment. It would have been impossible, however, for any student to have completed all the work for the bachelor's degree at the State University of Iowa. There never were enough courses broadcast, and the rules of the institution would have prevented it.

These radio courses were more popular at first than later. The grand total enrollment for the thirty-five courses offered from the Spring semester of 1925 to and including the Fall semester of 1927 was but 372—an average of only 10.6 students per course. These enrollments varied from zero to twenty-eight. Of the 372 enrolled, 272 (or 73.1 per cent) received University credit for successfully meeting the requirements of

the Extension Division. Special syllabi were prepared for the enrolled students, with full instructions being given for study. Lectures were given in the evening hours so that working men and women could avail themselves of the radio instruction. Copies of the lectures were furnished when the student was prevented from listening in. Written work was submitted according to instructions, and final examinations were taken under qualified supervision. Table 4 presents the catalog course number and title, faculty instructor, day and hour of the lecture, number enrolled in each course, and the number receiving University credit for each course.

Miss Helen Williams, who is in charge of the Correspondence Study unit in the State University of Iowa Extension Division, gives further details as follows:

As time went on and neighboring stations increased their power, it became difficult for any but those in this section of the state to "get" our station. Then, too, the novelty had worn off, and the instructors objected to the extra work for so little pay.

The records indicate that in the fall of 1928 we were unable to offer a program of courses. In the second semester of that year, however, beginning in February, 1929, we started broadcasting from the classroom. Off-campus students were allowed to enroll for these courses, and a few did so. However, it soon appeared that students who were interested in doing the work for credit were working at the hour the class was broadcast, and even if they were not, the lack of library facilities slowed up their work so they found it difficult to complete the course with the rest of the class.

Whenever the course broadcast was being offered as a regular correspondence course, interested students were advised to enroll for that and work out the assignments under the correspondence study regulations—listening to the instructor's lectures over the radio as often as possible. A few students did this, but most of the people who were interested in working for credit were teachers and not free to listen to the class lectures. Although we are sure that many people

TABLE 4

STATE UNIVERSITY OF IOWA EXTENSION DIVISION RADIO-CORRESPONDENCE COURSES

1925-1927

Number Number Enrolled Receiving	Cream	7	7 2	25		22	10	m	9	•	7	6			14	6	20
'umber nrolled		10	∞ ≃	78		23	14	9	6	11	10	14			16	10	23
Day and Hour A		Monday, 7:30 p.m. Monday, 7:50 p.m.	Monday, 8:10 p.m.	Wednesday, 7:50 p.m.		Monday, 7:30 p.m.	Monday, 7:50 p.m.	Monday, 8:10 p.m.	Monday, 8:30 p.m.	Wednesday, 7:45 p.m.	Wednesday, 8:05 p.m.	Wednesday, 8:25 p.m.			Monday, 7:30 p.m.	Monday, 7:50 p.m.	Monday, 8:10 p.m.
Instructor	SPRING SEMESTER, 1925	Prof. Frank Horack Prof. Luther Mott			FALL SEMESTER, 1925	Prof. Bruce Mahan	Prof. Luther Mott	Prof. Bohumil Shimek	Prof. Edward Reuter	Prof. M. F. Carpenter	Prof. Kirk H. Porter	Dr. Christian Ruckmick	Strange Stranger 1006	NG CEMESIEK, 1720	Prof. Bruce Mahan	Prof. Dayton Stoner	
Course Number and Title (*)	SPRI	RC 9—American Constitutional System RC 78—Appreciation of Literature	RC 195—Current Social and Economic Problems RC 131—Paychology of Learning	RC 72-Modern English	FAI	RC 193-Early Iowa History	RC 111-American Literature	RC 140-lowa Flora	RC 172-Problems of Population	RC 123—Teaching of English	RC 103-Political Parties in the United States	RC 1-Elementary Psychology	, ac	OFK	RC 194-Iowa History Since 1857	RC 107-Iowa Birds	RC 145-Importance of the Written Examination

30 p.m. 16 11 50 p.m. 7 3 10 p.m. 11 11 30 p.m. 4 3	p.m. 11 5 p.m. 4 3 p.m. 13 10 p.m. 14 13 30 p.m. 5 4 550 p.m. 5 3 110 p.m. 7 2	p.m. 13 6 p.m. 9 5 30 p.m. 8 1 10 p.m. 6 4	p.m. 0 0
Wednesday, 7:30 p.m. Wednesday, 7:50 p.m. Wednesday, 8:10 p.m. Wednesday, 8:30 p.m.	rr Monday, 7:30 p.m. Monday, 7:50 p.m. Monday, 8:10 p.m. Monday, 8:30 p.m. Wednesday, 7:30 p.m. Wednesday, 7:50 p.m. Wednesday, 8:30 p.m.	Monday, 7:30 p.m. Monday, 8:10 p.m. n Wednesday, 7:30 p.m. Wednesday 8:10 p.m. Wednesday, 8:30 p.m.	Monday, 7:00 p.m. Tuesday, 7:00 p.m.
Prof. Nellie Aurner Prof. F. J. Lazell Mr. Dale Yoder Prof. Louis Pelzer	FALL SEMESTER, 1926 Asso. Prof. N. C. Meier Prof. F. J. Lazell Mr. Harold McCarty Dr. Don M. Griswold Prof. Henning Larsen Prof. Bohumil Shimek Prof. C. F. Taeusch Prof. John Scott	SPRING SEMESTER, 1927 Prof. George Gallup Prof. Edward Reuter Prof. Clarence Wassam Prof. M. F. Carpenter	FALL SEMESTER, 1927 tes Prof. Kirk H. Porter Prof. Bruce Mahan
RC 102—English Novel RC 117—Community Weekly RC 195—Current Social and Economic Problems RC 181—Topics in Recent United States History	RC 135—Social Psychology RC 118—Community Weekly RC 6—Economic Resources of North America RC 19—School Hygiene RC 114—Modern Norwegian Literature RC 103—Men and His Plants RC 37—Practical Social Ethics RC 151—English Prose and Prose Writers	SPRI RC 104-Magazine Writing RC 172-Problems of Population RC 116-Life Insurance RC 123-Teaching of English RC 73-Introduction to Educational Psychology	FAI RC 103—Political Parties in the United States RC 193—Early Iowa History

^(*) Each radio course consisted of twelve lectures with the broadcast period being twenty minutes.

listen quite regularly to the classroom broadcasts, very few have actually used them to help earn university credit.

It is impossible to supply a record of the students who have been helped with their correspondence work through these broadcasts. These records are filed with those of hundreds of others who have taken correspondence courses during this period with no indication on the card that they were also listening to broadcasts in that field.

As stated above when the novelty of the radio extension courses for credit wore off, fewer enrollments led the University Extension Division to abandon this type of program offering and instead to broadcast selected courses from the classroom. Dr. S. E. Frost, Jr., describes this work as follows:

Broadcasting from the classroom was begun in 1929 as an experiment with two courses offered, one in astronomy taught by Professor C. C. Wylie and one in the English novel taught by Professor Sam Sloan. These were one-hour broadcasts and consisted of the professor's lecture and the questions and comments of students. Arrangements were made so that listeners who took careful notes and sent them in along with evidence that they had done the assigned readings might take the regular class examinations and, if these were passed, be given credit for the course. Though the actual enrollment for this work was small, evidence was available to convince the University authorities that a large audience was availing itself of the opportunities of such work. Professors doing the actual teaching of such courses reported that their lectures were greatly improved by having to be prepared with a radio audience in mind and that the effect upon the classes was most favorable. Another value of such work was felt to be the fact that persons throughout the state were given a better idea of what was being done by the University.8

There is an error in the above account inasmuch as there were three rather than two courses offered—the one Doctor Frost failed to mention being in the "Short

⁸ Frost, op. cit., p. 135.

Story" as offered by Professor Frank L. Mott. Dr. Bruce E. Mahan, Director of the State University of Iowa Extension Division, contributes the following information:

Courses have been broadcast from the classroom every semester since 1929 to date over Station WSUI. These courses have been selected with care so as to have a wide general appeal to listeners and also with particular attention to the radio personality of the instructor. We feel that these courses have made a distinct contribution to adult education in the State, and have brought listeners generally into closer contact with the University.

In 1934 the Extension Division began to broadcast language courses-French, Spanish, and Germanfrom the WSUI studios in the late afternoon. were put on the air once or twice a week. Letters have been written to correspondence study students enrolled for these courses, suggesting that they try to listen in to these lessons for help in grammar and pronunciation. Other listeners, who wished to follow the foreign language broadcasts regularly, have been urged over the air to enroll for the equivalent correspondence course. Inasmuch as the records of such students are filed with all the others in the Extension Division, as explained above, it would be very difficult to tell whether (by reason of their radio listening) they were more or less successful than those students who did not listen. dividuals, however, have expressed themselves as being greatly helped by the broadcasts.

As a matter of current historical interest, the Professor Gallup who taught Magazine Writing via radio in the Spring semester of 1927 was Dr. George H. Gallup, now Director of the American Institute of Public Opinion, Princeton, New Jersey. He is a State University of Iowa graduate, and at that time was on the staff of the School of Journalism of his Alma Mater.

University of Kansas, 1925

University of Kansas operates its own station, KFKU (Lawrence), receiving its initial license on December 18, 1924. This began as a development within the Department of Electrical Engineering-in fact, it was the Department and not the University that received the first license. The dedicatory program of KFKU went on the air December 15, 1924, under special authority to broadcast on that date—three days before the official federal authorization to maintain a station was received. The regular program schedule began January 5, 1925, and included twelve series of lectures. Two of these original twelve were used to supplement correspondence courses leading to University credit. Available data on this pioneer attempt to grant credit for extension class work via radio unfortunately are quite meagre.

The files in the office of KFKU give the following information about these courses:

Radio lessons for the course in Educational Psychology will be given once a week. While intended primarily for persons pursuing the correspondence course in this subject offered by the University Extension Division, the lectures in Educational Psychology will be of interest and value to individuals who provide themselves with copies of the texts, names of which will be sent on request. It is also suggested that local groups of teachers may follow up the lectures with discussion periods wherever this can be arranged.

Radio lessons in Elementary Spanish will be given once each week by the faculty of the Spanish Department. They are intended primarily to supplement the assignments in Elementary Spanish supplied by the Bureau of Correspondence Study of the University Extension Division, with special emphasis upon the matter of pronunciation. Persons not

caring to enroll for the correspondence work may still receive some benefit by providing themselves with copies of Fuentes and Francois' A Practical Spanish Grammar, published by the Macmillan Company, and following the lessons in that book.

The first radio lesson in Educational Psychology was broadcast over KFKU on Monday, January 5, 1925, with Dean R. A. Schwegler, of the School of Education, as instructor for the course. Twenty-three lessons were broadcast, and thirty-four students were enrolled. The first broadcast in Elementary Spanish was given on Thursday, January 8, 1925, with the following faculty members participating in these radio offerings: Arthur L. Owen, C. J. Winter, J. M. Osma, Agnes Brady, and May Gardner. Twenty-four lessons were included in the course, with twenty-three students being enrolled. There unfortunately is no record available of the number who successfully completed these courses.

Both of the above named academic offerings were dropped as "credit" courses after the first half year since the reception at that time was not dependable enough to warrant their continuance. It should be noted, however, that in addition to these two "credit" courses offered in 1925, there have been non-credit courses offered over KFKU in basketball coaching, chemistry, debating, gardening and landscaping, geology, mathematics, mining engineering, sociology, and vocational guidance, as well as in drama and music.

Another factor made it virtually impossible for the continuation of these extension courses for credit, namely, the limited amount of time on the air. In 1931 difficulties in frequency assignments and conflicts of interest between KFKU and commercial broadcasting groups resulted in the adoption of a definitely limited daily schedule of hours. At first, additional time was provided for the broadcasting of football and basketball games, but these exceptions became less frequent as

the broadcasting industry developed. Today (1941) KFKU is on the air approximately one hour each day, averaging eighteen programs a week.

University of California, 1927

Dr. Virgil E. Dickson (now Superintendent of Schools at Berkeley, California, but at that time Director of Research in the same school system) developed the idea in 1926 of using radio to assist students in a University of California Extension Division course called "Mental Measurement." This was a combination of the traditional correspondence work and broadcasting. Students were enrolled, and outlines of the work to be covered were sent out with a set of questions and problems for each of the thirty lessons—supplemented by lectures given over the air through KGO (San Francisco) at a time when reception was quite different from its present state of efficiency.

So far as present available data indicate, the course was divided into two terms—designated as Education 110A and 110B. Of the sixty-five students enrolled, forty-two (or 65.6 per cent) successfully completed the A portion and thirty-six (or 54.6 per cent) the B portion. In other words, thirty-six of the original sixty-five received official credit for the entire course. Extension Division officials say that this is a higher-than-average percentage of completion—a fact which might indicate that the radio talks served to stimulate student interest in this particular course offering. The correspondence course—which was written and conducted by Doctor Dickson—was complete in itself with the radio talks merely serving as a supplementary service to the enrolled students.

As a matter of permanent record, the advance an-

nouncement of the course (as printed and distributed by the University of California Extension Division) reads as follows:

The course will consist of fifteen lectures by radio given from Station KGO every Tuesday at 5:00 p.m., supplemented by thirty assignments for correspondence, (two assignments per week). It is therefore advisable that each student proceed with the correspondence course at the rate of two assignments a week.

The course will yield two units of University credit. It has been accepted by the State Board of Education toward a

teacher's credential. It may be applied:

1. As an elective course in education for the various types of teaching credentials.

 For a supervision credential, Class A, group b under 6, Methods in Mental Diagnosis.

3. For an administrative credential, group b under 14, Methods in Mental Diagnosis.

4. For the Research and Guidance credential, no. 4 under group A. Mental Tests.

Date of beginning:—Tuesday, January 11, 5:00 p.m. Radio Station KGO.

Enrollment fee:-\$12.00.

Enrollment should be made early, at the latest before January 11, 1927.9

Very unusual in the recording of these extension courses for credit that have been given via radio is the typewritten record, dated May 26, 1927, as made by Doctor Dickson at the conclusion of the course. It reads, in part, as follows:

Nature of the Course

The course was planned to embrace thirty assignments or lessons. Two of these assignments were sent out by mail each week. Two sets of problems based upon the assignments were answered by the students each week through corre-

⁹ University of California Extension Division, no date.

spondence. Each week the instructor gave one radio lecture about fifteen minutes in length. The purpose of this lecture was to supplement and summarize the assignments of that Each member of the class had his own texts and supplementary references. He was likewise furnished a mimeographed copy of the radio talk for review purposes.

Enrollment.

Sixty-five students, mainly teachers, enrolled in the course. They embrace teachers in kindergarten, elementary, junior and senior high schools, and principals of elementary and high schools. The geographic distribution of the class extended from Alturas on the north to Santa Barbara on the south.

Attitude of Students.

The members of the class have shown an unusual appreciation of the work. The only real complaint has been that the assigned work was too heavy. Ten members of the class have written in to this effect,—quoting from two letters:
"The course is very stiff but it is enjoyable."

"The first fifteen lessons are enough for the two units of credit."

A questionnaire was sent out by the extension division to each member of the class to discover the attitude of the students toward the experiment. Following are some of the facts gleaned from the answers to the questionnaire:

The median time spent on each assignment was three and a half hours. Four reported an average of five hours on each assignment, one reported six hours, one seven hours, and one ten hours.

Assignment No. 5 was the hardest of all. The time reported in the preparation of this assignment ranged from four hours to fifteen hours. Assignment 10 was the next most difficult, followed closely by assignments 8 and 3. By such means of checking the course can be revised so that these "demon" assignments can be reduced.

Nearly half of the class reported that one of the texts was "too difficult" or "lacked in clearness."

The readers' notations were found very helpful. In three

places the class members were meeting in groups to listen to the radio lectures and to discuss the lessons.

In one community the P.T.A. was "listening in" on the

radio lectures.

In one community the local paper had discussed the ex-

periment.

In practically all cases the radio reception was satisfactory. Reception was reported in from Pullman, Washington, on the north, and from Riverside on the south. It should be kept in mind that five P.M., the hour when these talks were given, is not a good hour for distant broadcasting.

Letters of appreciation have been received from many

members of the class.

The following quotations are illustrative of many that

might be given:

"I have found your radio talks especially interesting and feel that the contact we received in this way has been highly beneficial. It generates an atmosphere which approaches that of the classroom lecture."

"Your radio talks give the course a much more personal touch. I look forward to the lectures and enjoy them. They reach me clearly."

Attitude of the Public.

Dozens of letters have been sent in from the listening public. Apparently hundreds of people tuned in regularly on Tuesday at five P.M. Some have written for information about books, about placement of children in special school, about tests for children. Others have called at my office on visiting Berkeley to get a personal acquaintance with the voice. The comment that has reached me from the general public evidences a widespread interest in the radio lectures. These lectures have been prepared with a view to interest the public as well as to guide the members of the class.

A Forward Look.

This experiment has revealed immense possibilities for the use of radio in university extension work. It can be made a helpful supplement to many courses. It brings a closer per-

sonal touch to students and gradually builds up an extended consciousness in the general public of the education furnished by the state through the university.

In appraising Doctor Dickson's report, with its emphasis upon the difficulties of reception, it must be remembered that this University of California Extension Division course for credit was offered over the air beginning January 11, 1927, at a time when the National Broadcasting Company had been in operation for less than two and one-half months, and more than eight months before the Columbia Broadcasting System came into existence. The use of radio to supplement his regular extension instruction originated with Doctor Dickson, who soon thereafter became the Superintendent of Schools in his city. The University of California made no further attempt to continue this type of correspondence work via radio.

Fourteen years after he conducted this one and only course via radio as offered by the University of California, Superintendent Dickson contributes the follow-

ing additional information:

The chief basis for judging the effects of the course came from the answers of students in the class who were asked to report from week to week any suggestion they had with reference to the radio reception and the values of the lectures. In addition to word from the class members, we received quite a bit of fan mail from the general listeners who were always encouraged to write in their opinions. The examinations in the course consisted of answers to the problems which were presented in the correspondence material and were given at the end of each assignment. These problems were so arranged that no one except the person really covering the work would be able to answer them.

So far as I know, this course was the first, at least here in the West, in which broadcasting played a part and which received university credit. The broadcasting was not a required part of the course, because those who were unable to listen could still get credit by doing the correspondence assignments. The radio lectures undoubtedly assisted the students. Practically all those who wrote in agreed on this point. Registration in the course was centralized about the northern part of this state, but there were a few scattered enrollments reaching well toward the South and some into Oregon, Nevada, and Arizona.

I felt that the results were very satisfactory and that the experiment was successful, but I did not feel personally able to carry on the work due to the fact that it required a great deal of extra time. Each week I had to travel several miles to get to the broadcasting studio. The time and effort involved did not seem commensurate with the returns for the one class. It should be emphasized that reception in 1927 was very different from that of today. In fact, in those early days I remember it was common for people to say they would start five or ten minutes before the scheduled time to tune their radio sets to the proper station in order to be sure that they would get proper reception and be able to hear the first part of the broadcast.

Hale Sparks, Radio Administrator at the University of California, makes the following statement concerning this one attempt of his institution to broadcast a correspondence course for credit:

The opinion of the Extension Division is that, on the whole, this experiment was quite successful. Extension officials say that the station was most cooperative and was willing to spot the program at any hour of the day which seemed most desirable. That the experiment wasn't repeated is due to the fact that the preparation and presentation of radio programs and the necessary travel to the radio station in East Oakland for each broadcast made the task considerably more laborious, and, as a continuous effort, might necessitate increasing the enrollment fee.

University of Southern California, 1928—1930

The University of Southern California had done some broadcasting previous to 1927, but in that year it seriously began its current extensive interest in the field of radio production work that today (1941) sees the presentation of a minimum of seven program series each week over the standard commercial stations of the Los Angeles metropolitan area and, in addition, the offering of two weekly televised programs over the Mutual-Don Lee Broadcasting System television transmitter. Unfortunately, so far as the broadcasting of credit courses is concerned, most of the data now being presented depend upon the memory of Don Petty, at present a practicing attorney-at-law in the city of Los Angeles, who was serving as Director of Radio at the University during the time that this experimental work was being carried on.

Mr. Petty's letter tells the story as follows:

In 1927 radio station KFI commenced to broadcast chapel programs from the University of Southern California on Monday, Tuesday, Wednesday, and Thursday of each week. The length of these broadcasts consisted of organ music for a period of five minutes and an inspirational address for ten minutes. Dr. Bruce Baxter, Bishop of the Methodist Church, at that time was professor in the School of Religion at the University of Southern California, and he delivered the inspirational addresses. This program had a wide following. KFI broadcast these chapel programs for approximately two years, or until some time in 1929, at which time KHJ supplanted KFI as the broadcaster of these chapel programs. KHJ continued to broadcast the chapel programs through 1932, at which time I left the University.

Some time in the latter part of 1927 or the early part of 1928, the University of Southern California arranged to have educational programs broadcast each day, except Saturday and

Sunday, of each week over KMPC. Broadcasts were made from ten in the morning to noon, from two in the afternoon to sundown, and from nine to eleven at night. The lectures were of half-hour duration and were all written out in advance by the professors giving them. With few exceptions, the speakers were from the faculty of the University of Southern California. The subjects covered were from the fields of philosophy, religion, law, commerce, government, architecture, liberal arts, education, psychology, political science, engineering, and medicine.

In 1928, through the efforts of Dr. Frank Touton and Dean Emery Olson, the University of Southern California broadcast courses in connection with the School of Education of the University. Credits towards teachers' credentials in connection with education were given by the University. Approximately five courses were given each term. Mimeographed material was sent to the students and regular written assignments were prepared by the students and sent to the professor giving the course. The program of which I speak lasted for approximately three semesters.

In February, 1930, credit for such courses was discontinued. Lecture series, however, continued over the same station as before. I believe that at the same time credit for courses was discontinued there was a reduced broadcasting time over station KMPC, and that we broadcast only four hours a day.

In June of 1930, the University of Southern California ceased broadcasting over KMPC. It did, however, at the same time increase its broadcasting time over KHJ. In addition to the regular chapel programs, educational programs were broadcast over KHJ four times weekly. Each broadcast consisted of fifteen minutes duration. broadcasts were placed over the Pacific Coast network of the Don Lee system.

In June, 1932, at the time I left the University of Southern California, radio appeared to be on the decline and I have been informed that for the following two years there was very little radio activity on the University of Southern California campus.

A memorandum of the courses registered for in which tuition was paid show a total of fifteen curricular offerings being presented over the air with a total enrollment of sixty-five—thirty-four men and thirty-one women. Unfortunately, there is no record of how many of these received credit. The highest total enrollment, according to these figures, was but seventeen in a "Business Law" course, whereas six of the fifteen radio "credit" extension courses had but one paid enrollment. These figures follow:

1.	Public Education in the United States (Education 103) (Professor Weersing)	,
2		•
4.	Growth and Development of the Child (Education	1,
_	131) (Professor LeFever)	13
3.	Business Law (Business Law If) (Professor	
	Marston)	1′
4.	Classroom Methods and Management (Education	
	156) (Professor Crawford)	
5.		
-	tion 116) (Professor Hull)	1
6.	Public Speaking (No record of course or professor)	
7 .	Money and Banking (Money and Banking 100)	
٠.	/D (O1)	
8.	Semitic and Oriental History (History 122) (Pro-	•
0.	(()	
Λ	fessor Knopf) Principles of Secondary Education (Education	•
9.	Principles of Secondary Education (Education	
	150) (Professor Touton)	4
10.	Psychology and the Professions (Psychology 108)	
	(Professor Rayner)	
11.	Constitutional History (History 177) (Professor	
	Hammond)	3
12.	Trade and Transportation (Commercial Aviation	
	150) (Professor Hill)	
13.	Short Story Writing (English 103f) (Professor	
	Dietrick)	-
14.		
	sor McClung)	
15.	Political Institutions of Latin America (Professor	
	Cook)	
	Cook,	
	ΤΟΤΔΙ.	-

There was a tie-up in these courses with the Associated Student's Store which advertised the required textbooks for sale. Provision was also made for those who desired second-hand books to have these furnished, whenever copies were available, at a reduction in cost of at least 25 per cent. A further commercial tie-up was made with commercial radio dealers as announced in the following mimeographed bulletin:

UNIVERSITY OF SOUTHERN CALIFORNIA RADIO EDUCATION DIVISION

Present this to the Atwater Kent Dealer in your territory. This is to certify that

	NAME	
	ADDRESS	
	CITY	

has been regularly enrolled in the Radio Education Division of the University of Southern California, tuition paid, and desires to purchase upon presentation of this certificate, a Model 46 or Model 53 Atwater Kent radio at the special Trojan rate as recommended to you by Ray Thomas Inc.

2—Model (46 or 53)
3—Serial Number set speaker
4—Date of sale
5—Dealer making sale
Address of dealer
(Atwater Kent dealer fills in data on #2, 3, 4 and 5)
UNIVERSITY OF SOUTHERN CALIFORNIA
Cashier

The printed enrollment blank gave further description of these courses—many details of which are not

found in enrollment blanks of the other twelve institutions that have offered official academic credit via radio—as follows:

UNIVERSITY OF SOUTHERN CALIFORNIA Los Angeles, California RADIO EDUCATION DIVISION KEJK Correspondence—Lecture—Conference Courses

APPLICATION FOR REGISTRATION

Date of Application	19
Name in full (printed)	
Date of Birth Place of Birth	
Permanent P. O. Address	
Present Occupation	
How much high school work have you had?	
How much college work have you had?	
What college or colleges have you attended?	
Are you enrolled in any other educational institution	n?
Nama sabaal	
Commercial, industrial, or teacher experience and pos	sition
Are you enrolling in this work for cultural or vocativancement, or with the expectation of receiving U credit toward a degree, or a teacher's credential?	niversity
Name of courses desired.	
1.	
2.	
Have you had previous courses along these lines?	
State definitely what work	
What general informational courses, aside from the credit, would you be interested in hearing over Radio	
Enclosed, \$ '' Check, '' Money C	order.
(Signature)	
The registration fee for each course is \$18.00, w	hich in-

cludes the correspondence study privileges extended by the

Students may not receive University credit for more than

University library.

two courses at a time. Students enrolled in any other educational institution will not be allowed to register for credit without special permission from that institution. Students in residence at the University of Southern California may not receive credit for correspondence study without special permission in advance.

Names and Addresses of others who ought to be informed of the Correspondence—Lecture—Conference Courses:

These "credit" courses consisted of a series of twelve or fifteen lectures given once each week, in connection with which there was additional mimeographed material sent to the students. Also, there were regularly written assignments required of those seeking credit in the courses. In February, 1930, after this work had been carried on during three half-year semesters, the credit for the courses was discontinued although lecture series in certain fields continued as before. It is believed that one reason for the discontinuance of the policy of issuing credit for the radio work was because of protests by certain other California colleges and by other public or semi-public authorities who believed that teachers should not be permitted to obtain credit for courses by This, however, is a statement that canthis method. not be confirmed by any present available data. The fact that the University's time on the air was cut drastically about this time undoubtedly was a contributing factor for this discontinuance. Dean Emery Olson had administrative charge of these radio activities while Mr. Petty served as Manager of the Radio Department.

A check-up of the apparent inconsistency between Mr. Petty's information that the courses were broadcast over KMPC and the University of Southern California's record of offering this work over KEJK shows that Mr. Petty's memory had failed him on this one point. It is remarkable that after eleven years, and with practically no documentary records, that the Los

Angeles attorney can furnish as many data as he has done. KEJK was the original station of the Macmillan Petroleum Company and it was over this transmitter that the "credit" courses of the University were broadcast. KMPC was one of the stations which broadcast courses of general information to the public, but for which no credit was given.

University of Florida, 1929—1930

University of Florida operates its own station, WRUF (Gainesville), having received the initial license October 6, 1928. Inasmuch as those who were in charge of the station during its first year of operation had had no previous experience in the art and business of broadcasting, considerable experimentation was carried on with various types of presentation over the air. Certain other departments of the University are said to have objected to the General Extension Division's having this instrument of communication in its hands, and therefore were opposed to the operation of a radio station by the University. Some high authorities themselves felt that the transmitter had been thrust upon them as an instrument for advertising Florida's commercial possibilities under the guise of education sponsored by the University.

One of these early radio experiments was the broadcasting of four extension courses for credit over a period of a year and a half. There was a registration of 177 in these radio classes of whom 141 (or 85.3 per cent) finished their work and were given academic credit. The details of organization are described by Dean B. C. Riley, of the General Extension Division, as follows:

During January, 1929, letters were sent to 75 selected school men in the State, authorizing them to act as class

leader for a three-hour credit radio course in Education 101. They were asked to tune in for the organization lecture on February 2. At that time the plan was explained, and the leaders took local enrollments at the regular correspondence study fee of \$9 per student.

The lecture on the first assignment was given one week later. The course was given in twelve one-hour lectures, followed each time by a round table of one hour's duration conducted by the class leaders with the class group in each locality. This totaled 24 class hours of work required of each student. In addition, 12 written assignments of sufficient length to cover all of the additional work required for the course were submitted by each student. The class in each locality further submitted a bound book, "How to Teach;" these books are now in possession of the College of Education.

This class was conducted as an experiment to determine what might be accomplished in college credit work by radio. The experiment was considered a success.

As a matter of record, these four "credit" radio courses had the following instructors, total registrations, and total receiving academic credit:

- Education 101 (Dean J. W. Norman), 69 enrolled, 60 receiving credit, with students coming from six towns and six counties. This was the only one of the four courses in which enrollments were concentrated so that study group work could be possible; in the three others the enrollments were widely scattered.
- 2. Spanish 21 (Professor Francis M. De Gaetani), 18 enrolled, 16 receiving credit, with enrollments coming from ten towns including one in West Virginia.
- 3. Education 203 (Professor E. G. Lancaster), 32 enrolled, 25 receiving credit, with enrollments coming from sixteen towns including one in Georgia.
- 4. Education 308 (Dean J. W. Norman), 58 enrolled, 40 receiving credit, with enrollments coming from twenty-three towns.

Major Garland Powell, Director of WRUF since 1929, contributes the following information:

When I took over the station in the fall of 1929, a thorough study was made of the whole situation. Upon my recommendation the station became an independent branch of the University, and the whole set-up changed. It was then that certain needs in the field of public school education and adult education were studied, and an honest attempt was made to supply them. However, no courses were offered for credit after the Spring of 1930. Courses were given at the request of the Parent-Teachers Association and others. Included among these were "Child and Adolescent Psychology," "Music Appreciation," "Speech," "United States History," "Great Americans," and others purely informative for the welfare of people on health, control of diseases, better English, Geography, and kindred subjects.

A personal check-up on the values and shortcomings in the attempt made by the University of Florida to broadcast extension courses for credit showed that in the "School Curriculum" course many teachers took this radio service but due to lack of sets at the time would listen in groups. study showed that these groups at times were a lot more interested in "What Carrie so-and-so wore to the dance the other night," "Mrs. So-and-so is going to have a baby," and similar chit-chat than they were in listening to the lecture. There were several reasons incident to this. climatic conditions of the state at certain times during the year produced probably the most static of any state in the Union. Second, the psychology of groups in discussing current, interesting local happenings whenever they get together. Third, the lack of ability to ask questions. Fourth, the lack of leadership to conduct radio classes properly.

In the instance of the "Elementary Spanish" course we had one faithful person taking it, but she lived in West Virginia, some seven hundred miles airline from the place of broadcast in Florida. Any credit would do her little or no good. Also, we were unable to pay the professors for this extra load, and they lacked the necessary interest to assume this extra burden with no remuneration.

At that time the educators were beginning to clamor for time purely as a selfish thing, and when they were given time they would seldom fill it. In other words, my experience has been that one could never depend upon anyone to fill a scheduled program unless they were paid. The next observation I made was that there was no concentrated effort to supervise groups listening in, and likewise, there was little incentive for the general public to gain very much out of it due to the academic manner in which the broadcasts were presented.

In the fall of 1931, after the surveys were made and more or less study given to the various subjects used by groups participating, a more definite and general policy was set up. It was the endeavor of the officials of WRUF to get away from class broadcasts. In other words, when an educational broadcast was made, showmanship had to be employed in order to interest the general public as well as those particularly interested. Methods had to be employed to educate people without their knowing that they were being educated. Broadcasts of any nature had to be couched in such simple language that all could understand and enjoy them. was quite a variation from the staid old method of lecturing. but it accomplished the desired results. We would sugarcoat the names of our programs, giving them very attractive and interesting titles, and then do a little sweetening of the programs themselves. Consequently, we built a desire upon the part of the public to listen as well as making the programs interesting for those who reaped the most benefit from them.

OGLETHORPE UNIVERSITY, 1931—1935

Oglethorpe University (Georgia) held license to operate its own station for a period of four years, seven months, and five days beginning April 21, 1931. The transmitter of Kent's Furniture and Music Store had been purchased through a gift from Dr. and Mrs. T. J. Lupton and son, Carter. Other equipment was acquired. The application for transfer of license stated that Oglethorpe University proposed to establish a "Department of Education by Radio."

This ambitious plan was described in detail in a pamphlet as follows:

Announcement of Courses

On June 5, 1931, Oglethorpe University inaugurated a complete program of college education by lectures over the radio, supported by correspondence, conference and examinations. These courses are conducted in a standard, permanent and systematic manner and are the full equivalent of similar courses offered in the classrooms of the University.

The territory covered by the broadcasting station is that of greater Atlanta and the courses are offered on a convenient schedule during the mornings, afternoons and evenings of six days of the week. The courses offered which are summarized below are designed to constitute the greater part of a standard college education. Until television has been successfully accomplished it will be impossible to teach certain subjects successfully over the radio but such courses as those in English, History, Education, Sociology, languages, etc., are included in the program.

The lecture periods are the same in length (fifty minutes) as those in use on the campus of the University.

The tuition charge is \$15.00 per year hour (one minor), the same as that for the other divisions of the University. This means that a course, one hour per day for three days of the week during a radio term of approximately three months (3 term hours) will cost \$15.00. Any person desiring to enroll for these courses should fill out the blank inclosed with this circular and mail it immediately to the Oglethorpe University, Oglethorpe University, Georgia, with check to cover the cost of the courses desired. The applicant will then be enrolled as a regular student of Oglethorpe University and will be notified as to what text or texts should be purchased and be given general instructions as to how to avail himself of the lectures offered. The schedule of the radio courses will be forwarded to him or her and will also be published in the local Atlanta newspapers daily. The student who is a candidate for a college degree is required to do the work in a regular and systematic manner, to attend the radio lectures regularly, make notes thereon, submit them to the professor in charge for examination and criticism, study the texts and correspondence sheets furnished by the University, meet the professor at convenient intervals for conferences and guidance. either personally or by telephone, stand the customary examinations at the close of the work and, of course, pay the regular tuition fees. After each lesson the student is required to forward the notes made on the lecture immediately by mail to the professor in charge for criticism and review and is expected also to append thereto any questions he may desire to have answered and this will be done by radio at the next lecture period. Questions may also be telephoned to the lecturer at any time during the lecture. They will be answered at once.

Careful tests will be made to determine the exact quality of the work done over the radio as compared with that done in the present Extension department and on the campus. Comparative results will show the relative value of radio work and the relative college credits will be granted accordingly. Inasmuch as it is confidently believed that this work will be the full equivalent of that done in the other divisions equal course credit will be given from the beginning and until and unless the University finds that the work done differs in quality from that done in other divisions of the University. The radio division is of equal standing, dignity, and order with the undergraduate and graduate departments of the University. The studio has been installed on the University campus. The equipment is the best purchasable with crystal control and complete modulation and with it the University has been assured that it will be possible to completely cover with a dependable signal the territory of greater Atlanta.

The Radio Division was inaugurated beginning with such courses as were deemed most practicable for radio instruction. The broadcasting station operates under the call letters WJTL being thus named for Mr. John Thomas Lupton, donor of Lupton Hall in which the station is located and donor also of the equipment of the station itself. It is perhaps the only station in America which is operated exclusively for educational purposes.

Students who desire to enroll should select their courses from those listed below, fill out the enrollment blank which is inclosed with this circular and mail check to cover the cost of the course at once. For further information call Cherokee 1017 or write to the President, Oglethorpe University, Ga.

The college year is divided into four quarters or terms, each approximately three months in length. They are the Autumn, Winter, Spring and Summer terms.

Method of Registration

All persons desiring to take the Radio courses in a regular and systematic manner should fill out the matriculation sheet enclosed herewith and mail it accompanied by a check to cover the course or courses desired as stated above. It is not necessary in order to take these courses for one to become a candidate for a degree immediately. Later on if you desire to do so, the proper credentials can be supplied to the registrar, enabling any student to qualify as a candidate for the bachelor's degree. All students desiring to do this work in a systematic manner should provide themselves immediately with a good loose leaf notebook and with such texts as may be required by the professors in charge. All professors may be reached by day over the University phone and by night at their homes. Notes must be taken by candidates for degrees on all lectures and must be mailed to the professor of the subject taken the following day as evidence of attendance on classes and for purposes of correction and advice. All students who are candidates for degrees are also required to take the final, general comprehensive examinations such as are required in all other departments of the University.

All courses at Oglethorpe University whether by radio, on the campus or by extension are of equal value and may be used interchangeably for credit toward degrees upon approval of the dean of the department in which the student is working.¹⁰

This pamphlet listed twenty-three courses, with the instructor, amount of time to be consumed by the broadcasting, amount of college credit, tuition charge for each offering, and a general description of the work to be offered. Not even the University Administration itself apparently knows which of these courses were broadcast, that is, actually went on the air. The proposed course offerings were as follows: (1) Beginners' Course in German, (2) Mental Hygiene, (3) History and Appreciation of Music, (4) History of English

¹⁰ Radio Division of Oglethorpe University, Station WITL, Session of 1931-32, Autumn, Winter and Spring Terms, pp. 2-15.

Literature, (5) Thesis Writing, (6) History and Literature of Georgia, (7) American Literature, (8) Short Story, (9) Literature and Life, (10) Psychology for the Writer, (11) Newspaper and Magazine Writing, (12) Beginners' Conversational Spanish, (13) Beginners' Conversational French, (14) History and Interpretation of the Bible, (15) Comparative Religions, (16) Contemporaneous Civilization, (17) Philosophy, (18) A Study of Society, (19) Economic Problems, (20) Business Problems, (21) The Human Body, Its Use and Abuse, (22) Health and Parental Education, and (23) Second Year French.

On June 5, 1931, Oglethorpe University put this ambitious plan into operation. The professor was located with the microphone on his desk immediately in front of a large plate glass window with a college student on the other side, who himself was taking the course on the campus. There was communication in the form of an open slot between the classroom and the professor so that any person—desiring to ask a question—could slip the paper on the desk of the radio instructor. At stated intervals all radio students met the professor on the campus. At the close of the term, oral and written examinations were held on the campus. On the basis of these requirements, credit was to be given up to 25 per cent of the amount required for graduation.

Oglethorpe University sold its station on November 26, 1935, retaining definite broadcasting privileges for a period of three years. Higher education via radio on this extensive and ambitious a scale had been found to be impractical—it being felt that the same amount of faculty time and energy would show better educational results if applied to the more traditional campus or extension work as developed by the University over a long period of time. The broadcasting of these radio courses, as begun in the summer quarter of 1931, continued until some time in 1935 although no official at the University seems to know exactly when it did stop.

President Thornwell Jacobs, of Oglethorpe University, gives further details concerning this interesting experiment as follows:

It would be impossible to give accurately the number of students that received credit for these courses but it would run up into the hundreds. The plan was dropped because of three reasons: (1) We found that students were unwilling to follow the rigid regulations which we laid down as to the taking of notes, forwarding them for correction, regular appearances for quizzes, etc., and preferred to do this work in the classroom. (2) Our radio station was only 100-watts and could not adequately reach more than a small percentage of territory which we desired to cover. (3) This being the case, it was necessary for us to operate two studios, one on the campus and the other in down town Atlanta where the broadcasting equipment was located. This was doubly expensive.

Our experience revealed the fact to us that certain subjects could be taught over the radio as well as in the classroom, namely, those subjects which depended for their excellence of instruction upon the ear rather than the eye. This applied principally to foreign languages. We also found that we were doing an immense amount of good in the city of Atlanta and that literally thousands were benefitted by the public instruction which we offered. The fact that we were not a commercial station but were devoted almost entirely to educa-

tional subjects limited our clientele in the city and we were

given a good deal of trouble by persons who desired to obtain our frequency for purely commercial use.

We found it necessary to accept advertising in order to pay the double expense and this brought us more or less in competition with some of our best friends in the city. There were other minor reasons for discontinuing the station. On the whole, the experiment demonstrated that so far as we are concerned if we had a station which (while located on our campus that is ten miles from the center of the city of Atlanta) could cover the entire city—that is to say, if we had a clear channel—we could make of it a complete success. On a 100-watt station located ten miles from its customers, it was very difficult.

It is unfortunate that Oglethorpe University has been unable to furnish any exact data concerning the names of the courses which actually went on the air (or even the total number of such radio offerings), number of students enrolled in each course, and number who received University credit for this radio instruction. The lack of such data has made it necessary to release this entire study in incomplete form inasmuch as the research worker cannot tell from a pamphlet (such as the one reproduced herein) what is pure announcement or wishful administrative thinking on the part of the University and what should be recorded as historical accomplished fact. Three years of intermittent communication by letter and wire have failed to develop the information requested.

President Jacob's statement, quoted above, that, "It would be impossible to give accurately the number of students that received credit for these courses but it would run up into the hundreds," must be taken with a grain of salt. The history of this entire movement has failed—even for the well-financed state universities which own their own relatively high-powered broadcasting stations—to show more than a few students enrolled for "credit" courses and even fewer who were able to complete work for a degree via radio instruction. Oglethorpe's station was only 100-watts in power. The Federal Government authorizes operation from 100 to 50,000 watts. These 100-watt stations, operating under the minimum power authorized, have a coverage that seldom exceeds a radius of fifteen miles although this depends upon topographical and other technical conditions. Also, in Georgia where many high school teachers receive approximately eighty dollars salary a month and elementary school people even less, it seems doubtful that many would or could afford tuition fees of \$15.00 for radio courses.

An illuminating letter concerning this work comes

from Mark Burrows, Dean of the School of Commerce and Secretarial Arts, which reads as follows:

This is written to you at the request of President Jacobs, who is glad to aid you in your investigation of radio in education. I am sorry I am unable to give you such detailed information as you seem to have from such institutions as the University of Iowa. I was not in charge of the project and have only such knowledge as one would have who gave courses by radio. I am not able to say definitely when we started it, but to the best of my recollection, it was in the summer school of 1929. We continued the work for several years, but finally the station was sold. At the request of the broadcasting company we gave some courses after that as a public service. The project was never self-sustaining. We did not have the broadcast material connected up with a correspondence course as seems to be the case with the University of Iowa. From the standpoint of scholastic thoroughness it could not be compared with the work of a careful classroom teacher. We feel that we did a lot of good to people who were out of school but were intellectually or artistically hungry. It was a boon for the shut-ins. A blind man listened to the Spanish and became as proficient in it as the average good student with two years of college work.

I can speak more definitely of my own work. The first summer I gave a course in Sociology with a small group working for credit. It was unsatisfactory and I asked to be relieved of it, and substituted the History and Appreciation of Music with examples and illustrations from the finest recordings. The response was gratifying, judging by the many grateful and appreciative letters received. The blind coroner in Atlanta, who was fond of music, the railroad man who was out all evenings and nights on duty and slept by day woke up in time to hear my program, the only good music, he said, he had a chance to hear. Ouite a number took the course for credit, coming in and taking the examinations. Other courses that were popular was one in Contemporary Problems, by one of our livest preachers in Atlanta.—Rev. D. Witherspoon Dodge. One in English literature, dealing largely with recent publications, was very interesting. This was given by Dr. James Routh. A course in Bible was given

by Dr. F. G. Nicolassen; one in German by Dr. H. F. Gaertner.

The consensus of opinion, perhaps, of those involved was that radio as a public service for the outside public was all right, but not to be compared as a teaching agent with the live teacher in the classroom. An hour is too long for mere listening in. The best examples of radio as an educative agent are the now numerous 15-minute programs given by the broadcasting companies. Perhaps the Columbia School of the Air with its somewhat longer programs is the best example of the radio in education.

University of Utah, 1932—1935

University of Utah held license twice to operate its own station for a total period of three years, six months. and twenty-five days beginning January 6, 1925, and after its first deletion, relicensed November 9, 1925. Both entertainment and educational programs were broadcast, but no definite program policy was established. The University, moreover, found itself financially unable to keep its equipment up-to-date during a period when technical improvements were developing so rapidly that earlier equipment was becoming obsolete. Inasmuch as both Red and Blue Networks of the National Broadcasting Company and the Columbia Broadcasting System have outlets (KYDL, KUTA, and KSL, respectively) in Salt Lake City, no further applications have been made by the University for renewal of its license—it being felt that commercial facilities (at little or no cost) are more efficient and economical than the maintenance and operation of an educational station.

On October 6, 1932, the Extension Division of the University with the cooperation of the Utah State Department of Public Instruction and the Salt Lake City

Public Schools, and with some financial assistance of the Department of Public Instruction, began a field course in the advanced techniques of teaching. This consisted of twenty-five half hour radio lectures by Dr. Jonn L. Nuttall. Jr., Superintendent of the Salt Lake City Public Schools. Extension Division instruction heretofore had been restricted to the teachers in the larger centers of population that were reasonably close to the University. Teachers in the more remote communities, or isolated in rural schools, were being helped only by the general courses which could be organized as home-study or correspondence work. It was primarily as a service to these teachers in remote areas that the radio courses originally were planned.

These extension courses by radio have been a combination of classroom and home-study techniques. Students in the radio class have been given the advantage of personal contact as represented by the lecturer's voice and also the benefits derived from carefully written directions and instructions by the Home Study Department. Contents of each of the courses given over the radio have been announced by printed bulletins containing the lists of lectures to be broadcast, a summary of the aims of the course, an outline of the prerequisites, and a statement of the work necessary to

obtain credit from the University of Utah.

Although the University of Utah Extension Division has expressed the possibility of presenting future "credit" courses by radio, only four have been offered to date—the last one being in the 1934-35 academic year. The Utah Department of Public Instruction subsidized these four courses with a total of \$900 as an effective means of professionalizing teachers in remote areas who were unable to attend regular extension classes at institutions of higher learning. A total of \$700.62 was charged by KSL (Salt Lake City) for the broadcasting time. Three of the four courses were in the field of Education, while the other (second in

TABLE 5

University of Utah Extension Courses Subsidized by Utah Department of Public Instruction for Purpose of Teacher-Training by Radio, 1932—1935

Year and Course	Radio Station Charges for Time on Air	Number of Broadcasts	Radio Station Number Time on Air Charges for of in Minutes of Time on Air Broadcasts Each Broadcast	Total Number Students	Total Number Students	Subsidy of Department of Public	Cost of Time on Air Per
1932-33 Education 171 Books of the Day	\$265.62 \$ 35.00	26 15	30 15	186 41	Credit 111 17	\$300.00 \$200.00	Enrolled \$1.43 \$2.17
1933-34 Education 172	\$250.00	. 25	30	142	103	\$300.00	\$1.83
1934-35 Education 142	\$150.00	15	20	93	81	\$100.00	\$1.61
Totals	\$700.62	81	33 hours, 15 minutes	462	312	\$900.00	\$1.52

chronological order of presentation) was given by the Department of English through the Extension Division. Table 5 shows the allocation of this subsidation by the State Department of Public Instruction for these radio-extension courses as well as the enrollments and number of students receiving credit in each of these radio offerings.

Education 171, "Field Course in Technique of Teaching," went on the air for its first of twenty-six radio lectures on October 6, 1932. It was followed the spring of that same academic year by a course entitled, "Books of the Day," with the initial broadcast being made April 13, 1933. Superintendent Nuttall offered Education 172, "Field Course in Classroom Organization and Management," the following year with the opening radio lecture being given September 28, 1933. The fourth and final of these radio courses broadcast to date was presented during the succeeding academic year with the initial broadcast being given March 19, 1935. This was Education 142, "The Activity School," offered by Dr. John T. Wahlquist, Director, William M. Stewart School of the University of Utah.

The requirements of the two longer courses were practically the same, with those of Education 172, "Field Course in Classroom Organization and Management," being presented as typical of both. These were

as follows:

EDUCATION BY RADIO

Education 172

This course is offered by the Extension Division of the University of Utah in cooperation with the State Department of Education and the Board of Education of Salt Lake City.

The use of radio to assist the teacher in service has proved definitely practical. It has made possible the reaching of teachers in remote areas with supervisory help and at the same time extending to them the opportunity of college credit.

The requirements in Education 172 are:

(a) Careful attention to radio lectures.

(b) Certain prescribed reading.

- (c) Twenty assignments on classroom activities. These assignments are closely related to the lectures. They are specific and do not require the writing of long papers.
- (d) A final examination.

Credit will be given only to regularly enrolled persons who meet the above requirements.

The credit (not graduate credit) will be five quarter hours

upper division University credit.

The course is so interesting and valuable for teachers and principals that the registration should not be limited to those who want credit.

To register, send your check and money order for \$6.00 direct to: Extension Division, University of Utah, Salt Lake City.¹¹

In the initial course given, that on methods and teaching, the twenty-six lectures were of two types. New information was presented over the air. Four lectures later, giving the students plenty of time to complete the assignments made in the first lecture outline, a report lecture was given. The material for this was taken from the completed assignments reported by the students. Those who were enrolled also were furnished outlines for these report lectures. In Doctor Nuttall's second course (the third one that was broadcast) in classroom organization and management, the papers sent in were read carefully, marked, and returned to the students. Four of the twenty-five lecture periods were used in answering over the air the questions sent in. In the initial 1932-33 course on methods, the largest "attended" of these offerings, the 186 students were enrolled from fifty-eight communities in four American

¹¹ University of Utah Extension Division, Education by Radio, Education 172, p. 4.

states and Canada. The other courses showed a similar wide distribution.

A radio course under title of "Books of the Day," the second of the four series to go on the air, consisted of fifteen fifteen-minute lectures by various professors in the English Department of the University of Utah, beginning Thursday, April 13, 1933. Description of the two classes of registration, as printed in the pamphlet announcing the course, follows:

- 1. Three hours of University credit may be obtained by complying with certain requirements laid down by the Department of English of the University of Utah. The required work will include, besides the listening to the radio lectures, certain papers, a book report and answers to questions. The work will be no more than that required of students in residence at the University for an equivalent amount of credit. The fee for the course carrying three hours of credit is \$5.00, postage on lessons included.
- 2. If one does not care for credit, but does want something more than the enjoyment of listening to the lectures, supplementary material prepared to accompany the broadcasts may be obtained for \$1.50 for the entire series.¹²

The fourth and last of these extension courses by radio that to date has been offered by the University of Utah Extension Division was under title of "The Activity School." Its fifteen twenty-minute broadcasts extended from March 19 to May 16, 1935. A five-dollar fee was charged for this shorter Education course. Eighty-five students were enrolled; eighty-one received University credit. This radio offering was described, in part, as follows:

The course will consist of: (1) Lectures by radio representing the importance, the place, the function, and the methods of the activity school; (2) Supplementary directed reading in authoritative books and periodicals. . . . In large

¹² University of Utah Extension Division, Books of the Day, p. 8.

measure, the students enrolled will learn by experimentation. They will be led to introduce activities into their everyday practice in teaching, to experiment with "unit activities." They will appraise and report the results. They will present their own criticisms, reactions, and questions. . . . The course will utilize the experimental methods; it will be, therefore, really, an exemplification of the activity school.¹⁸

Of all the extension courses broadcast for academic credit, these of the University of Utah are the only ones in which a commercial station charged for the time used on the air—a total of \$700.62 for thirty-three hours and fifteen minutes. Charging educational institutions for time on the air is very rare inasmuch as each broadcasting station must certify roughly the amount of constructive educational effort it is making when filing application to renew its license each year. It must be admitted that the rate charged by one of America's most powerful stations, KSL, 50,000-watt clear channel, was ridiculously low. There also is the ethics of the matter in that the University received the income from fees paid by the students enrolled in addition to the subsidation by the Department of Public Instruction.

The instruction given in all four of these radio courses was made applicable to both elementary and high school teaching. It should be noted that although these radio courses were directed primarily to rural teachers who as a matter of usual habit retire much earlier than do their city cousins, they went on the air quite late—10:00 to 10:30 p.m. in two cases while the final course was not aired until 10:45 p.m. The University of Utah, centered as it is in the heart of a sparsely settled mountainous region where great distances isolate teachers, seems ideal for the development of these extension courses via radio if better time can be

¹³ University of Utah Extension Division, The Activity School, pp. 2-3.

secured. But it is hardly fair to expect one of America's most powerful stations to sacrifice income and audience for program series that are built to attract a very

limited number of regular listeners.

It should be noted that the University of Utah Extension Division, when compared with the radio credit courses of other institutions, had relatively large enrollments in the four courses that were presented. There were 462 enrolled, of whom 312 (or 67.5 per cent) received credit. This would indicate that the radio offerings were well publicized and efficiently organized. The fact that the Utah State Department of Public Instruction and the Salt Lake City Public Schools actively cooperated also was an important factor in securing the large enrollment and successful completion in the courses.

FAIRMONT STATE TEACHERS COLLEGE, 1933

Fairmont State Teachers College (West Virginia) began broadcasting in 1929, and has been continuously on the air during the academic sessions since that time. It is the only teachers college in the United States to have attempted to offer a radio course for credit. Beginning on January 23, 1933, the mimeographed material used to publicize the course presented an administrative set-up for the work as follows:

Course-Orientation

An extension course utilizing the radio to teach teachers.

Purpose—

- (1) to familiarize teachers with the various subject matter fields as taught at Fairmont State Teachers College.
- (2) to demonstrate possible ways of using the radio in extension work.

(3) to assist teachers in making classroom use of educational broadcasts that are now and may be available.

(4) to measure the effectiveness of radio as an instructional device.

Set-up—A one or two hour course for teachers to be given by Fairmont State Teachers College beginning January, 1933.

It will be taught by various members of the faculty of Fairmont State Teachers College.

Ten or twenty classes of teachers might probably be organized to meet one afternoon a week in their respective centers.

Each class should have a qualified local leader who will work under the direction of the broadcasting instructors.

The usual extension fees will be charged the teachers who enroll in the course.

Part of the instruction will be broadcast by the instructors in charge of the course and part will be given by the local group leaders. If the classes meet at four o'clock each Monday afternoon for 15 weeks the procedure might be as follows: 4:00-4:15 p.m.—Preliminary consideration—local leader in charge.

4:15-4:30 p.m.—Broadcast lessons over Radio Station

WMNN.

4:30-5:00 p.m.—Class discussion—local leaders in charge.

The local groups will be expected to meet at 4:00 p.m. in a room where there is a radio receiving set. The set should be tuned in a little before 4:15 as the broadcast must begin exactly 4:15.

One extension hour credit will be given to extension students who satisfactorily complete the work of the broadcast course as outlined below. An additional semester one hour credit will be given to extension students who carry out a project utilizing broadcasting in teaching their own pupils. Section C and D of this outline are intended to give the basic information needed in carrying out a classroom radio project. Teachers enrolled for two hours credit will be expected to spend about as much time experimenting with a broadcast series in connection with their own work as they do in studying the broadcast course.

The Final Report-

In case the results were significant, the final report would be published by the Office of Education. The following are some of the items that would be included in the report.

1. Statement of the specific problem investigated.

2. Summary of the investigation.

- 3. Techniques described, evaluated, or validated; and possible further uses suggested.
- 4. Findings stated and possible applications suggested.
- 5. All data given which are needed to validate findings.
- Statement made of data collected which are not reported but might be useful in further studies.
- Significant assumptions stated and either validated, or their plausibility shown, or they are given as problems which must be studied before the findings can be accepted.
- 8. Statement of the outstanding problems which are suggested by the study or should follow upon this study.

This is the only course for credit that the Fairmont State Teachers College has attempted to present over the air. The usual difficulty of these experiments has been that too many restrictions are put upon the students who might be interested, and as a result the response is practically nil—at least so far as enrollment figures can tell the story. The radio course did go on the air for a sixteen-week period beginning January 23, 1933. Seventy-eight students were enrolled with seventy (90 per cent) of these receiving credit.

Miss Medora M. Mason, who since 1929 has been responsible for the development of broadcasting on the

Fairmont campus, reports the following:

At the time that we broadcast this extension course for college credit, the public was much interested in the experiment. At that time radio was still new here, and we were doing something entirely unusual. All of us were inexperienced so far as broadcasting was concerned. It was difficult for all teachers to get to a radio set at the scheduled hour, and there were difficulties in getting those enrolled to complete

their examinations and to send in their papers. There also was a little difficulty in getting faculty members to keep up

to date with the necessary material as scheduled.

The experiment was not repeated because the State Department of Education was not sold on the idea at that time, nor was the United States Office of Education, on the quality and worth of this type of education by radio. So far as this particular angle is concerned, such a course could be repeated with ease at this time. Extension work, however, was discontinued in West Virginia in 1933. The result is that such a course cannot now be used for standard credit.

Personally, however, I feel that our 1933 "Orientation" radio course was an entirely worth while experiment. It gave us wide publicity, made our faculty as well as teachers in the field better acquainted with the radio and its possibilities, and gave us a foundation on Station WMMN (Fairmont) on which throughout these years there has been built what we consider a very fine structure of cooperative broadcasting. Mr. O. J. Kelchinor, Director of WMMN, during the past four years has given us the utmost cooperation in all our broadcasting work, and this also may be said of the other officials of this station prior to Mr. Kelchinor's administration.

Oregon State System of Higher Education, 1935—1940

Oregon State Agricultural College (now officially known as Oregon State College) received its initial license to broadcast on December 7, 1922, with KFJD as call letters which on July 19, 1936, were changed to KOAC. As a state-owned station located on the Corvallis campus, KOAC today is operated by the General Extension Division of the Oregon State System of Higher Education as the radio outlet for Oregon State College, University of Oregon, University of Oregon Medical School, and the three Oregon Colleges of Education. Various state departments, public agencies, and

individuals also contribute frequently to the thirteen-

hour daily-except-Sunday schedule of broadcasts.

The four home-study courses broadcast from KOAC during the months of September, October, November, and December, 1926, marked the first attempt on the Pacific Coast to utilize radio as a means of carrying on systematic instruction by an institution of higher education. In effect, these were practical short courses taken at home, without laboratory facilities and with no examination. Enrollments were as follows: (1) Poultry, 46; (2) Seed Production, 20; (3) Basketball, 5; and (4) National Government, 9. The mimeographed material had stated that, "At the end of the course a list of final examination questions will be sent to enrolled students. Those who pass this examination will be granted a certificate indicating satisfactory completion of the work." This feature was never carried out. Enrollment, with study aids, was free to residents of Oregon.

Since this beginning in 1926, these non-credit radio courses have continued in agricultural subjects, art and homecrafts, business law, German, home economics, household textiles, international relations, journalism, personality development, poultry, rural electrification, soil improvement, Spanish, and others. The major emphasis has been upon creating a service for farmers and homemakers. Until 1935, however, no real effort was made to offer "credit" courses over the air. Those given had been attempted primarily as a service to

listeners.

A coordination of radio broadcasts and correspondence-study courses was announced by KOAC in the fall of 1935. "The ABC's of a Homey Home" was the series title of sixteen broadcasts which correlated with the correspondence course of the Extension Service (CT C331) on "House Furnishings." The radio lectures, keyed to the topics assigned in the study course, were presented weekly on Tuesday evening at 8:45 p.m.

by various members of the Art Department of the University of Oregon. It was hoped that students enrolled for this work would listen in and thereby gain additional insight and inspiration in the course. It also was hoped that groups of women would form study clubs, using the correspondence course outline for guidance, and then hold meetings for discussions and exhibits immediately following the radio broadcast. These lectures continued over the air from October 1, 1935, to January 28, 1936.

Enrollment in these four correspondence-study courses has been made through the General Extension Division of the Oregon State System of Higher Education, Eugene. The "House Furnishing" course, which the radio lectures supplemented, carried college credit for three term hours, and a fee of \$7.00 was charged for it. Actually the coordination in this initial experiment did not prove itself to be very real. Only three persons enrolled, and none completed the course.

Two other radio series, correlating with correspondence courses for credit, were offered in this same fall of 1935 and the spring term that followed by Alexander Hull, KOAC Director of Public School Programs and Assistant Professor of Radio Education. These series called, "We Write a Story," were intended to supplement the courses in "Short Story Writing (English C213 and C214). Again, this coordination was not very real. A total of twelve persons was enrolled for both courses—eleven in the first and but one in the second—with but four (or 33.3 per cent) receiving academic credit as a result of the radio instruction. These talks on the techniques of writing were given at 8:15 p.m. on Wednesdays. It was reported that writers and literary laymen listened, and that groups of college students, writers' organizations, and numerous others followed the programs. However, as a means of earning academic credit, the statistics of but twelve enrollments and four individuals receiving credit would indicate that the effort was far from a success.

The fourth and final (to date) effort to coordinate radio broadcasts and correspondence study courses for academic credit occurred in the fall of 1940. A series of thirteen programs called, "Have You Some News for the Paper?" was intended to give instruction to press chairman of groups, clubs, and various other organizations. It was presented by George Turnbull, Professor of Journalism at the University of Oregon. Discussions were on the air from 8:45 to 9:00 p.m. Mondays. This series followed closely the correspondence course, JC 1 X, "Newswriting for Publicity Chairmen." The announced cost of the course was \$5.00, but no enrollments were received. Broadcast weekly beginning October 7, 1940, it ended on December 23 of that same year.

Broadcasts of actual classroom work have been given over KOAC from time to time since 1932. In each instance, the enrolled students working for college credit have met in the KOAC Studios in the Physics Building on the Oregon State College campus. The fifty-minute lectures and discussions were broadcast regularly throughout each course; quiz and examination periods only were not on the air. The record of these offerings to date shows the following:

1932 March, April, May (each Tuesday)—"General Sociology"—Soc. 211. Dr. Elon H. Moore, Professor of Sociology, Oregon State College.

1934 January, February, March (M-W-F)—"Tennyson"
—Eng. 261. Dr. M. Ellwood Smith, Dean of the

Lower Division, Oregon State College.

1936 July (M-T-W-T-F)—"The Family"—Soc. 312. Dr. R. H. Dann, Associate Professor of Sociology, Oregon State College.

1937 July (M-T-W-T-F)—"International Relations"— P. S. 417. Dr. F. A. Magruder, Professor of Political Science, Oregon State College. 1938 June, July (M-T-W-T-F)—"General Sociology"— Soc. 212. Dr. R. H. Dann, Associate Professor of Sociology, Oregon State College.

1938 July (each Thursday)—"Adolescent Psychology"— Ed. 420. Dr. R. H. Laslett, Professor of Educational

Psychology, Oregon State College.

1941 June, July (M-T-W-T-F)—"Contemporary American Novel"—Eng. 271. Dr. Ralph Colby, Associate Professor of English, Oregon State College.

Mrs. Zelta Rodenwold, Director of Women's Programs, KOAC, contributes the following information about these classroom courses:

The one now on the air at 11 o'clock daily (except Saturday and Sunday)—the "Contemporary American Novel"—has thirty radio listeners enrolled after three meetings of the class. The studio class itself includes twenty members enrolled for credit. Also this literature course is one offered by correspondence. We are mentioning that fact on the air, and it may be that there are or will be enrollees for credit by correspondence. However, such enrollments are made through the General Extension Division office in Eugene and I have not been informed of this yet.

University of Hawaii, 1935—1940

University of Hawaii broadcast its first program in 1922, a few weeks after radio stations were in operation on the Islands. The May 26, 1922, Honolulu Star Bulletin appounced:

Professor Crawford, head of the Extension Service, will appear on the first broadcasting program with a complete announcement of . . . a University Extension course, free of charge. . . . It is the first time that any newspaper in the United States has attempted such a complete and thorough

undertaking of an educational character. As the demand for talks on special subjects accumulate, the University will be asked to cover them.

This pioneer 1922 broadcasting effort was not an extension course in the sense that University credit was granted for organized listening and examination. The word, "extension," undoubtedly was used to describe a series of lectures because radio was new at that time and it was the Extension Service that at first was held responsible for the programs that went on the air. From 1922 on the University broadcasting developed at an uneven pace primarily as an activity of the Extension Service and later of the Agricultural Extension Service.

It was in the 1935-36 academic year that there was first offered an extension course, Political Science 171, "Problems of Democracy," given by Dr. William H. George, Dean of the College of Arts and Sciences (retired, August, 1939). This course was announced in an undated mimeographed bulletin as including:

- (1) 18 thirty-minute broadcasts, Wednesdays, 8:00 to 8:30 p.m.
- (2) Mimeographed outlines of lectures sent to students in advance of each lecture.
 - (3) preparation of weekly papers by enrolled students.
- (4) four different texts and references, copies of which were loaned free of charge to discussion groups and individuals.
- (5) a supervised examination, held at some central point on each island.

This initial radio-extension course offered two University credits, with sixty-two students being enrolled for credit and thirty-one without credit. Fifty-two completed the course and received credit. Of these students, 25 per cent lived in Honolulu and about 75 per cent on the outside islands. Certain administrative

problems were encountered. The first broadcast from the campus on October 2, 1935, by remote control was unsatisfactory, so the following programs were made direct from the studio. KGU (Honolulu) changed the day and the hour of the broadcast from Wednesday at 8:00 p.m. to Thursdays at 8:30 p.m., due to the fact that the station was compelled to take on a commercially sponsored national broadcast that came in at the same time the educational offering was originally scheduled. The students were very much dissatisfied, and most of the discussion groups disbanded because of this change. However, none of the credit students dropped from the course which continued through seventeen lectures, ending February 6, 1936.

As a matter of record, the mimeographed pamphlet describing this initial radio course for credit is presented

below:

UNIVERSITY OF HAWAII ADULT EDUCATION DIVISION

Information Concerning Radio Course—Political Science 171—Problems of Democracy

An experiment in adult education—tried by several mainland universities but new at the University of Hawaii will begin this fall when Dr. Wm. H. George broadcasts his course in PROBLEMS OF DEMOCRACY. This course, which carries two university credits, will combine radio lectures, discussions by visiting groups, collateral reading, and assigned written lessons based on the lectures and reading. A supervised examination will be included for those enrolled for credit.

Who May Take the Course

For University Credit—Graduates of high schools who already have passed the college aptitude test; those who make arrangements to take it and are able to pass it; graduates of the former Territorial Normal School; students who have been enrolled in regular university courses, in summer session or extension courses for credit; those who have transferred from other universities; mature persons who by experience or

training are qualified to do university work. (A full statement of such experience or training must be furnished the Director of Adult Education before persons are admitted as credit students.)

Listeners Without Credit—Those who do not wish to enroll formally in the course but merely wish to use the study outlines as a guide in following the lectures may secure these outlines upon payment of \$1.50.

How to Enroll

Answer all the questions on the Registration Blank. Return this Blank immediately with tuition fee of \$10.00 to the Adult Education Division. Checks, money orders or bank drafts should be made payable to the University of Hawaii.

The Lessons

As soon as we have received your Registration Blank and fee, the first lesson outlines will be sent you. This should be used as a guide in following Dr. George's opening lecture. If three or more persons in your school or neighborhood are enrolled, we would advise that a listening and discussion group be formed: (1) to listen to the lecture as a group, taking such supplementary notes as you think necessary; (2) to discuss after the broadcast points raised in the lecture and the questions suggested at the end of the study outline. Each person in the class may take a turn as discussion leader, or you may elect from among your number a discussion leader who will serve continuously throughout the course.

If you are the only person in your school or neighborhood enrolled in the course and no discussion group is available, you must of course think these questions over by yourself or discuss them with friends who may be interested.

Whether you are a member of a discussion group or not, you are expected to write out the answers to the questions at the end of each lesson and send these into the Adult Education Division no later than two or three days after each broadcast. Each student is expected to do individual work on these assignments, i.e., write out his own individual opinions on these questions, regardless of the opinions expressed in the discussion meetings. We shall depend upon each student to practice the honor system in the preparation of his papers.

As soon as your paper is received here it will be turned over to Doctor George who will read it and make such comments as are necessary. Then the paper will be returned to you.

This procedure will be followed with each weekly lesson. At the end of the semester, a supervised examination will be held on each island at a convenient center. The weekly papers, examination, and reports on collateral reading will all be considered in determining the student's grade in the course.

Collateral Reading

The following books will be used as texts in the course: PERSONALITY IN POLITICS, by Wm. B. Munro THE INVISIBLE GOVERNMENT, by Wm. B.

Munro

DEMOCRACY, by Edward M. Sait

GOVERNMENT IN A PLANNED DEMOC-

RACY, by Arthur N. Holcombe.

Several copies of each one of these books will be placed on reserve in the main libraries on each island. Where the enrollment is sufficiently large, extra copies will be ordered or if a listening group wishes to order its own set of books to be used by the members, it may do so at small cost. The books on reserve will be issued to persons taking the work for credit. If there is a sufficient demand for the books from non-credit students, the librarian will order extra copies for the general reading public.

Each student will be expected to write an analytical review of each book, evaluating its contents and appraising its particular contribution to the course. Since there are four books to be read in the semester, students should endeavor to send in a report of one book every four weeks. Further particulars as to the formation of listening groups, lesson assignments and readings will be given by Dr. George in his introductory lecture.

A survey was made in 1937 of the interest of teachers in taking extension courses by radio. Subjects which received the highest number of votes were music appreciation, speech, education, and political science. KGMB (Honolulu) was very cooperative in helping to broad-

cast the second radio extension course, patterned after the first credit course offered in 1935. The station gave its time without charge, assuring the University authorities that this time would not be changed. An excerpt from the mimeographed bulletin sent to all schools gives the occasion for offering the course at this particular time. It read:

In view of the nation-wide celebration of the 150th anniversary of the formation and adoption of the Constitution beginning this September and lasting until April, 1939, the University thought that no more timely subject could be chosen for territory-wide participation in this event than the broadcasting of a series of lectures on "The Constitutional History of the United States."

Although offered as a credit extension course for university students both on and off the campus, the lectures are designed to appeal to a far wider audience and perhaps to add something to the citizen's knowledge of the workings of our

National Government.

It is believed that a great many persons outside the teaching profession followed these lectures as "listeners," among them many high school students to whom it was hoped to give a better understanding and appreciation of the Constitution. Beginning October 4, 1937, fifteen broadcasts were made on Mondays from 3:30 to 4:00 p.m., with Dr. Charles H. Hunter as instructor. There were thirty-six students enrolled for credit; thirty-three of these completed the requirements successfully; and many more are said to have reported that they were listening in without seeking official credit. These enrollees for credit were largely students on the outside islands who were working for their bachelor's degree.

A third credit extension course, "Discovering Music," conducted by Verne Waldo Thompson, Director of the Punahou Music School and for several years an instructor in the Adult Education Division of the

University, was given over KGU from September 27, 1939, to June 5, 1940. Its administrative set-up included weekly broadcasts, weekly papers sent in by those enrolled for credit, and the reading of several texts and reference books on music. Designed primarily for teachers on the outside islands, it was developed with the idea in mind or bringing pleasure to the musicloving public and of furthering interest in the study of great masterpieces. This music appreciation course offered two credits each semester. Twenty-one broadcasts the first semester included several over the Christmas holidays when no written lessons were required. The second semester had only sixteen broadcasts. the thirty-four students enrolled the first half-year, all received credit for the course; of the twenty-four enrolled the second semester, twenty-three received credit. A ten-dollar fee was charged for the two credits.

This course was announced to the public and to the

schools as follows:

"The Territory is Our Campus"

UNIVERSITY OF HAWAII ADULT EDUCATION DIVISION

September 21, 1939

To the Principal:

Two years ago when a territory-wide poll of island teachers was taken on the subject of extension courses desired by radio, the greatest number of votes cast was for a course in MUSIC APPRECIATION. The present course was organized and is now offered to meet the needs and interests indicated in that survey.

We hope the course will appeal not only to teachers desiring to earn university credit, but to the general listener, and to teachers who are anxious to promote an appreciation of good music among children. Wherever there is a home with a radio and children old enough to stay up through the time of the broadcast, there should be encouraged the effort to listen to these very fine broadcasts. The syllabus and other material in the texts and reference books could easily be

simplified and converted into a junior music appreciation course by the alert and interested teacher.

This course, when offered on the university campus as an evening course for adults, has drawn one of the largest registrations each year it has been given. We hope that the same response will be forthcoming when it is offered to the residents on outside islands. No course could be more ideally suited to appeal to both the general listener or "auditor" and the credit student.

We wish to do everything we can at this end to make the course practical and enjoyable. The greatest handicaps will probably be occasional poor reception and the lack of reference material in school libraries. To offset the first, we are willing to supply summaries of talks whenever students notify us that broadcasts have not been heard. It is possible also that a rebroadcast could be arranged in such case at a time to be announced at the succeeding lesson. To overcome the second, we are asking the cooperation of schools and public libraries in purchasing one or more copies of the reference books suggested.

We are enclosing the first lesson of the course. It will give an idea of how the course is to be conducted. We would appreciate your reading this letter to your faculty and calling their attention to this first lesson. Registrations will be accepted up to October 10th.¹⁴

This third and final (to date) "credit" course, "Discovering Music," was divided into two parts so that there were two enrollment periods. Including these two enrollment periods separately, that is, a total of fifty-eight enrollments and fifty-seven receiving credit, the three radio "credit" courses have had a grand total of 156 enrollments, of which 142 (or 91.0 per cent) received credit for successful completion of the work. There were seventy broadcasting periods included in the three radio offerings. It should also be noted that a considerable number purchased study guides without seeking credit for work accomplished.

¹⁴ Mimeographed. Signed by Etta R. Washburn, Associate Director.

R. Ray Scott, Director, Adult Education Division of the University of Hawaii, contributes the following information about these "credit" courses:

Regarding the University policy relative to the granting of academic credit for radio courses, these were considered as regular extension courses (thirty-two extension credits can be counted towards the B.A. degree). The administrative setup for these radio courses was our regular office staff—director, associate director, secretary. Lessons were sent out from our office, returned to this office, then given to the professor for grading, etc.

University of Akron, 1939

Instruction in radio was first offered at the University of Akron (Ohio) in the fall semester of 1930. The initial course was under the direction of Professor Donald Hayworth. Since that time this course was offered each semester of the academic year by Professor Havworth until the fall of 1937 when it was taken over by Dr. O. A. Hitchcock. The latter has continued the development of broadcasting activities over the three local stations (WJW, WADC, and WAKR)—most of which has been of general publicity character and presented by students. In February, 1938, for the second semester, a new course was instituted in the Community College where the instruction does not carry University credit. This course was called "Radio Broadcasting," and was taught by Bob Wilson, Production Manager, at the Columbia Broadcasting System station, WADC.

On September 26, 1939, the University of Akron offered a credit course of sixteen broadcasts on Tuesdays and Thursdays at 2:30 p.m. under title of "Contemporary American and British Poetry" as conducted by Dr. Harlan W. Hamilton. The printed undated

announcement of the Division of Adult Education stated, in part, as follows:

College credit will be granted to students who register formally at the beginning of the series and who complete the requirements of the course. A detailed syllabus will be mailed to students who register for credit.

The broadcasts will be heard on a wave length of 1320

kilocycles.

A special feature of the series will be the use of electrical transcriptions of certain modern poems as read by the poets themselves. In following these recordings, listeners will find it advantageous to have their own copies of the poems read. A mimeographed copy of these poems will be mailed free on request. Write or telephone (BLackstone 4126) the Division of Adult Education, University of Akron, Akron, Ohio.

The mimeographed outline for the study of "Contemporary American and British Poetry" enlarged upon this initial announcement, in part, as follows:

For the assistance of students who wish to obtain credit in this course during the fall semester, 1939, a series of radio broadcasts is being given over station WADC. These broadcasts are intended only to serve as a rather general guide to the reading assigned in this syllabus. College credit will be granted on the basis of two rather extensive written assignments (which may be submitted in four parts if the student prefers) and on the basis of the knowledge of the subject which students reveal on final examinations.

Textbooks. All the necessary materials of the course will be found in two books:

Anderson and Walton, This Generation (Scott, Foresman, \$3).

Sanders and Nelson, Chief Modern Poets of England and America (Macmillan, \$2.50).

Of these two books, the first is indispensable. It contains readings which are difficult to find elsewhere, and its critical comment is excellent. This is the basic text, required of all students, and recommended to others who are interested merely in following the broadcasts. Since This Generation is concerned only with those writers who are most active at the present moment, it must be supplemented with readings from the poets of the more recent past, poets such as Hardy, Robinson, Bridges, and others whose influence is strongly felt by contemporary writers. Also there are two important poets who are not represented in the volume because of copyright difficulties. These are Yeats and T. S. Eliot. All of these writers are substantially represented in the volume edited by Sanders and Nelson. Although students who have access to a good library may find it possible to avoid the expense of a second book, it will be much more convenient to own both of these texts. They may both be obtained from the University of Akron Bookstore.

Assigned Readings: (This list is omitted.)

Other prose selections in *This Generation* will be interesting and valuable as optional reading. The examination will not, of course, cover readings listed in this syllabus as optional, but a knowledge of some of these outside materials will undoubtedly help the student obtain a better understanding of the poetry and the period.

Written Assignments.

Twice during the term each student will be required to submit a written assignment. These will be due as follows:

November 4. Comments on Modern American Poets.

December 9. Comments on Modern British Poets.

These are not to be considered as formal papers, but should consist of notes and observations concerning the most important of the poets studied. Any questions vou have concerning points in the poetry read may be included in these papers. If you wish, you may submit the first half of each of these papers in advance of the second half. This will enable you to get additional suggestions from the instructor.

Conferences. If you wish to arrange a personal conference with the instructor, you may do so by letter or telephone call. During the day he may usually be reached at the University, telephone BLackstone 4124. If you wish, you may call him at his home, University 3355.

Final Examination. The final examination will be given December 15 or 16—the exact date and hour to be arranged by correspondence with the students. The examination will test the student's knowledge of the assigned readings. He

should have a fairly clear idea of the nature of each poet's contribution to modern literature, and should know the chief influences which have been felt by modern writers. Above all, he should be able to give evidence of having read the assigned poems with understanding.

Notes Concerning the Use of Recordings in the Broadcasts.

The University of Akron library has acquired this fall an interesting collection of recordings made by various modern poets of their own works. It was originally planned to use a great many of these in the broadcasts. Accordingly, the University offered in its preliminary announcement of the series, to mail a mimeographed text of the recorded poems which were to be heard in the broadcasts.

Because of copyright difficulties, and because of a new policy which the radio stations have adopted in the use of records, our original plan has been considerably modified. Of the transcriptions which we will be permitted to use, only Carl Sandburg's singing of a mountain ballad, "I'm Sad and I'm Lonely" will offer any difficulties to the hearer. It is such an unimportant work, so far as the exact text is concerned, that it is not deemed necessary to furnish a copy of the poem. It may be found, if anyone wishes the text, in Sandburg's *The American Songbag*.

On October 24, a recording by T. S. Eliot of "Gerontion" will be used. Athough Mr. Eliot reads the lines very clearly, the poem itself is so puzzling that it may be well to study it in advance. Students will find this poem printed in the Sanders and Nelson volume, page 643.

If there is any general desire to hear more of these records, the instructor will gladly arrange an evening at the University when all of them may be played. If you would like to attend such a program, please communicate with the instructor.

Dr. Harlan W. Hamilton, Associate Professor of English and the broadcaster of the only credit course that the University of Akron has offered to date, offers the following analysis of this broadcasting experiment:

Inasmuch as only sixteen broadcasts were scheduled for this course, each fifteen minutes in length, the amount of lecture time was equivalent to only two weeks' lectures in a campus course—approximately one-eighth of the normal classroom work for a two-hour course. The course, therefore, was conducted essentially as independent study. A detailed syllabus outlined readings and papers, and a term paper and final examination tested the students' work. Personal conferences were available but not required.

Although a few students were reached by this course who otherwise could not have carried on any college study, and although the number of such students could probably be increased considerably, there seems to me to be a fundamental weakness in the plan. If the broadcasts are to maintain a scholarly level suitable to a college course, they are unlikely to appeal to a wide listening public and will, therefore, be a liability to the station as a sustaining program. If, on the other hand, the broadcasts are directed toward a wide listening public, they are unlikely to be of great assistance to serious students. I suspect that even university-owned radio stations would be loath to sponsor too many programs of limited popular appeal.

I think the educational broadcast is most likely to be useful as auxiliary to classroom work; I doubt that it can be used

extensively in place of classroom work.

The records of the University of Akron show that fifteen persons followed this course in "Contemporary American and British Poetry," asked for the readings, and intimated that they would take the work for credit. However, only five took the special examination and received University credit. The course was given publicity in the regular Evening Session Semester Bulletin. The announcement card describing the course was sent to about five hundred people whom the University authorities thought might be interested.

Thoughts Concerning the Failure of Radio Extension "Credit" Courses to Function

Thus have been recorded the efforts to broadcast "credit" courses from 1923 to date, as well as a few

approaches to this problem in which academic credit has not actually been awarded for the work accomplished. A few thoughts are pertinent to the why's and wherefore's of both successes and failures of this theory that the radio is a proper medium for the broadcasting of formal instructional courses in which academic credit leading to degrees or teaching certificates may be acquired by the meeting of certain scholastic standards as

well as by the listening to the radio programs.

In the present infancy of broadcasting that has covered slightly more than two decades of American life, it is only to be expected that educators would try to fit radio somewhat exactly into the traditional pedagogical channels that have been hallowed by three centuries of hit-and-miss development of a young Democracy recklessly feeling its oats in an overabundance of natural resources. Whensoever this fit has proved itself to be imperfect, it is radio that has received the blame. Any suggestions that the present American teaching ideals and methodology themselves possibly might be far from perfect, and therefore could stand a more-or-less complete revolutionary reorganization, would prove to be almost unanimously unpopular among the rank and file of modern pedagogs. Only an un-American radical or communist would dare express such seditionary thoughts, and if he did, the charges perhaps would fly high and wide that he was being financed by the blood money of Red Russia. Such is the strength of tradition!

Radio unquestionably has raised the "knowledge quotient" of the great masses of American population through its newscasts, highly paid commentators, "Information Please," "Quiz Kids," and countless other fact-giving services although, admittedly, most of these are strongly saturated by the profit motive which in itself seems to be a peculiarly American institution. The educator, for the most part, has failed to see radio's real educational possibilities—apparently along the

principle that "none is so blind as he who will not see." The logic unfortunately follows, therefore, that if radio is to be used as an educational tool, it must conform to what has become (by virtue of tradition) the accepted ways of teaching. If it doesn't conform, then by all means it must be eliminated from future serious consideration.

In the smug, timid conservatism of the American educational leaders any possible "fifth-column" thoughts inferring that perhaps the traditional teaching methods aren't efficiently meeting the real needs of modern-day students of necessity must be doomed to abortive deaths. Today's educational leaders are the "leaders" because they know how to hew reasonably close to the accustomed ways of doing things. general public, which hires these men, usually is incapable of discerning between the "crackpot" radicals who are against everything in general principle and the genuinely capable reformers who have been nauseated by the present expensive and inefficient mess called "education," which the majority of American citizens have been hoodwinked into blindly considering as a panacea for all evils; or, as they might put it into nicer sounding language—the "cornerstone of a functional democratic way of living." Radio today is proving itself to be a successful educator of the masses, yet the modern American pedagog tightly closes his eyes to the glaring success of this microphone technique.

This present volume has attempted to trace the history of a theory that so far has failed to prove itself very successful, namely, the broadcasting of university and college courses for credit. It is a beautiful thought that radio, reaching as it does a large number of people, should be utilized to spread the cultural advantages of institutions of higher learning. It sounds theoretically plausible that broadcasting is a legitimate medium for the earning by ambitious individuals of credits that eventually may lead to academic degrees. Since these

extension or correspondence courses are income producers inasmuch as students pay fees for the instructional services, it is logical to assume that radio should be able to open up almost limitless areas for the spread of academic cultural advantages.

If all students were zealously eager for knowledge for its own sake, if the social contacts of a formal education did not so frequently outweigh the values of subject-matter training in the minds of modern youth, and if the present American educational set-up were not so overcrowded with useless decayed mental verbiage, then it might be possible to present formal educational courses over the air that would interest large masses of both credit-seeking students and culture-desiring citizens. The rising generations in high schools and colleges, however, seem to be degree-conscious rather than learning- or self-improvement conscious. Formal education in an alarming number of cases is merely a means to an end—the grades received being far more important than the actual amount of personal values involved.

The fact that so many college professors are dry and uninteresting make them poor radio personalities. Perhaps it is a cardinal sin to express such a thought, but if all members of the instructional staff consciously tried to make themselves more dynamic as teachers and developers of the thought process, formal education could be put over the air in plain earsound of everyone. "Credit" courses, tied up with the publicized possibilities that any normal individual (who is willing to work hard enough for it) can earn a college degree, could be made highly successful educational adventures. So long as our average faculty member continues to hide behind his sacred dignity rather than tackle the more strenuous task of inspiring students to conquer new intellectual fields, just that length of time will "credit" courses fail to attract radio listeners in large numbers.

At least it is conceivable that eventually the right combination of showmanship and instruction, consistent with the scholastic standards of reputable institutions of higher education, may be worked out so that radio will be recognized as an important medium for the extension of instruction that carries as its reward the possibility of earning academic credit at the same time that the listening individuals are enjoying themselves because they are learning from someone who is dynamic enough to inspire them to live better and fuller lives.



INDEX—SUBJECTS

Advance publicity, 22, 24, 30 Advertising, 21, 90 Agriculture, 22, 26, 28, 69, 103, 104 Arts and crafts, 26, 28, 43, 49, 104

Basketball coaching, 69, 103 Bible, 43, 60, 89, 92 Book reviews, 34, 35, 49, 95, 98 Business administration, 28, 43, 49, 78, 89, 104

Certificates, 20, 22, 23, 31, 33, 51 Chemistry, 69 Civil Works Administration, 26, 38 Classroom lectures, 37, 63, 66 Columbia Broadcasting System, 13, 58-9, 74, 115 Constitution, 64, 112 Copyright difficulties, 118 Correspondence courses, 14, 15, 17, 19, 38, 40, 47, 62, 63, 68-9, 70, 94, 104, 107 Credit, academic, 12, 15, 16, 17, 20, 28-9, 30-1, 35, 36, 39, 41, 42, **47-8**, **49**, **57**, **81**, **109-10**, **116**

Danish People's High Schools, 32 Diplomas, 31, 33

Earphone, 13, 20, 47
Economics, 49, 64-5, 78, 89
Education, 28, 43, 70-3, 78, 83, 95, 96-7, 98-9, 111
Electrical engineering, department, 23-4, 37, 68
Engineering, 22, 28, 69
English, 28, 43, 45, 49, 54-5, 60-1, 64-5, 95, 98
Enrollments, 22, 26-8, 34-5, 42, 47-8, 49, 50, 51, 53, 62-3, 64-5, 69, 70, 78, 80, 82, 90, 91, 104, 108

Ethics, 65 Evaluation of credit courses, 24, 28-9, 33-4 Examinations, 12, 15, 17, 21, 24, 25, 31, 33, 66, 74, 86-7, 97, 103, 104, 108, 117-8

Extension division, 16, 17, 18, 36, 82, 87, 93-4, 96, 100, 103, 108

Faculty investigation committee, 29 Faculty supervision of radio pro-

grams, 25, 32-3, 55 Federal Emergency Relief Administration, 25, 26

Fees for courses, 17, 18, 25, 31-2, 47, 50, 51, 57, 62, 80, 84, 86, 88, 97, 98, 101, 104, 110 French, 28, 39, 43, 49, 60-1, 67, 89 Freshman colleges, 38

German, 36, 39, 43, 60-1, 67, 88, 93, 104 Government financial aid, 25-6 Graduation via radio, 44, 62

History, 34, 35, 43, 64-5, 78, 84 Home economics, 26, 28, 43, 49, 104

Journalism, 43, 49, 64-5, 89, 104, 106

Literature, 26, 43, 48, 49, 64, 88-9, 92, 106, 115

Mathematics, 69 Mental hygiene, 49, 88 Mimeographed aids, 14, 15, 21, 104, 108, 116 Music, 21, 26, 28, 41, 43, 49, 69, 84, 88, 92, 111, 113-4

National Broadcasting Company, 13, 74

Nature study, 35, 64-5

Objective tests, 17
Ohio Emergency Junior Radio
College, 24-5, 26-8
Ohio Emergency School Program,
25
Ohio State University Radio
School, 24
Orientation, 28, 100-2

Personal development, 26, 104 Philosophy, 28, 89 Physics department, 29 Political science, 28, 43, 64, 78, 103, 109-11 Proficiency credit, 24 Psychology, 19, 28, 43, 49, 64-5, 68-9, 78, 84, 89, 107

Questionnaire, 18

Radio, 43, 49, 52-3 Recordings, 29, 38, 39, 41, 116, 118 Religion, 35, 89 Relief from other work to broadcast, 25 Review questions, 15 Rural teachers, 18, 19, 45

St. Olaf School of the Air, 30-5 Short story instruction, 49, 78, 89, 105 Social studies, 26, 28, 34, 35, 64-5, 92 Sociology, 28, 43, 64-5, 69, 89, 92, 106, 107
Spanish, 28, 39, 43, 60-1, 67, 68-9, 83, 84, 89, 104
Speech, 22, 28, 78, 84, 111
Subsidy for credit courses, 45, 94, 95, 99
Supplementary materials, 23, 24, 25, 50, 70
Syllabus, 14, 31, 34, 63, 116

Teaching credentials, credit towards, 77, 80, 81 Telegraphy, 23 Thesis writing, 89

U. S. Office of Education, 25, 102, 103

Verbatim copies of broadcasts, 21, 63 Visual aids, 15

Wisconsin College of the Air, 12 Works Progress Administration, 25, 26, 38 WPA Correspondence Study Department, 38 World Wide Broadcasting Foundation, 52 Written exercises, 51, 63, 71-2, 81, 108, 110, 117

INDEX-NAMES

Abbot, Waldo, 7, 38 Abbott, G. A., 41 Alexis, J. E. A., 60-1 Aurner, Nellie, 65

Baxter, Bruce, 76 Belcher, C. D., 53 Breitwieser, J. V., 7 Burkhard, O. G., 36 Burrows, Mark, 7, 92-3

Carpenter, M. F., 64-5 Castell, Anthony, 37 Chapin, F. S., 37 Christensen, A. N., 37 Colby, Ralph, 107 Conger, G. P., 37 Crane, A. G., 6 Crawford, C. C., 78 Crawford, D. L., 107

Dann, R. H., 106, 107 DeGaetani, F. M., 83 Dickson, V. E., 7, 70-5 Diers, T. C., 7 Dodge, D. W., 92 Dooley, D. A., 48, 50

Engel, Harold, 7, 11

Finn, J. D., 7, 17-8 Frasier, G. W., 7, 19 Frost, S. E., Jr., 8, 14-5, 16, 17, 66-7

Gaertner, H. F., 93
Gaiss, A. J., 39
Gallup, George, 65, 67
Garrity, Helen, 7
George, W. H., 108, 109, 110, 111
Glasoe, Norris, 29
Griswold, D. M., 65
Grumann, P. H., 60

Hamilton, H. W., 7, 118-9 Hayworth, Donald, 115 Hegland, Martin, 7, 32-4 Heilman, J. D., 19 Higgy, R. C., 6, 7, 28-9 Hinshaw, E. H., 6 Hinshaw, Ida, 6 Hitchcock, O. A., 7, 115 Horack, Frank, 64 Horsfall, I. O., 6, 7 Houston, Clifford, 16-7 Huddleston, R. E., 7 Hull, Osman, 78 Hunter, C. H., 112

Ingham, H. G., 7 Ireland, Russell, 7, 40 Irvin, George, 18, 19

Jacobs, Thornwell, 7, 90, 91, 92 Jaspert, G. H., 48

Kelchinor, O. J., 103 Kenyon, H. A., 39 Knight, F. B., 64-5 Knott, T. A., 64

Lancaster, E. G., 83 Larsen, H., 65 Laslett, R. H., 107 Lazelle, F. J., 65 Le Fever, D. W., 78 Lideen, C. S., 62 Lupton, T. J., 85, 87 Lyon, E. R., 21

Magruder, F. A., 106 Mahan, Bruce, 6, 7, 59, 64-5, 67 Mandelbaum, D., 37 Marconi, Guglielmo, 54 Marget, A. W., 37 Marston, G., 78 Mason, Medora, 7, 102-3 McCarty, Harold, 65 McConnell, W. J., 6 McCowen, Annie, 18-9 Meier, N. C., 65 Menzer, Carl, 59 Moore, E. H., 106 Morrison, R. H., 18 Mott, F. L., 64-5, 67 Moyer, J. A., 6, 8, 47, 48, 53-4

Nicholassen, F. G., 93 Norlin, George, 16 Norman, J. W., 83 Nuttall, J. L., Jr., 94, 96, 97

Olson, Emery, 77, 78, 81

Pargment, M. S., 39
Parsons, E. S., 15
Pelzer, L., 65
Petersen, Elmore, 16-7
Petty, Don, 8, 76-7, 81-2
Pfeiler, W. K., 61
Pickard, Sam, 21
Porter, K. H., 64-5
Powell, Garland, 8, 83-5

Reed, A. A., 8
Reeder, Ward, 29
Reuter, E., 64-5
Riley, B. C., 8, 82-3
Roberts, Luke, 8
Rodenwold, Zelta, 8, 107
Routh, James, 92
Rowland, H. C., 8, 41
Ruckmick, C., 64
Rugg, E. U., 19

Scott, John, 65

Scott, R. R., 8, 115
Seaman, Mildred, 8
Shaffer, R. L., 6
Shimek, B., 64-5
Silke, Harry, 8
Skifter, H. R., 29
Skinner, F. B., 37
Sloan, Sam, 66
Smith, M. E., 106
Sparks, H. S., 8, 75
Steefel, L. D., 37
Stevenson, F. G., 8, 38-40
Stoner, Dayton, 64
Stuff, F. A., 58, 60

Taylor, H. A., 40 Telle, E. V., 61 Thompson, V. W., 112 Touton, Frank, 77, 78 Traeusch, C. F., 65

Umberger, H., 8, 23

Vande Bogart, G. H., 6

Wahlquist, J. T., 96 Washburn, Etta, 8, 114 Wassam, Clarence, 65 Watson, A. C., 8, 14, 15 Weersing, W. J., 78 Weseen, M. H., 55-6, 58, 60-1 Williams, Helen, 8, 63, 66 Williams, L. C., 21 Wylie, C. C., 66

Yoder, Dale, 64-5

Ziebarth, E. W., 8, 36-7