EDUCATION BY RADIO
VOLUME 2, NUMBER 11. MARCH 17, 1932

Radio in the Rural Schools

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ONE OF THE DISTINGUISHING FEATURES of American democracy is the excellence of its public-school system. But the reputation has been earned not by the rural, but by the urban schools. While there are a few superior rural schools and a few sadly inferior city schools, the contrast between rural schools and city schools is most marked. In every aspect of education the schools of the urban centers have more nearly kept pace with modern educational thought and industrial progress. The rural schools have lagged behind. Today they are the darkest picture in American education.

There are approximately twelve million children in the United States who depend upon the rural school for their education.

Free schools were established to enable every child to secure the essential elements of an education, so that each might participate as a useful citizen in the nation which educates him. With each decade, the essential elements of that education have increased in importance and in number until now they exceed the three R's by a wide margin. Yet, for the majority of rural-school children conditions have remained stationary. Are we not shortchanging the rural child when we fail to put within his reach the additional elements of modern schooling made necessary by social progress?

Four rural school necessities—There are at least four major needs of the rural schools if their educational offerings are to compare favorably with those of the city schools.

[1] Buildings of modern design, well-heated, lighted, and ventilated; adequate in size to provide for a diversity of activities.

[2] Teachers — better trained and more of them. It is humanly impossible for one person to teach a group of children of all ages and grades without assistance and do a perfect job of it.

[3] Supervision—the surprising thing is that we have had as good teaching in the rural schools as we have had with so little supervision.

[4] Broader curriculum—the regular courses of study are not sufficient to give rural children a training such as will best fit them to continue into adult life.

How many of these needs can be procured? Except for a gradual replacement of the older schools by more modern structures, the country child will have to be patient for many years yet before he is comfortably and sanitarily housed.

WITHIN A GENERATION the radio station of a state will be its most important single educational institution, linking together all other institutions in one mighty service to the people at all hours of the day and week when an audience can be found. Our excellent common schools will be still further strengthened by the wise use of this most economical medium of teaching. Master-teachers at central points in the states and cities will lift the whole level of teaching and free a part of the time of classroom teachers for special service to individual pupils.

It is beyond reason even to dream of the time when more than one teacher shall be provided for a one-room school.

If the rural teachers were today to have the same amount, type, and quality of supervision as their city sisters, it would require a staff of supervisors so large and so expensive as to border upon bankruptcy of rural communities.

Admittedly under existing sources of revenue, there is faint hope of raising the level of the country child's educational opportunities to the level of the city child's if reliance upon old methods and man power is to be made. But the farmer today does not rely upon old methods entirely and upon man power alone as he did in the days of his grandfather. The tractor, the reaper, the auto have replaced the ox team, the scythe, and the stage-coach. *Now is an opportune time to apply the latest of great inventions to rural education.*

Radio school supervisors—*Radio stands ready to assume the gigantic task of carrying expert supervision to every rural school in the nation.*

What a step in advance will be made when other state public-school officials undertake a program of supervision by radio similar to the one now being formulated by State Superintendent E. C. Giffen of South Dakota, who says:

> Our plans are still in the making, but we have taken some very definite steps toward a statewide program of this kind. We expect to work it out thru this department in cooperation with the state university, state agricultural college, and particularly with the four state teacher training institutions. We propose to have a very definite program of supervision for county superintendents and teachers generally thruout the state. We realize that this is a new and big undertaking but that it can be done to great advantage in the interests of special supervision which can be furnished largely from the supervisors of our own department and by special supervisors in the teacher-training institutions.
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> This department expects to take care of the installation of microphones in its own offices and of receivingsets in those of the county superintendents. You probably have heard of our South Dakota Young Citizens League with a local chapter organized in more than ninety of our rural schools. We will depend upon their efforts for the installation of sets in the schools in which they have organized local chapters.[1]

It is not difficult to visualize what a mint of supervisory assistance the rural teacher will have at her command. One day she may hear the state superintendent himself, an opportunity seldom available under present conditions. Another day she may have in her audible presence the best supervisor of reading or of any other subject that a teacher-training institution affords. Another day she may "attend" in her own schoolroom one of the finest inspirational lectures that the state can supply from talent ordinarily reserved for annual conventions.

A practical example—Illustrative of the type of supervisory assistance which can be given rural teachers is the following outline of one talk on teaching and testing reading. It must, of course, be assumed that lectures have preceded this one, building up a knowledge basis in the teachers' minds and providing a continuity easily followed by the average rural teacher. It is even probable that printed literature to supplement the radio super-

[1] From a letter from State Superintendent E. C. Giffen of Pierre, South Dakota, under date of October 22, 1929.

vision will be placed in the hands of teachers, some of it as material to be read before the lectures occur, some of it as follow-up suggestions and outlines after the "radio visit." The whole program of radio supervision presumes a wellorganized, carefully developed schedule. No hit-and-miss supervision of any type is valuable. The supervisor may on this particular occasion be concluding a group of supervisory talks on reading. She says:

Good morning, teachers! Let us continue our discussion of yesterday in which we approached the matter of testing how well and how rapidly your children read. While many standardized tests are available for doing this very thing thoroly, it is really not necessary at this juncture to use them. Each teacher can readily devise her own test if she will observe the following directions. Remember, we are talking about measuring how well and how rapidly pupils read. If you do not get all of what I have to say, send for Circular No. 85.

Observe this procedure:

[1] Choose a selection of about 300 to 400 words which is new to the pupils and is a little easier than the reading this particular group has been doing.

[2] Prepare a list of ten or twelve questions from the reading selection; that is, questions that can be answered by reading the selection. They should not be catch questions—just ordinary ones that you would ask if you desired to find out whether a child got the thought of the selection.

[3] When ready, give the selection to the children to be tested. If in a book, have markers at the right place.

[4] Say something like this to the children: "We are going to see how rapidly and how well you can read the story which I have chosen for you. When I say 'Go,' you may open the book where the marker is and begin reading carefully but rapidly. When I say 'Mark,' I want you to put a ring around the word you were reading when I said 'Mark.' Then go on and finish the story."

[5] After exactly a minute say "Mark," and then tell them to finish reading the story.

[6] When all have finished, ask them to count the number of words from the beginning down to and including the one encircled. They may check each other for accuracy. The number read gives the child his reading rate per minute.

[7] When this is done, have books closed and direct the children to answer the questions which you have made out. These should have been previously mimeographed or put on the blackboard and covered up. The number of correct answers gives the comprehension score.

[8] From experiments, it has been learned that rural children should be able to read the following number of words per minute on the average:

Grade 4—160	Grade 7—250
Grade 5—180	Grade 8—280
Grade 6—220	Grade 9—320

Tomorrow I shall want to meet all of you to discuss *The Causes of Slow Reading.*

No one will question the value such "visits" will have for the rural teacher who heretofore has been compeled to be satisfied with one or two short visits per year from the county superintendent during which no constructive help could be given. The fact that a continuing, organized program of supervision can be instituted in this manner guarantees values not even dreamed of.

> A LARGE NUMBER of the stations with high power and with cleared wavelengths are on what is known as the National Broadcasting chain. I will state I do not think they should be. I have repeatedly spoken on that here. I have said that it is not right for one group to have the cream of the broadcasting facilities. I have said it before and I say it again, that there is no reason why a station, because it is a chain station, should be on a cleared wavelength or should have high power, because the two leading companies which furnish chain programs have networks extending all over this country, and each station feeds the program to its area, and for that reason they do not need high-powered stations.
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> I should think that if each of those groups had one cleared wavelength in three sections of the country it would be ample. I have inveighed against that; I have criticized it. I know the objection of people to getting the same program everywhere they turn the dial.—Representative Ewin L. Davis of Tennessee, *Congressional Record*, February 10, 1932, p3800.

The possibility of expert assistance should not be lost sight of. While, under the old plan of supervision, it is generally true that a supervisor is strong in one phase of his work, he may be weak or uninterested in other equally important phases. But the radio can for one week or a limited time bring to the rural teachers the best there is in reading. This unit may be followed by assistance in geography from the best supervisor of geography the state affords in its educational institutions. Then may come experts in teaching arithmetic, language, and other subjects. The composite result of all this should be a value as great as if one supervisor in person should actually visit the rural teachers at regular and somewhat frequent intervals.

An aid to the rural-school teacher—It is possible that the radio may be of even more assistance to the rural teacher in the classroom. Here again there must be a carefully developed program, keyed to the syllabus which the teacher is expected to follow. While one county or similar political unit may undertake this project, for the sake of uniformity and a wider selection of expert assistance, *the state should be behind the undertaking.*

As in the matter of supervision, the radio can carry to the rural teacher expert assistance in every subject of the curriculum.

The rural pupil needs most to have access to the finer things of living. This is now possible by means of the radio.

An experiment in England—These proposals are not dreams or unrealizable theories. They have been tried out in several places. One of the best planned and most successful experiments with radio as an assistant teacher was carried out in Kent County, England, in 1927-28 under the auspices of the Carnegie United Kingdom Trust. It is significant to our problem that this project was in the elementary schools, some of them small rural, some semi-rural, some in larger towns. Each set of procedures lasted one semester. Various subjects were taught by radio, thru the teacher's guidance. A digest of the opinions of teachers regarding the success of the experiment will surely convince the most skeptical that there is great possibility in radio instruction for rural schools.

The teachers generally agreed that:

The broadcast lessons

[a] Imparted a knowledge of facts.

[b] Stimulated interest in ways which could not be definitely observed.

[c] Created impressions as durable as those produced by their ordinary lessons.

[d] Did not encourage inattention.

[e] Were particularly stimulating to clever children.

[f] Supplied views and information which the teachers themselves could not have supplied.

[g] Gave teachers fresh ideas for lessons.

[h] Interested some of the parents in the work that their children did in school.[2]

What more conclusive argument need be brought forth than the above enumerated benefits of the radio to teachers and pupils? That teachers themselves derived fresh ideas for their teaching bears evidence of its being a supervisory factor not

[2] See *Nature*. 122:301, September 1928.

to be discounted. In other words, the teachers were observers of the teaching of masters and were themselves learning better ways to teach.

California meets success—In the United States, several extensive experiments have been carried to a successful conclusion. In California a program was initiated for the special benefit of the isolated rural schools whose contact with other schools and communities was scant. Music, history, and geography were the subjects stressed in this series of broadcasts. So popular became the broadcasts that other schools provided equipment to join the program until several broadcasting stations were required to supply the demand, and several program committees were necessary to keep abreast of the work required in setting up desirable programs. Those commenting on the experiments say that the "possibilities for this method of teaching are almost unlimited. By the use of radio, the work of a great teacher can be immeasurably extended. Such a system of lessons by radio, together with plans and suggested readings and activities, could bring the most scientific methods into the most remote districts."

The rural-school's radio alcove—The one-room school presents the serious problem of having two voices in action at the same time. In fact, it always presents the problem of the recitation of one group interfering with the study of another. While it is possible to alternate teacher class periods with radio instruction, it would greatly facilitate both recitation and study to make provision for a radio alcove. This can be done at no great cost by erecting a sliding, hinged partition. In order that the teacher may exercise supervision over this portion of the room, part of the partition should be of glass. Ordinary folding doors with glass panels should prove very suitable. They are common equipment in many churches, Sunday school rooms, and other buildings. They may be erected to slide between two rows of seats with a wide aisle and when not in use may be pushed against the wall.

During radio instruction, at a time when the regular teacher is conducting another class, those pupils participating in the activities of the "radio" teacher take seats within the alcove, the teacher tunes in for them, then goes back to her other class, keeping an eye on those within the alcove just as she would if the temporary partition were not there.

All of the before-mentioned activities fit precisely into the rural pupil's daily work. He is already overburdened with study time because of the necessity for very brief recitation periods. He is eager for a diversity of activities. He will revel in the opportunity to broaden his activities in every subject. Subjects will become real and interesting. School will become a place of inspiration.

Possibilities in larger rural schools—If the foregoing discussion points to great things for rural children in the one-room school manned by one teacher, it also suggests as great possibilities in rural schools of two-room, three-room, and consolidated type of organization. In such schools there will be no necessity for the radio alcove since classes may exchange rooms for radio and non-radio instruction. Consolidated schools may go so far as to install more than one receivingset so that two or more different courses may be offered simultaneously.

[1] Supervised study may be undertaken in some degree by the rural teacher when she is assisted by her "radio coworkers." There will be many periods during each week when she can assist her slow pupils during a time when the "radio teacher" is holding the attention of the other groups.

[2] Additional subjects may be insinuated into the already crowded curriculum for boys and girls who have outgrown the group they are in or who have lost interest in general school work. Home economics lectures and agricultural courses over the radio may prove the vitalizing element for uninterested girls and boys, for whom the humdrum routine of rural school classes has made school a bore. Such additional things might turn the current of some rural children's lives to more promising things.

Conclusion—He who has read thoughtfully will surely agree that "when the possibilities of broadcasting as a formal and deliberately organized means of education are considered there can be no doubt that an instrument of incalculable value will be shaped for the service of mankind." The rural pupil, whether in the one-room school or in the consolidated school, need not longer passively accept the outgrown type of schooling to which he has been subjected, but by a relatively small outlay of radio equipment will be able to participate in those additional advantages which have come to his more favored city brothers and sisters.

The rural teacher not only will become a better teacher because of more direct supervision thru radio contact, but can provide for herself an assistant teacher in every unit of her activity.

No longer will lack of contact with the great leaders of the world handicap the teacher and the pupil in the isolated community when this modern invention's possibilities for education are realized. Admiral Byrd will be as wellknown to the rural child seated in a log schoolhouse in the mountains of Tennessee as to the city child sitting in a million-dollar school building.

Features that none but the largest schools can now enjoy are possible for the smallest school thru radio instruction.

The relief from monotony that the radio can bring with its new voices is in itself worth the whole cost of installation. It will energize the whole day's program and make each rural schoolhouse a place of delight rather than a haunt of monotonous classes and dull study periods.

Reprinted from *School Executives Magazine*, Vol. 51, No. 5, Jan. 1932, p210. by courteous permission of the publishers.

EDUCATION BY RADIO is published weekly by the National Committee on Education by Radio at 1201 Sixteenth Street, Northwest, Washington, D. C. The members of this Committee and the national groups with which they are associated are as follows:
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America Is Safe

A MILLION teachers and thirty million youth march steadily forward—a living monument to a nation and a century that has the vision and the courage to put children first. Let the good work go on. Let every child be taught by his parents and led by his teachers to appreciate the glory of the pioneering spirit; to understand the sacrifice and hardship that go with great achievement; to realize that vast new frontiers of social, economic, educational, and spiritual possibility are yet to be explored and conquered; that for the youth of today willing to labor and sacrifice as did his parents of old, there are opportunities such as man has never known before . . .

The unconquerable spirit of the teachers; the boundless energy of youth; the tradition of democratic opportunity, and our heritage of high ideals are panic proof. Upon that foundation let us continue to build for the better day.—Joy Elmer Morgan in the February *Journal of the National Education Association.*