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THE JOPLIN PLAN AND CROSS GRADE GROUPING.

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THIS PAPER ON THE JOPLIN PLAN INCLUDES AN OUTLINE OF HISTORICAL MOVEMENTS LEADING TO THE JOPLIN PLAN AS IT IS KNOWN TODAY, A DESCRIPTION OF THE PLAN AS IT IS USED IN JOPLIN, A SURVEY OF VARIOUS STUDIES WHICH HAVE EMPLOYED THE PLAN, AND A DISCUSSION OF ITS ADVANTAGES AND LIMITATIONS. TYPICALLY, THE JOPLIN PLAN GROUPS MIDDLE-GRADE CHILDREN FOR READING INSTRUCTION ON THE BASIS OF SCORES MADE ON READING ACHIEVEMENT TESTS AND TEACHER OBSERVATIONS, REGARDLESS OF GRADE PLACEMENT. THE GROUPS ARE NOT CONSIDERED HOMOGENEOUS, HOWEVER, AND INDIVIDUAL DIFFERENCES MUST STILL BE RECOGNIZED. SOME ADVANTAGES ARE THAT PUPILS ARE PLACED AT READING LEVELS WHERE SUCCESS IS POSSIBLE, THAT READING INSTRUCTION ACQUIRES NEW IMPORTANCE, THAT TEACHERS APPARENTLY ARE STIMULATED TO BETTER PERFORMANCE, THAT READING ACHIEVEMENT AS MEASURED BY STANDARDIZED TESTS MAY BE INCREASED, AND THAT PARENTS APPROVE WHEN THE PLAN IS CAREFULLY EXPLAINED. SOME LIMITATIONS ARE THAT SOCIAL PRESSURE MAY RESULT WHEN FOURTH- AND SIXTH-GRADE PUPILS ARE IN THE SAME READING CLASS, THAT ACADEMIC INTEGRATION MAY RESULT IF COMMUNICATION BETWEEN THE READING TEACHER AND THE HOMEROOM TEACHER IS INSUFFICIENT, AND THAT THE PLAN MAY BE INEFFECTIVE IF NO PROVISION IS MADE FOR INDIVIDUAL DIFFERENCES WITHIN THE READING GROUP. REFERENCES ARE INCLUDED. THIS PAPER WAS PRESENTED AT THE INTERNATIONAL READING ASSOCIATION CONFERENCE (SEATTLE, MAY 4-6, 1967). (RH)
One of the most complex problems of American education since the establishment of universal public schools has been that of the grouping of pupils for maximum educational benefits. One of the most popular plans that has been advanced for fulfilling this need has been that of intergrade ability grouping of children in the middle grades for reading instruction. This plan, popularly called "The Joplin Plan," has achieved national attention particularly during the past fifteen years at Joplin, Missouri and other cities where the plan has been instituted.

The purpose of this paper is to provide (1) a brief outline of historical movements which led up to the establishment of the plan as it is known today; (2) a complete description of the plan as it is used in Joplin; (3) a survey of various studies which have explored the use of this type of grouping; (4) a discussion of the advantages and possible limitations of the plan; and (5) a summary of the total presentation.

Historical Background

One of the first attempts to solve the problems of the individual needs of pupils was the use of the "Monitoreal System" which had its origin in England where teachers regularly instructed up to 100 pupils with smaller groups taught by tutors. Later, American writers such as McGuffey and others authored clearly defined series of classroom materials designed for and taught on distinct grade levels. During the early part of the nineteenth century, most public elementary schools were organized by levels or grades from one to eight and pupils were grouped in accordance with their ability to meet grade standards. As individual intelligence tests and other instruments were developed in the early 1900's, it became readily apparent on the
part of administrators and teachers that a wide range of mental and academic abilities existed in the typical heterogeneous classroom. Pupils were found to be vastly different in growth rates, intelligence, socio-economic backgrounds, and emotional development. Because of these findings, there was a very distinct impression generated among teachers and administrators that grouping of children for various instructional purposes was vital. School officials began accordingly to formulate different grouping plans.

One of the first school systems to make use of an intergrade grouping plan was the Detroit, Michigan Public Schools in 1928 when different studies were conducted with the use of the vertical grouping plan, an adaptation of the original Detroit XYZ plan (14:279). Under this procedure, pupils from various grade sections with similar intelligence levels were grouped for instructional purposes.

The San Francisco Schools instituted what was known as the "circling" plan in the 1930's. Under the "circling" plan, certain pupils in grades four, five, and six were placed in reading classes on the basis of ability, regardless of their homeroom grade classification. By 1946 the plan had been discontinued in many schools, since there appeared to be some doubt that the plan was more advantageous than other curricular patterns.

The intergrade ability grouping of children for reading instruction was initiated in four elementary schools of Joplin, Missouri in 1954 and since that time all of the public elementary schools in the city have instituted the plan as a part of the instructional program. Various school officials from all sections of the United States have investigated the advantages and limitations of the plan as a result of articles which have appeared in the Saturday Evening Post (16) and the Elementary School Journal (3) (5). Since 1954, a number of research studies have been completed which have been designed to reveal the general effectiveness of the Joplin Plan
in different schools. A review of several of these studies is included in another section of this paper.

Description of the Joplin Plan

Several school systems are in the process of using variations of the plan for grouping for reading instruction as it is used in Joplin. The description which follows applies to the procedures which have been observed by the writer in his visits in various Joplin schools. Additional information has been gained through interviews with Mr. Cecil Floyd, Assistant Superintendent of Schools and the various principals and selected teachers in the school system.

The organization of instructional groups

Near the close of each school year, the principal and teachers of grades 4, 5, and 6 of each elementary school in Joplin conduct one or more conferences at which time the pupil personnel for each of the reading groups which represent reading levels from three through eight for the following September are tentatively arranged. These groupings are based primarily on scores from reading achievement tests which have been administered at the close of the year with particular attention given to the reading level of each pupil as reflected by these tests. Additional consideration is given to each pupil's score on group intelligence tests as well as teacher judgment of general social and emotional factors and the academic status of individual pupils in other content areas. Pupils who are new to the various schools are generally given an informal reading inventory and a reading achievement test. Placement is based on the results of these tests along with the professional judgment of the building principal.

A number of practices are followed in addition to the procedures outlined previously. No fourth grade pupils are placed in seventh and eighth
level classes even though certain pupils may demonstrate ability to perform at those levels. "Academic pressure" appears to be too great for fourth grade pupils in the upper reading level classes. An additional reason for this practice is the feeling that the majority of the older pupils in the sixth grade have had experiences which the average fourth grade pupil has not encountered. The groups are kept flexible at all times, and all teachers, in consultation with the principal, are instructed to move pupils from one group to another if such a transfer seems to be in the best interest of given pupils.

Even though this type of grouping arrangement is used in all schools in Joplin, it appears to be more effective in the larger buildings where at least four to six teachers can be involved in the program.

In buildings where there are two fourth grade teachers, two fifth grade teachers, and two sixth grade teachers, it is possible to establish six reading level classes from third through eighth. Under this arrangement each teacher is responsible for a single reading level class during a given reading period, whereas in buildings where there are as few as three teachers for the middle grades, it is necessary for each teacher to instruct as many as two reading level classes during a reading period. Teachers are often assigned to teach reading level classes other than at the grade level of their homeroom. One will occasionally find a sixth grade teacher who has been assigned a fourth level class, while a fourth grade teacher has a sixth level class assignment. Since there is a feeling that all of the teachers should be acquainted with the skills and abilities which are taught at the various reading levels, teachers are frequently transferred from one level teaching assignment to another from year to year.
The materials and methods used in the program

The administrative officials of the Joplin schools believe that a sound developmental reading program is based on the use of basal reading materials. A modern series has been carefully constructed to provide a sequential development of reading skills. A number of leading series of basal readers are available for use in the program. The series used in any particular class in any given building is based on the teacher's personal preference with the approval of the school administrators. Care is taken to select materials which have not been used by any of the pupils at any previous grade level. Since large numbers of books from many series are circulated throughout the system on the basis of need, each principal is asked to keep very accurate records of the number of books for each level from given basal series which have been placed in his building. Duplicated lists of the materials are made available to the various principals so books and other aids may be taken from building to building as the need arises.

Workbooks are not used in the middle grades except by the teacher. There is a feeling that each teacher should prepare her own practice sheets which are to be used by the pupils in her class.

The recreatory reading period

A twenty-minute recreatory reading period is scheduled daily in the opposite half day from the reading level class. In one school, for example, the reading level class is held at 10 o'clock each morning with the recreatory reading period scheduled at 3 o'clock in the afternoon. All pupils remain in their home rooms for the recreation period and are not grouped in any manner. Children are given a chance to do wide reading on their interest and ability levels in a relaxed atmosphere. Since there are no central libraries in any of the elementary schools, a large number of attractive and interesting library books are provided in each room.
Some of those books are interchanged from room to room. A few school officials borrow books from the public library for use by the pupils. Illustrative of the kinds of books available in the room libraries are the American Adventure Series; American Heritage Series; and the Childhood of Famous Americans Series. A large percentage of the pupils participate in the Missouri State Reading Circle Program.

The recratory reading period is an important segment of the total reading program since it provides a time when all children, regardless of reading level, can come together in a relaxed situation and enjoy reading in many different areas.

The procedures used for the measurement of the pupils' reading achievement

Several procedures and techniques such as informal reading inventories, standardized achievement tests, and the informal observations of teachers and principals are all used to help determine the reading achievement levels of pupils. A careful inventory is made with respect to the competency of each pupil in such areas as word attack, reading for different purposes, and summarization of various reading materials.

The reading report card

A special report card has been constructed for use with those pupils who are involved in the Joplin Plan. The four major sections of the card are entitled: "Oral Reading," "Silent Reading," "Word Skills," and "Recreatory and Supplementary Reading." Some of the items included in the "Oral Reading" section are: (1) reads with ease and fluency at a satisfactory rate on his present level; (2) reads too slowly with a tendency to omit or substitute words; (3) needs more training in projecting the voice in expression; and (4) has a tendency to read too rapidly, omits or mispronounces words and tends to ignore punctuation marks.
The section dealing with "Silent Reading" contains some of the following items: (1) reads at a satisfactory rate with meaning and understanding on his present level; (2) has made definite improvement in ability to remember and relate that has been read; (3) has difficulty in concentrating in silent reading which causes rather poor understanding; (4) needs to adjust rate of silent reading to type of material being read; and (5) has some difficulty in stating main ideas of a paragraph or article and in interpreting implied meanings.

The "Word Skills" portion lists several of the following notations: (1) has a well developed understanding of and is able to use most skills which apply to word attack on his present level; (2) has too great a tendency to guess at words instead of using word skills which have been learned; (3) has well developed dictionary concepts and skills and makes excellent use of this knowledge; (4) is making more use of the dictionary, but still needs considerable training; and (5) is acquiring the basic vocabulary needed for his present level.

Some of the sentences entered in the "Recreatory and Supplementary Reading" section are: (1) number of books read this nine weeks; (2) does a large amount of reading with meaning and understanding on a variety of subjects; (3) is showing greater interest in independent reading; (4) needs to read a greater variety of materials; (5) needs to develop more interest and spend more time in reading; and (6) could profit from using the Public Library more frequently.

Each reading level teacher is asked to place a check beside those items in each area which apply to given students. There is also a place for teacher comments and suggestions.

Recent Studies Involving Intergrade Grouping for Reading Instruction

Shortly after the article by Floyd (5), a number of school officials
started to experiment with the Joplin plan of grouping in their respective schools. Several significant studies have been reported in different journals and are summarized in the following section.

A study was conducted in 1953 at the Burko Elementary School in Chicago and reported by Bernard (1). Pupils in grades six, seven, and eight were placed in various reading classes each school year on the basis of reading achievement as reflected by the results of standardized tests. According to Bernard, the median reading score of the graduates of the school went from 6.3 to 8.3 during the three years the grouping plan was in operation. The investigator also reported that the teachers were particularly pleased with the procedures because even the slow children made good progress and some pupils who had been difficult behavior problems showed noticeable improvement.

An additional investigation which showed favorable results for this type of grouping was one reported by Hart in 1959 (6). The faculty of an Oregon elementary school made a very careful analysis of the achievement test results of the pupils in the middle grades and discovered a very wide range of reading achievement in evidence. The staff and principal devised a plan whereby each of the nine teachers would assume the responsibility for one or two of the instructional groups for a block of time, eighty-five minutes in length, at which time the teaching of language arts, reading, spelling, writing, and English was undertaken for each of the ability groupings. The teacher for each group used the developmental approach to the teaching of reading. An analysis of achievement test results gave evidence that the experimental groups gained approximately ten months over the results registered by the pupils using the conventional plan the previous year. The investigator felt that the results of the study offered some evidence for
those persons who have the feeling that intergrade grouping for reading has
some merit (6:231).

Morgan and Stucker (10) designed an investigation in which the purpose
was to see if the Joplin plan of grouping for reading instruction would
result in significantly superior results where the teachers had been random-
ly assigned to experimental and control groups, and where sex, method,
measured intelligence, and initial reading ability had been controlled.

Ninety matched pairs of fifth and sixth grade pupils were used as
subjects. Alternate forms of the Durrell-Sullivan and California Achieve-
ment Tests were used for pre and post test purposes. The researchers con-
cluded that the data from the study supported the idea that the Joplin Plan
is a more effective plan of grouping than the conventional plan followed in
self-contained classrooms where pupils have wide ranges of ability in reading.

In another study, Ernest L. Doniny, (4), Principal, West Main Elementary
School, Lancaster, Texas, found the results of his study were similar to
those of Morgan and Stucker, (10)

During the second week of school in the fall of 1958, achievement tests
were given to the 273 pupils in grades four, five, and six to determine the
reading ability level of each pupil in reading. Nine groups were formed on
the basis of the test scores with each of the nine teachers assuming the
teaching duties of a given group for a fifty-four minute period which was
held during the same time in the morning for all sections. In order to
capitalize on the wide range of interests of the various students, many new
materials were purchased.

After four months, the average reading gain for all groups was 7.2
months with 113 pupils showing an improvement of eight months or more (4:25).
Ramsay's (12) study which employed the use of the Joplin plan with pupils in Logansport, Indiana was conducted from 1957 through 1960. During the period, the investigator was interested particularly in seeing what results might be obtained by using the "Joplin Plan" in two schools of different sizes.

The Stanford Achievement Test was administered in early October of 1958 and 1959 and the results of the instrument was used as the basis for dividing the fourth, fifth, and sixth grade children in the schools into seven different reading level classes.

Achievement test results indicated that the intergrade grouping program was effective in producing expected reading gains at all three grade levels. The data from the study reflected the fact, however, that pupils in the upper intelligence levels profited much more from the plan than did those in the lower intelligence levels. The researcher reported that the responses of both teachers and children to a series of questions indicated a unanimous approval for the plan from both groups.

In yet another study, Ramsay (13) established three groups of children who were matched with respect to a number of variables and were instructed by three teachers whose abilities were thought to be relatively equal. One teacher used the Joplin plan approach, another the individualized method, and the third followed the conventional three groups-within-the-classroom procedure. The pupils in all of the groups performed at approximately the same level. The investigator was of the opinion that the teacher impact on an individual group was of more importance than the nature or kind of grouping procedure employed.
Rothrock (15) concluded an similar study in McPherson, Kansas, in which he compared the advantages and limitations of three methods of grouping for reading instruction: intergrade ability grouping; self-contained classroom instruction; and the individualized approach. The researcher used 186 subjects who were enrolled in the fourth and fifth grades. Materials used, size of classes, socio-economic background of the pupils, and the experience and training of pupils were matched as closely as possible. Tests A and B of the Iowa Every Pupil Tests of Basic Skills were used as pre and post tests. At the conclusion of the study the investigator noted that when good teaching was done with appropriate materials and where children were stimulated, great improvement can result with any one of the three plans studied (15:235).

Kierstead's (8) study in Orwell, Vermont, in 1959 showed results which were somewhat different from those of the investigators mentioned previously. Two groups of pupils from grades three through eight were chosen as the subjects. One group was taught within the regular classroom in small groups while the other pupils were directed to reading classrooms on the basis of reading ability and teacher observation, regardless of grade level. When the study was completed, Kierstead reported that no significant difference in reading comprehension and vocabulary skills was noted when the groups were equated by the composite scores of the Iowa Test of Basic Skills which was administered to all children who had participated in the investigation. As one conclusion of the study, the investigator opined that ability grouping did not remove the need for further attention to the individual needs of pupils. He was also of the feeling that ability grouping was acceptable to both parents and students if the proper communication is established between the home and the school.
One of the most recent investigations was conducted by Carlson and Thompson (2) in which a comparison was made of the amount of reading growth which was attained by 129 pupils in grades four, five, and six who constituted an experimental group using the Joplin Plan procedures and 121 pupils in the control group using the conventional within class three-group approach. The mean intelligence quotients for the pupils in the experimental and control groups were approximately the same. Alternate forms of the California Reading Test were given as pre and post tests. Test results indicated that pupils in both the experimental and control groups registered gains of more than one year in reading vocabulary, reading comprehension, and total reading. The vast majority of the pupils and parents approved of the plan and only three parents of children in the experimental group wanted the Joplin Plan discontinued.

Powell selected two public elementary schools in Indianapolis for a study of the effectiveness of the Joplin Plan (11). One school had used the Joplin Plan for three and a half years and the other school had employed the self-contained conventional type of within class grouping procedure. The 164 pupils in the Joplin Plan school and the 207 pupils in the conventional school were equated as nearly as possible with respect to socio-economic level and mental ability. Ability of teachers employed and range of materials provided in the two schools were similar. In late 1961 numerous standardized reading achievement and mental ability tests were administered. Among other things, the findings of the Powell study indicated no significant difference in achievement in reading, spelling, arithmetic, social studies, sciences, or in study skills. Powell applied a number of critical ratios in the study and on the basis of these applications concluded that the Joplin Plan was not as effective as the self-contained approach.
Moorhouse (9) reported a study which was undertaken in February, 1958 in two public elementary schools in Wyoming to determine if an intergrade grouping procedure could result in higher pupil achievement than when pupils were grouped by the conventional in-class grouping plan. Periodic comparisons of achievement were undertaken at the end of one semester, three semesters, and five semesters for the 189 pupils who were involved in the experimental group and the 189 pupils who were included in the control group. There was no significant difference between the experimental and control groups with respect to mean intelligence quotient. Analysis of covariance was employed to analyze the periodic test results registered by all pupils in the study. At the end of one semester the experimental group measured twice the mean gain in reading level over the control group. At the conclusion of the five semester interval, however, the experimental group did not show significant gains over the control group. Among other things, the researcher concluded that the advantages of the intergrade grouping procedure may not be adequate to initiate such a plan.
The writer is aware of a number of studies in the midwestern area which have not been reported in the literature. The results of the vast majority of these investigations appear to indicate that there are a number of advantages as well as limitations to the plan. These factors are discussed in the section which follows.

Advantages of the Plan

In light of the conclusions of the studies which have been described previously along with the observations and research of the writer, a number of possible advantages might be claimed for this method of grouping for reading instruction.

One of the chief advantages appears to be that the pupils are placed in reading level classes where success is possible. (Frustration is generated when pupils in the conventional class are forced to read in grade level books when, in fact, a given pupil's reading level is two or more grade levels below his actual grade level.) Nothing breeds success like success, and there appears to be ample evidence that this plan provides for this type of environment.

The teacher is able to concentrate her efforts on one group of pupils during a given reading period and thus is able to be more thorough in her approach. With the use of the Joplin Plan she is able to give adequate time to pronunciation and definition of new words, readiness for a story, silent reading, oral reading, and follow-up activities.

The writer has observed that the pupils at Joplin have an intense interest in reading and read an unusually large number of library books. A high percentage of these children participate in the activities of the Missouri State Reading Circle and read many books found in the public library.
This plan of grouping challenges children to want to improve reading skills and move to the next higher level. A fourth-grade child, for example, feels a great amount of pride and satisfaction when he is able to participate in a class with sixth-grade pupils.

The studies of Bernard (1), Hart (6), Morgan and Stuckor (10), and Ramsey (11) appear to give evidence that pupils exhibit a high achievement level in reading when the Joplin Plan is employed. The writer's (3) investigation of the plan in Joplin, revealed that reading achievement in two selected schools exceeded grade expectancy by an average of 1.83 grade levels in Grade 4; 1.98 grade levels in Grade 5; and 2.06 grade levels in Grade 6.

Parents appear to approve of the plan as suggested by the articles written by Carson and Thompson (2) and the author (3). Among the advantages given by Joplin parents for the approval of the plan included "challenges child to read better," "permits child to achieve at a high level," "permits child to work at his own reading level and achieve success," and "takes care of individual differences among children and allows the teacher to extend maximum help to the pupils."

The range of reading achievement levels with which each teacher is concerned is narrowed materially through the use of this plan. In some cases it may be possible to narrow the range by as many as four levels.

The magnitude of each of the advantages mentioned previously is determined to a great degree by the amount of care taken to introduce this method of grouping into a particular school system. Maximum advantages may well result if the administrative officials move deliberately and lines of communication are kept open among teachers, parents, and administrators.
The plan must be carefully explained and introduced only after a willing and open-minded attitude is established among those who have responsibilities for executing the details of the various procedures.

Limitations of The Plan

The limitations of the plan may be of a very minor or a very serious nature, depending upon how the procedures are executed by teachers and administrators.

Social pressures among a few children may be an inherent part of a grouping structure of this type. The possibility of a large sixth grade child resenting being placed in a class with a small fourth grade child exists in varying degrees; however, the observations of the writer would appear to suggest that social pressures are not significant since most pupils are more concerned with success and achievement than they are with social success or failure.

There is a danger of lack of communication between the reading teacher and the classroom teacher. Unless there is constant dialogue between these two teachers, lack of integration in a given child's academic program may well result.

Some teachers using the plan may well be lulled into thinking that they are instructing a "homogeneous" group and that further differentiation of instruction is not urgent or needed. Teachers should keep in mind that the grouping procedures merely narrow the range of reading abilities present and does not in any way negate their responsibilities for further dividing for additional instruction in various skill areas.

The Joplin plan of grouping for reading instruction is one of the most significant advances in attempting to meet the needs of children in reading
instruction. The advantages of the plan appear to outweigh the limitations, particularly when the procedures are introduced in a careful, systematic manner into a given school system.
Summary

Cross grade grouping, more popularly called "The Joplin Plan," has been used in Joplin, Missouri and many other cities with varying results. Children in the middle grades are typically grouped for reading on the basis of scores from reading achievement tests along with the observation of the homeroom teachers. In most instances basal reading materials are used in a developmental reading context.

The plan is merely a method of grouping employed in order to narrow the range of reading abilities and thus allow the teacher more time to concentrate on the needs of pupils whose reading strengths and limitations are similar in nature. One must remember, however, that the groups are not to be thought of as being homogeneous in nature. Even with the use of this plan, additional provision must be made for the individual limitations of the pupils.

There are a number of advantages which may be realized from the plan of grouping. Pupils are placed at reading levels where success may be realized. Reading instruction is given a new emphasis and teacher appear to be stimulated to perform at higher levels of efficiency with the use of the plan. The results of the studies seem to indicate that reading achievement as measured by standardized tests may be increased by using the grouping procedures. Parents seem to approve the plan if careful lines of communication have been established between the home and school.

Some limitations may result from the use of the plan. A degree of social pressure may result when fourth grade and sixth grade pupils are placed in the same class. Unless careful attention is given to regular discussions between the homeroom and reading teacher, a lack of academic integration may
well result. A teacher must remember that even with this type of grouping, further provision must be made for the individual reading needs of the different pupils in her classroom.
REFERENCES


