

R E P O R T R E S U M E S

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LONG-TERM STUDY OF EDUCATIONAL EFFECTIVENESS OF NEWLY FORMED
CENTRALIZED SCHOOL DISTRICTS IN RURAL AREAS, PART TWO.

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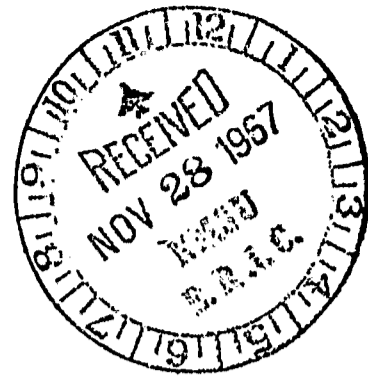
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ANALYSIS, *EDUCATIONAL IMPROVEMENT, FACILITIES, INSTRUCTIONAL
MATERIALS, LIBRARY FACILITIES, *ORGANIZATIONAL CHANGE,
PRIMARY GRADES, *RURAL SCHOOLS, RURAL EDUCATION, *SCHOOL
DISTRICTS, SECONDARY GRADES,

THE BASIC PURPOSES OF THIS LONGITUDINAL STUDY WERE TO
ASCERTAIN WHETHER OR NOT SCHOOL DISTRICT REORGANIZATION IS
WORTHWHILE IN TERMS OF TIME, EFFORT, AND EXPENDITURES OF
FUNDS, AND TO DETERMINE THE EFFECTS OF SUCH SCHOOL DISTRICT
REORGANIZATIONS ON THE EDUCATIONAL OUTCOMES OF THE SCHOOL.
THE SAMPLE CONSISTED OF 10 WISCONSIN COMMUNITIES, 5 WITH
REORGANIZED AND 5 WITH NONREORGANIZED SCHOOL DISTRICTS. THE
COMMUNITIES WERE MATCHED ON THE BASES OF SUCH FACTORS AS
WEALTH, POPULATION, TOPOGRAPHY, TYPE OF FARMING, NEARNESS TO
URBAN AREAS, AND SIZE AND DENSITY OF POPULATION. FIRST GRADE
CHILDREN WERE TESTED AND COMPARED IN THESE COMMUNITIES AND
RETESTED AT GRADES 6, 9, 12, AND WILL BE STUDIED 5 YEARS
AFTER GRADUATION FROM HIGH SCHOOL. THIS REPORT IS ON THE
TWELFTH GRADE STUDY, 1961-1964, IN WHICH THREE MAJOR
HYPOTHESES WERE TESTED. THE OPPORTUNITIES AVAILABLE IN
SCHOOLS WERE EXAMINED BY CONSIDERING TEACHING AIDS AND
MATERIALS, LIBRARY RESOURCES, STAFF QUALIFICATIONS AND
ASSIGNMENTS, BUILDING CAPACITY, CLASS SIZE, PROVISIONS FOR
STAFF, AND CURRICULUM OFFERINGS. THE ACADEMIC ACHIEVEMENT,
PERSONAL AND SOCIAL ADJUSTMENT OF STUDENTS, AND
SOCIO-ECONOMIC CONTACTS OF PARENTS WITH THE VILLAGE CENTER
WERE INVESTIGATED. THE RESULTS SHOWED FACTORS FAVORING
REORGANIZED SCHOOL DISTRICTS OVER NON REORGANIZED SCHOOL
DISTRICTS. A 69 ENTRY BIBLIOGRAPHY IS INCLUDED. (JH)

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Long-Term Study of Educational Effectiveness of Newly Formed
Centralized School Districts in Rural Areas - Part Two

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SUMMARY

Background

School district reorganization in Wisconsin has progressed for more than a century, but the greatest changes occurred after 1947 legislation established county school committees. Reorganization legislation since 1947 has promoted greater learning opportunities for Wisconsin boys and girls. Legislation in other parts of the nation has followed a similar pattern. In the decade between 1955-56 and 1965-66 the number of school districts in the United States fell to half. Between 1949 and 1966, Wisconsin school districts were reduced from 6,000 to 700.

As the school district reorganization movement gained momentum, parents and educators asked, "Did school district reorganization really improve the education provided for boys and girls?" In answer, in 1949 University of Wisconsin research workers began an intensive study of the effects of school district reorganization on the education of boys and girls and on the communities involved in reorganization.

Objective

The four basic objectives of the study were:

1. To determine the opportunities provided youngsters attending reorganized and non-reorganized (traditionally-organized) school districts.
2. To determine the academic achievement and intelligence level of boys and girls attending reorganized and non-reorganized school districts and to analyze any noted differences.
3. To determine the relationship between academic achievement of the youngsters and the expenditure for education in reorganized and non-reorganized school districts.
4. To determine the effects of school district reorganization on the farmers' social and economic contacts with the village center.

Procedure

The basic design of the study consisted of selecting five communities with newly reorganized school districts and matching them with five communities having traditionally-organized school districts and starting with all of the first-grade students in the sample reorganized and non-reorganized schools comparing them through 12 years of school and beyond. The first pair of communities was selected in 1949-50. Two pairs were selected in 1950-51, and the final two pairs were selected in 1951-52.

Newly reorganized districts were chosen to represent the various levels of reorganization established by educational authorities. Criteria used in selecting reorganized districts included such factors as district enrollment, physical facilities, size of community (community boundaries were made to coincide with trade area boundaries for the village center, and the high school attendance area; hence some reorganized communities also included non-reorganized districts), tax base, bus transportation, and a community with common interests. Then these communities were matched with non-reorganized communities on the basis of wealth, population (size and distribution), topography, type of farming, nearness to cities, and total area.

Two of the reorganized communities met the established criteria sufficiently well to be classified as "well-organized communities." Two were considerably smaller in enrollment, area, wealth, and potential educational program than demanded by the criteria. While the fifth reorganized community met some of the criteria, it did not meet others.

The first year that the communities were involved in the study, their first-grade pupils were tested and compared. This same group of students was also tested at grades 6, 9, and 12. The group will be studied further five years after graduation from high school. When this original group had reached sixth

grade, a replication study was started with first graders. The same pattern of testing and comparing was followed for the replication group as was outlined for the original group.

Hypotheses in this report were tested on the basis of twelfth-grade data that were analyzed during the period covered by this project. Major hypotheses tested herein are as follows:

- H₀₁ "There are no differences between reorganized and non-reorganized school communities in opportunities available to students and teachers."
- H₀₂ "There are no differences between reorganized and non-reorganized school communities in academic achievement and personal and social adjustment of boys and girls."
- H₀₄ "There are no differences between reorganized and non-reorganized school communities in the social and economic contacts of parents with the village center."

Another major hypothesis H₀₃ is not reported here because no additional data pertaining to it were analyzed at this stage of the investigation. Previously it had been concluded that school district reorganization led to greater expenditure of funds at the elementary level as well as to greater academic achievement.

Results

1. Opportunities Available

To test H₀₁, data were organized and analyzed or described to provide judgment on six sub-hypotheses. These sub-hypotheses dealt with differences between reorganized and non-reorganized communities in these areas of opportunity:

- H_{1a}--teaching aids and materials
- H_{1b}--library resources
- H_{1c}--staff qualifications and assignment
- H_{1d}--building capacity and class size
- H_{1e}--provisions for staff
- H_{1f}--curriculum offerings

Analysis of the data collected on the availability of teaching aids and materials (H_{1a}) at the high school level revealed that reorganized districts were significantly better equipped with micro projectors and overhead projectors. There were no significant differences between the reorganized and non-reorganized districts on the availability of radio and television in the classroom or in expenditure per pupil for audio-visual equipment.

An examination of the extent of library resources in the reorganized and non-reorganized communities (H_{1b}) revealed that there were significant differences showing that the reorganized communities had a greater expenditure for library materials than did the non-reorganized communities. No important differences were noted in terms of 1) number of volumes in the library, 2) number of volumes added, 3) number of obsolete volumes discarded, and 4) the number of class periods assigned to library work.

Descriptive data on staff qualifications and assignments (H_{1c}) were analyzed and no marked differences between reorganized and non-reorganized schools at the high school level were identified except in the significantly higher participation of teachers in reorganized districts in summer session and correspondence study.

Findings related to building capacity and class size (H_{1d}) were not consistent and none of the differences noted were of sufficient size to reach the level of significance. Factors with minor advantages to reorganized districts were in pupil/teacher ratio, and duties assigned to high school principals.

Minor advantages to non-reorganized districts were in fewer classes of over 35 pupils, and assignment of responsibilities for health and guidance activities. Both reorganized and non-reorganized communities had average pupil enrollments at the high school level that were less than sufficient for curriculum flexibility, and both types of districts were operating near to maximum building capacity.

Of the professional opportunities for continued learning for the staff (H_{1e}), the reorganized districts provided significantly more days for in-service study and had a significantly larger professional library available for the use of the teaching staff.

A comparison of high school curricular offerings (H_{1f}) in the two types of school districts showed marked differences favoring reorganized districts in foreign language and art and favoring non-reorganized districts in the physical education program. Other curricular offerings were identical or showed only minor variations.

In terms of hypothesis H_{01} , six sub-hypotheses were tested and compared by statistical and descriptive methods. Twenty-three factors, other than curriculum, and 15 curriculum factors were analyzed. Six of the factors which favored the reorganized school communities and one factor which favored the non-reorganized were significant at the $P \geq .05$ level. On the basis of these findings, Hypothesis H_{01} was rejected in part.

2. Achievement

Data related to hypotheses H_{02} were subject to statistical analysis involving mean scores on academic achievement and personal and social behavior mean scores.

At grade twelve, those boys and girls who were in the non-reorganized part of the initially selected reorganized district were compared with those in the reorganized part on both H_{02x} academic achievement and H_{02y} personal and social behavior. The hypotheses failed to be rejected so the data were pooled and classified as reorganized in testing the major hypothesis H_{02} .

Data used in the analysis were only for those boys and girls who had been in one of the 10 study communities (5 reorganized--5 non-reorganized) from grade one through grade twelve and for whom the necessary achievement and background data were available.

Hypothesis H_{2a} tested the difference in academic achievement between boys and girls in the reorganized and non-reorganized study communities. The analysis led to a rejection of the null hypothesis, with girls having the higher mean score. The differences were significant at the $P \geq .05$ level on 10 of 15 measures. Boys had a mean score higher than girls (not significant) only on the Physical Science test.

Tests of significance on hypothesis H_{2b} showed a continuation of the pattern established after grade one. Boys and girls in reorganized school communities scored higher on standardized achievement tests than did those in non-reorganized school communities. Boys in the twelfth grade of reorganized districts scored higher than those in non-reorganized districts on 11 of 15 achievement measures. The differences were significant at the $P \geq .05$ level in Reading Vocabulary and Biological Science as well as in Mental Age. Girl's differences, significant on the same factors, favored those in reorganized districts on 13 of the 15 measures.

Differences between boys and girls in Personal and Social Behavior scores followed the general pattern established earlier in the investigation. Sub-hypothesis H_{2c} was rejected with a significantly higher mean score $P \geq .05$ favoring the girls over the boys on five of six measures. There were no differences of Feeling of Belonging and on Socio-economic Status and Parent Choice of the Level of the Child's Future Education.

For sub-hypothesis H_{2d}, the parts related to Socio-economic Status and level of education parents desired for their children failed to be rejected. On the parts of the sub-hypothesis related to Social and Personal Behavior, the differences between boys in reorganized and non-reorganized which were noted as significant at grade six, Sense of Personal Worth, and Total Personal-Social scores were again of sufficient magnitude to cause this part of the hypothesis to be rejected. The higher mean score favored boys in the non-reorganized communities.

On the basis of these findings hypothesis H_{02} , "there are no differences between reorganized and non-reorganized school communities in boys' and girls' academic achievement and personal and social behavior" was rejected in part. H_{02} was rejected with higher mean scores favoring reorganized communities as follows:

1. In Mental Ages for both boys and girls.
2. In Reading Vocabulary for both boys and girls
3. In Biological Science scores for both boys and girls

H_{02} was rejected with higher mean scores favoring boys in non-reorganized communities as follows:

1. In Sense of Personal Worth scores
2. In Total Personal Social Behavior scores

The factors on which differences were noted on the basis of ANOVA were subjected to Analysis of Co-variance controlling selected factors related to such achievement. As a result of this analysis, H_{02} was rejected for the sub-hypothesis dealing with differences between reorganized and non-reorganized school communities on the Total Personal Social Behavior test with sixth-grade Socio-economic Status controlled. Boys in non-reorganized school communities had the higher mean score.

When Mental Age was controlled by use of Analysis of Co-variance, no significant differences remained between reorganized and non-reorganized communities on academic achievement factors. The sample of students in the reorganized and non-reorganized communities began their education with less than one month difference in mean mental age in months. During the course of 12 years of education in reorganized and non-reorganized school communities, greater measured mental development occurred in the reorganized communities. Where no significant difference was found in the early years of the investigation, by the time the same

youngsters reached grade twelve, the difference was significant and H_{02} was rejected on the factor of mental development.

3. Socio-Economic Contacts

Data gathered from parents of the sample at first and twelfth grades were analyzed to test hypothesis H_{04} dealing with social and economic contacts of parents with the village center.

Hypothesis H_{4a} tested whether or not there were differences between total contacts with the village center between parents living in reorganized and non-reorganized school communities when the sample youngsters were in first grade (1950-1952) and in twelfth grade (1961-1963). The changes in contact noted during this period were small for both reorganized (up 4 percent) and non-reorganized (down 2 percent). The percentage using the village center for services at the twelfth-grade level were 44 percent in reorganized and 43 percent in non-reorganized. Null hypothesis H_{4a} failed to be rejected.

Sub-hypothesis H_{4b} was analyzed by examining for significant differences on each of 11 services independently. Only minor differences existed. At twelfth grade, parents of students in reorganized districts had more contacts on seven and parents of students in non-reorganized districts had more contacts on four of the selected services. On the basis of a Chi-square test of significance, the hypothesis H_{4b} failed to be rejected.

Sub-hypothesis H_{4c} analyzed differences between those living in the farm service area of reorganized and non-reorganized school communities as to their socio-economic contacts with the village center and changes in these contacts between the time sample students moved from grade one to grade twelve. For this portion of the total sample, there was a small increase (19 to 26 percent) in contacts in reorganized communities and a very slight decrease (38 to 36 percent) in non-reorganized communities. On the basis of a Chi-square test, H_{4c} was rejected.

Sub-hypothesis H_{4d} dealt with the nature and extent of change of contacts with the village center in each community in each pair of reorganized and non-reorganized communities. The small increases (two to seven percent) in four of the reorganized communities and the small decreases (one to seven percent) in non-reorganized communities were not sufficient to show statistical significance. Therefore, sub-hypothesis H_{4d} failed to be rejected.

One statistically significant difference between reorganized and non-reorganized districts was found in the sub-hypothesis H_{4c} of the major hypothesis H_{04} . H_{04} failed to be rejected for sub-hypotheses H_{4a} , H_{4b} and H_{4d} . Some consistencies of increasing contact with village centers in reorganized districts and decreasing contact in non-reorganized districts accounts for the one significant sub-hypothesis. The rejection of H_{4c} makes essential the reexamination of H_{04} in the replication, even though three of the four sub-hypotheses failed to be rejected.

Conclusions and Implications

Conclusions

The conclusions which follow were made with special reference to the high school level of education in reorganized and non-reorganized school communities. Where possible, general references were made to the two types of school organization being analyzed in terms of the total program from grades one through twelve.

Most of the analyses are subject to replication in five years. Thus, tentative conclusions can be reexamined.

1. Opportunities

Opportunities provided for the educational development of students were significantly greater in reorganized than in non-reorganized school communities. The differences were not as extensive as those noted at the elementary level. This can be explained in part because in the elementary grades, the non-reorganized pattern of attendance was in a variety of separate school districts and different

attendance centers. At the high school level, non-reorganized communities as well as the reorganized tended to establish a single attendance center--the high school.

In matched pairs of communities, as was the case in this investigation, the continuation of part of the large number of opportunity differences at the elementary level into the high school level was a most important finding and leads to the conclusion that the organization of the school districts over all or part of 12 years of education was indeed associated with learning opportunities provided for boys and girls.

The boys and girls in reorganized communities had greater learning opportunities than did those in non-reorganized communities.

2. Achievement

In academic achievement the boys and girls in reorganized districts outperformed those in non-reorganized districts. The evidence throughout 12 years of education indicated that the contact with greater opportunities did make a significant contribution to mental development. Although the mean grade twelve academic achievement test differences in Biological Science and Reading Vocabulary were significantly different, they were reduced when mental age was controlled by statistical tools. The factor responsible for this initial difference was mental age. At first grade there were no differences in mental age and 12 years later the differences were significant and favored those boys and girls in reorganized districts. On the basis of the findings, it is concluded that the type of school district structure was responsible for the significant increase in mental maturity.

The major achievement differences that were developed between grade one and grade six were maintained between grade six and grade nine, and they showed only minor regression during the high school years into grade twelve. This consistency, in a study using control groups, is sufficient to conclude that administrative organization of a community's school into a single kindergarten or first to

twelfth-grade system is superior to the forms of multi-district organization once so typical of the Midwest.

In personal and social behavior, the boys in non-reorganized communities continued to show a significantly higher mean score on Total Personal Social Behavior than did those in reorganized communities. This difference occurred when the first analysis was made on grade six scores, appeared again at grade nine, and still existed at grade twelve. The point of greatest score differences favoring boys in non-reorganized districts was at grade nine when significant differences at the $P \geq .05$ percent level were present on five separate parts as well as on the Total Personal Social Behavior test score.

No data comparable to that gathered on the test of Personal and Social Behavior was available at grade one. The differences noted in grades 6, 9, and 12 may have existed at grade one, but this cannot now be determined. The fact that these data are missing does not preclude the tentative conclusion that boys in non-reorganized school communities became better adjusted personally and socially than boys in reorganized communities. Based on the same kinds of data, a tentative conclusion can be made that the measured personal and social behavior patterns of girls were not influenced differentially in reorganized and non-reorganized districts.

3. Socio-Economic Contacts

The pattern of minor variations between reorganized and non-reorganized school communities on socio-economic contacts of farmers with the village center continued. There was less justification at twelfth grade than at grade six to conclude that the nature of the communities' school district organization has little if any effect on patterns of social or economic interchange with the village center. The evidence points less clearly in that direction than it did at grade six. It was considered likely that more engulfing and broader factors than district organization led to adjustments in both reorganized and non-reorganized school communities.

Implications

A longitudinal investigation covering a span of time from grade one through grade twelve with the same sample communities and with data analyzed on the same boys and girls brings to the surface findings and concepts about school district reorganization that have implications for organization of districts in the future.

The remarkable increase in mental maturity of boys and girls in reorganized districts when compared to those in non-reorganized communities is sufficient to make very clear the need to "get on with the job of getting school districts in order." This investigation has not identified a maximum size in pupil population where this increase in mental age would level off, but the data in this study implied that schools with a student population of 1500 boys and girls from first through twelfth grade had not reached the optimum size to take full advantage of the economy of scale as it related to factors of opportunity and achievement.

The findings are sufficiently consistent to identify differential effects of district organization on personal and social behavior of boys and no such differential effects on girls. This factor has implications for further study of personal and social behavior phenomena. These phenomena are often ignored because the instruments of measurement are crude. Social and personal behavior need to be examined in greater detail. Can simple steps be taken in reorganized districts to overcome possible handicaps? Do the findings of Barker and Gump¹ related to greater participation in extra-curricular activities in small schools suggest that special efforts toward more participation in the reorganized districts can overcome handicaps?

School districts in the United States have changed markedly in the last two decades. Year by year districts in the last strongholds of small schools in the

¹Roger G. Barker and Paul V. Gump, Big School-Small School, Stanford University Press, Stanford, California, 1964.

Midwest are disappearing. Reorganization can and does provide more opportunities. It can and does influence positively the mental development of both boys and girls. But reorganization also appears to have a less than desirable influence on the personal and social behavior of boys. The first two outcomes can be readily supported by theory--more opportunities and greater mental development in reorganized districts was expected. The undesirable outcome was not. What factors are responsible for it? Much remains to be discovered about the effects of school district organization on students and on the community.

Bibliography

There were 69 references listed in the report of Cooperative Research Project 375 which formed the base of the second report. Relevant new findings appear in the footnotes of Project 1318.

Publications

This list includes publications from this study which began in 1949. This was prior to funding as a Cooperative Research Project. This list also includes reports on periphery data (i.e. The 4-H Club Study) since the total research is jointly financed by a number of cooperative agencies.

1. Books, monographs, reports, bulletins, and pamphlets.

1. Longitudinal Study of Newly Formed Centralized Rural School Districts in the State of Wisconsin.
First Progress Report, Part I, Madison: University of Wisconsin, Department of Education, February, 1951.
2. What Shall We Do About Our School?
Special Circular 20, Madison: University of Wisconsin, College of Agriculture Extension Service, July, 1951.
3. Longitudinal Study of Newly Formed Centralized Rural School Districts in the State of Wisconsin.
First Progress Report, Part II, Madison: University of Wisconsin, Department of Education, September, 1951.
4. Longitudinal Study of Newly Formed Centralized Rural School Districts in the State of Wisconsin.
First Progress Report, Part III, Madison: University of Wisconsin, Department of Education, October, 1951.

5. Selected Cultural Characteristics and The Acceptance of Educational Programs and Practices, Mimeographed report of research project 52:33, Madison: University of Wisconsin, Department of Education, 1953.
6. Farmer Acceptance of Educational Change, Mimeographed report of the implications of research project 52:33, Madison: University of Wisconsin, Department of Education, 1953.
7. School Attendance of Wisconsin Rural Youth. (With W. Bjoraker and D. Marshall), Madison: University of Wisconsin, College of Agriculture, February, 1955.
8. School District Reorganization: A Citizen Seminar. Madison: University of Wisconsin, Bureau of Information and Program Services, January, 1955.
9. Culture and the Acceptance of Educational Programs in Rural Wisconsin, (with J. Duncan) Research Bulletin No. 525, Madison: University of Wisconsin, College of Agriculture, 1956.
10. Papers on Adequate Units of Service in Rural Society, Urbana: University of Illinois, College of Agriculture. RSE - 114, "Adequate Schools for Rural Areas," June, 1958, pp. 14-17.
11. School District Reorganization--Research Results, Madison: University of Wisconsin, Department of Education. A mimeographed report, February, 1959. 7 pages.
12. New Facts on School District Reorganization, Madison: University of Wisconsin, Department of Education. A mimeographed report, August 4, 1959. 11 pages.
13. Who Joins 4-H Clubs? An Analysis of the School and Home Backgrounds of 4-H Club Members and Non-Members in Ten Wisconsin Communities, Madison: University of Wisconsin, College of Agriculture Research Bulletin, 1960. 25 pages.
14. Does the Kind of a School District in Which Children Live Make a Difference for Their Future? Madison: University of Wisconsin, Department of Agricultural and Extension Education, College of Agriculture, October, 1960.
15. General Effectiveness of Extension Work: 4-H Club Work, Washington: Extension Research and Training, United States Department of Agriculture. Research Summary No. 64. September, 1960 (with L. Pierce and C. Middleton).
16. School District Reorganization--Does it Make a Difference in Your Child's Education? Madison: University of Wisconsin, College of Agriculture. Special Bulletin No. 6, March, 1961.
17. Proceedings of a Special Conference for County School Communities. "The Role of Reorganization in the Improvement of Education." University of Wisconsin Extension Center, Racine, 1961.

18. 4-H Impact? Does Club Work Make a Difference in Personal and Social Development and Academic Achievement in School? Madison: University of Wisconsin, College of Agriculture, Special Bulletin No. 8, October, 1962.
 19. Long-Term Study of Educational Effectiveness of Newly-Formed Centralized School Districts in Rural Areas. Madison: University of Wisconsin, Department of Agricultural and Extension Education, December, 1962.
 20. Film Use Guide--4-H Clubwork. Madison: University of Wisconsin, Department of Agricultural and Extension Education, 1962.
 21. Resume' of Legislation Pertaining to Wisconsin School Districts. Madison: University of Wisconsin, Department of Education, 1962.
 22. Expanding the Opportunities of 4-H Membership to More Boys and Girls. Washington: Federal Extension Service, U. S. Department of Agriculture, 1964, (with Laurel K. Sabrosky and Fern S. Kelly).
 23. Who Joins 4-H Clubs? Part 2. Madison: University of Wisconsin, College of Agriculture Research Bulletin 254, November, 1964.
 24. A Restudy of the Acceptance of Educational Programs in Rural Wisconsin. Madison: University of Wisconsin, College of Agriculture Bulletin 582, April, 1966.
2. Parts of books, monographs, reports, bulletins, chapters, articles, or other contributions to cooperative volumes.
1. "Community Relationships," in The Community School and The Intermediate Unit. Washington: Department of Rural Education of the N.E.A., 1955.
 2. "Designing and Carrying Out Longitudinal Studies in Rural Education," in Report of the Eighth Annual North Central Regional Conference on Research in Agriculture Education, January, 1955.
 3. "Neglected Opportunities; The Rural Sociologist and Rural Education" in Projection Papers. Rural Sociological Society, 1964.
 4. "4-H--Achievement and Future" in Professional Leadership in Extension Youth Programs. Madison, National Agricultural Extension Center for Advanced Study, 1965.
 5. "Effects of School Reorganization on Community Life" in The Changing Small Community. Madison, University of Wisconsin College of Agriculture in cooperation with The National Catholic Rural Life Conference, National Lutheran Council and The Wisconsin Council of Churches, 1965.
 6. "Abundant Opportunities" in School Administration in Newly Reorganized School Districts. Washington: American Association of School Administrators, 1965.

3. Articles and edited documents in magazines and other periodical publications.

1. "Do Rural Teachers Take Time to Think About Objectives." The Elementary School Journal, Vol. LII, No. 5, January, 1952.
2. "New Research Measures Results of Reorganization." The Nation's Schools, Vol. 50, No. 1, July, 1952.
3. "Factors Limiting School Reorganization." The Nation's Schools, Vol. 51, No. 8, February, 1953.
4. "Farmer Acceptance of Educational Change" (with J. A. Duncan), The Nation's Schools, Vol. 54, No. 3, September, 1954.
5. "All We Want Are the Facts." Phi Delta Kappan, Vol. XXXVI, No. 1, October, 1954.
6. "Selected Cultural Characteristics and the Acceptance of Educational Programs and Practices" (with J. A. Duncan). Rural Sociology, Vol. 19, No. 4, December, 1954.
7. "Scale for Determining Teacher Beliefs." The Elementary School Journal, Vol. LV, No. 6, February, 1955.
8. "School-Community Relation," Review of Educational Research, Vol. XXV, No. 4, October, 1955.
9. "Can School Districts Be Too Small," Education, Vol. 77, No. 6, February, 1957.
10. "Does School Size Make a Difference?" WEA Journal, Vol. 91, No. 8, March, 1959.
11. "How Are 4-H'ers Different?" National 4-H News, Vol. 37, No. 12, December, 1959.
12. "Research Reports - Their Significance in Building and Communicating a Body of Knowledge," Adult Education, Vol. XXXI, No. 3, June, 1961.
13. "Organizational Patterns: Local School Districts," Review of Educational Research. Vol. XXXI, No. 4, October, 1961.
14. "Reorganization Makes a Difference." NEA Journal. 50:55; March, 1961.
15. "Should Rural Schools Consolidate?" Farm Journal, Central Edition. May, 1961.
16. "Big School or Little School." Wisconsin Agriculturalist and Farmer, May 6, 1961.
17. "What is the 4-H Club Product?" Extension Service Review, Vol. 33, No. 10, October, 1962.
18. "Effectiveness of Lecture, Bulletin, and Film in Adult Settings," Adult Education, Vol. XII, No. 3, Spring, 1962.

4. Newspaper Articles and Editorials.

1. "Is This Johnny Like Your Son." Wisconsin Agriculturalist and Farmer, Vol. 79, No. 3, February 2, 1952.
2. "School Reorganization - A Report of Wisconsin's Longitudinal Study." New York Times Sunday Supplement, August 17, 1952.

5. Television and 16 Millimeter Films.

1. Research Report Number I - 15 minutes
A summary of the findings of the University of Wisconsin study on school district reorganization. It contains the same basic information on opportunities, achievement, costs, and social-economic changes as found in Special Bulletin No. 6.
2. Research Report Number II - 30 minutes
In this film the research director, Professor Burton W. Kreitlow, is interviewed by George Tipler, Secretary of the Wisconsin School Boards' Association; Paul Johnson, Editor of the "Prairie Farmer;" William Edwards, a farmer from Kansas; and Vernon Olson, a banker from Spring Green, Wisconsin.

Questions asked relate to disposition of one-room schools, representation of farmers on school boards, the role of village businessmen in dealing with school improvement problems, cost of instruction in reorganized districts, and others.

3. Research Report Number III - 15 minutes
A report giving details on the achievement advantages of the reorganized districts in the study. This report is narrated by Professor Kreitlow and contains a series of motion pictures taken in several of the schools in the study. The question is answered as to why the youngsters learn more in reorganized school districts.
4. Research Report Number IV - 30 minutes
This is a documentary of the progress of the reorganized district in Winneconne, Wisconsin through 12 years. It is narrated by a high school senior. The second half of the film is taken at a community meeting where the administrator, Arthur Lehman, and community citizens discuss plans for the school during the next 12 years.
5. Research Report Number V - 15 minutes
This is a report on 4-H Club work using the same data in the same communities. It contains the basic findings in a comparison between 4-H Club members and non-members on such factors as intelligence, school achievement, socio-economic background, personal development, and parent interest.
6. Community Schools Can't Stand Still, Research Report Number VI - 40 minutes
This is a case study of a reorganized school district showing the innovations accepted and the process the community followed in improving education, 1966.

6. Syllabi, Tests, Abstracts

1. The Purposes and Processes of Education - Teacher Objectives, Madison: University of Wisconsin, Department of Education, 1951.
2. Interest Record - Grade 1, Madison: University of Wisconsin, Department of Education, January, 1952.
3. Interest Record - Grade 6, Madison: University of Wisconsin, Department of Education, January, 1955.
4. Interest Record - Grade 9 and 12, Madison: University of Wisconsin, Department of Education, 1958.

7. Related Master's Papers and Ph.D. Theses

1. Arend, James M., A Study of the School Districts in Rural Communities to Determine Effects of Reorganization on Opportunities, Seminar Report, 1962, 67 p.
2. Bholay, Dineshkumar A., Consistency of Teacher Ratings and Achievement Patterns of 4-H Club Members in Relation to Their Participation in 4-H Clubs and Other Organizations in Grade One, Six, and Twelve, Doctor's Thesis, 1965, 206 p.
3. Brack, Robert E., A Study of the Relationship of Family Background and Status to the Age of Joining and Persistence in 4-H Club Work of Students in the Ninth Grade in Ten Wisconsin Counties, Seminar Report, 1961, 87 p.
4. Bragg, Desmond H., A Study of the Size-Cost-Achievement Relationships in the Reorganized School Districts of Wisconsin, Doctor's Thesis, 1960, 127 p.
5. Busset, Glenn M., A Comparison of Knowledge Gained by Adults When Presentations are Followed by Discussions Led by Local Volunteers and Professional Leaders with a Positive or a Negative Attitude Toward the Discussion Task, Doctor's Thesis, 1964, 119 p.
6. Butterfield, Paul G., Educational Attitudes and Learning Orientations of Rural Adults in Selected Cultural Settings, Doctor's Thesis, 1965, 209 p.
7. Call, Marilyn Anne, A Study of the Personal and Social Behavior of Ninth-Grade Boys and Girls in Reorganized and Non-Reorganized School Districts, Seminar Report, 1963, 91 p.
8. Dowling, William Dean, A Study of the Personal and Social Behavior of Boys and Girls in Reorganized and Non-Reorganized Districts, Doctor's Thesis, 1959, 128 p.
9. Edwards, William, A Comparison of the Effectiveness of the Lecture, Bulletin, Film, and Television in Presenting Research Findings, Seminar Report, 1961, 67 p.

10. Eisemann, Carl, A Restudy of the School Districts in Two Rural Communities to Determine the Effects of Reorganization, Doctor's Thesis, 1956, 144 p.
11. Eyestone, Merle L., A Comparison of the Effectiveness of Bulletin, Film, and Lecture, With and Without Discussion, in Presenting 4-H Research Findings, Doctor's Thesis, 1965, 187 p.
12. Koyen, Roland A., An Analytical Study of Two Types of School District Organization, Doctor's Thesis, 1951, 270 p.
13. Krull, Rex G., The Relationship of Selected Cultural Characteristics to the Acceptance of Educational Concepts and Programs Among Neighborhoods in Reorganized Rural School Districts in Wisconsin, Specialist's Thesis, 1963, 81 p.
14. Lidster, Echo L. R., An Analysis of Certain Educational and Socio-Economic Factors as They Related to the Nature and Number of 4-H Projects Selected and the Project Progression Shown by 4-H Club Members at Grade One, Six, and Nine in Ten Wisconsin Communities, Doctor's Thesis, 1963, 175 p.
15. MacNeil, Teresa, A Study of School Districts in Ten Rural Wisconsin Communities to Determine Relationship of School District Organization to Changes During an Eleven Year Period in Patterns of Adult Social and Economic Contact With the Village Center, Seminar Report, 1965, 126 p./
16. Maughan, W. T., A Restudy of the Relationship of Selected Cultural Characteristics to the Acceptance of Educational Program and Practices Among Certain Rural Neighborhoods in Wisconsin, Doctor's Thesis, 1964, 183 p.
17. Middleton, Curtis O., A Comparison of the Family Background and Status Between 4-H Members and Non-4-H Members Who Are in the First and Sixth Grades of School in Ten Wisconsin Communities, Seminar Report, 1958, 103 p.
18. Pierce, Lowell L., A Comparison of Mental Ability and School Achievement of 4-H Club Members and Non-Members in Ten Wisconsin Communities, Seminar Report, 1958, 67 p.
19. Pinnock, Theodore J., A Comparison of the Effectiveness of Film and Bulletin in Transmitting Knowledge to Negro 4-H Club Local Leaders in Alabama and Caucasian 4-H Club Local Leaders in Wisconsin, Doctor's Thesis, 1965, 114 p.
20. Prasad, Chadrika, A Comparison of Personal and Social Development and Interest Patterns Between Matched Groups of Ninth Grade 4-H and Non-4-H Members in Ten Wisconsin Rural Communities, Doctor's Thesis, 1961, 137 p.
21. Russell, George, A Study of Ten Wisconsin Communities to Determine the Relationship of School District Organization to Community Development, Seminar Report, 1957, 50 p.

22. Shipla, Otto J., A Study of Certain Supervisory Practices in the Schools of Ten Wisconsin Communities, Doctor's Thesis, 1956, 481 p.
23. Subaima, Guthikonda V., A Comparative Study Among 4-H Girls of Four Years and Over One and Two Year 4-H Drop-Outs and Non-4-H Girls of Ninth Grade in Ten Selected Communities of Wisconsin to Determine Differences in School Achievement and Social Behavior, Doctor's Thesis, 1961, 124 p.