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AUTHOR   Truesdell, Wayne P.
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ABSTRACT
          Population trends, curriculum, staffing demands, and
new methods of financing education are placing the small school in an
increasingly precarious position. The purpose of this paper is to
submit data showing that 68% of Iowa schools face a serious dilemma.
Declining rural populations could reduce by half the enrollment in at
least half of Iowa's school districts in the next 10 years. Staffing
requirements enforced by the Department of Public Instruction are
beyond the point of efficient utilization in one-fourth of Iowa
schools. Curriculum offerings in small schools are inadequate to
prepare mobile Iowa youth for urban life. The per-pupil costs in
small districts are extremely high and continue to climb in relation
to costs in reasonable-sized schools. The 1967 Iowa School Support
Law makes it impossible for individual school districts to support
schools completely by local effort; equalization moves wealth from
rural districts with high per-pupil costs to urban areas with lower
assessed valuations. Reorganization centered around growing
communities and the intermediate unit for special services are
suggested to alleviate some problems of small schools. (JH)

THE DILEMMA FACING THE SMALL SCHOOL

An analysis of the problems facing the small Iowa school today and in the years ahead. Based upon research into the causes of these problems:

1. Declining rural populations
2. Increased staffing requirements
3. Expanded curricular offerings
4. Increasing per pupil costs resulting from fewer pupils and larger staffs
5. Problems created for the small school by the 1967 Iowa School Support Law.
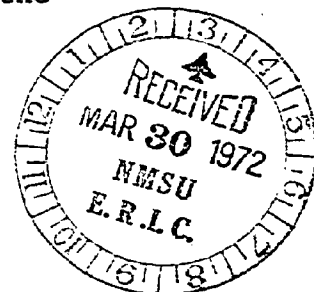
The Great Plains study suggested an optimum district of 3500 students with a central town of at least 2500 population. The writer has provided tables to show how the above factors operate in categories of schools of different enrollments. Eleven tables in the text make comparisons of the various characteristics in terms of enrollment categories. The data for each school and each county is contained in ten tables and maps in the appendix.

Dr. Wayne P. Truesdell
Associate Professor of Education   January 2, 1969
University of Northern Iowa
Cedar Falls, Iowa 50613

THE DILEMMA FACING THE SMALL SCHOOL

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THE DILEMMA FACING THE SMALL SCHOOL

I

PROBLEMS FACING THE SMALL IOWA SCHOOL

The Great Plains Study, recently published by the Iowa State
Department of Public Instruction, has precipitated another confron-
tation between those who see the need for further reorganization
of Iowa school districts, and the residents of these smaller
districts who would be affected by such reorganization.

Proponents of further reorganization see the small school
as becoming increasingly inadequate to prepare youth for modern
day problems, and expensive in terms of per pupil costs of
operation; those who would retain the small school district point
to the loss of local control, and to increased problems of student
discipline in the larger school systems.

It is not the purpose of this paper to defend the 3500 minimum
enrollment suggested by the Great Plains Study as optimum for Iowa
school districts; nor to assume that all Iowa schools could be
organized around towns of at least 2500 population. This paper
will show by the data presented that neither objective is feasible
in many Iowa rural counties. The purpose of this paper is to
submit data showing that the 68 per cent of Iowa schools with
less than 1000 students do face a serious dilemma that should
be resolved at this time; and that to put off the actual confron-
tation with the issues involved will tend to aggravate the problem
in the years ahead.

One can concede the desirability of maintaining as much local
control over schools as is feasible; and one can concede that the
congregation of large groups of students in a single center does
provide problems of student control that do not exist in smaller
units. But the other horn of the dilemma includes some five almost
insurmountable obstacles to an adequate program in small schools
at a reasonable cost. The only way to resolve this dilemma is
through a carefully planned program of reorganization.

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I would submit the following five hypotheses relative to the problems of the small school today and in the years ahead:

1. <u>Declining rural populations</u> could cut in half the number of children enrolled in at least half of Iowa's 455 school districts in the next ten years.

2. <u>Staffing requirements</u> now being enforced by the Department of Public Instruction are far beyond the point of efficient utilization in the one-fourth of Iowa schools with less than 500 students; and most questionable in the 68 per cent enrolling under 1000 students.

3. It has become almost impossible to provide <u>curriculum offerings</u> in small schools adequate to prepare mobile Iowa youth for life that most of them will face in Urban America.

4. Because small classes can not be avoided in the smaller schools, the <u>per pupil cost of operation</u> for these small schools has reached an extremely high level. The years ahead will see the gap in per pupil operation costs between reasonably sized schools (1200-1500 or larger) and the small schools continually widened.

5. The 1967 School Support Law contains features which make it <u>impossible for the individual school district to support its schools completely by local effort</u>: all schools must be involved in the new countywide and state-wide program for equalization of educational opportunity, and for providing greater equity in financial support of schools.

Source of Data

In compiling the data used in this paper the writer has drawn extensively upon the following sources:

1. <u>U.S. Census of Population</u>, <u>1960</u>, Iowa Volume
2. Iowa Department of Social Welfare, Vital Statistics
3. Department of Public Instruction:
   a. <u>Data on Iowa Schools</u>, 1966-7
   b. Iowa Public School Data, 1966-7 School Year (Mimeographed)
   c. Iowa Public School Data, 1967-8 School Year (Mimeographed)

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d. Data on Distribution of State Funds to Public
   School Districts, 1967-8 School Year (Mimeographed)
e. Data secured directly from the Department on county
   tax rates, per pupil distribution of county property
   and income tax, and distribution of state aid.

4. Great Plains Study, "A design for Educational Organization
   in Iowa" Final Report, June 1968

II

THE EFFECT OF DECLINING RURAL POPULATION ON SCHOOL ENROLLMENT

Three factors are operating in rural Iowa counties to reduce
Iowa population, and hence, Iowa school enrollments. They are:

a. A generally declining birth rate, now much lower in rural
counties than in urban ones, and lowest in southern Iowa
rural counties;
b. The exodus of young people from rural counties to cities,
thus reducing the percentage of the population in rural
counties of child bearing age; and
c. The migration of rural and small town families to the
cities as a result of increasing size of farms, and of
competition with urban super market methods of distri-
bution.

These three factors will be discussed in order.

1. The Effect of Declining Birth Rates Upon School Enrollment.

Birth rates have declined markedly, nationwide as well as
locally, since the high levels maintained during the 1950's. Table
I shows these data for the United States, Iowa, Iowa cities, Iowa
rural areas, and selected Iowa counties.

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TABLE I

BIRTH RATES PER 1000 POPULATION FOR SELECTED YEAR IN
THE UNITED STATES AND IN IOWA*

| Year | United States | Iowa | Iowa Cities | Selected Iowa Counties | | | | |
				Linn	Scott	Taylor	Monroe	Kossuth
1820	55.2							
1860	44.3							
1900	32.3							
1920	27.7							
1935	18.7							
1940	19.4	18.6						
1945	19.5							
1950	23.6	24.1						
1955	24.6	23.9	24.5	24.9	23.9	17.8	17.9	25.9
1957	25.0	23.3	24.8	27.1	24.4	16.6	21.5	24.1
1960	23.7	23.2	25.5	26.3	25.5	14.8	17.8	26.0
1963	21.7	20.8	22.5	25.6	23.6	13.7	17.4	22.5
1965		18.4	20.1	22.7	23.9	11.2	15.2	17.4
1966	18.5	17.7	19.4	22.7	22.3	12.4	12.2	16.9
1967		16.4		22.2	22.6	10.3	12.3	15.1

*SOURCES: U.S. Census, 1960
Iowa Department of Health, Vital Statistics

Tables I-IV in the Appendix provide detailed material on
birth rates, age characteristics of population, change in population
by counties from 1940 to 1980, and changes in school enrollment
from 1961-2 to 1966-7. Comparisons are made for 18 counties con-
taining the 22 Iowa cities enrolling more than 3500 students (the
22 cities enrolled 38.9 per cent of Iowa students in public schools
in 1967-8) for 19 southern Iowa counties, none with a city of
8,000; for 19 northwestern Iowa counties, one with a city just
over 8,000; and for the 21 Iowa counties with smallest school
enrollments in 1966-7. Condensations from these tables are used
to illustrate these factors which influence school enrollments.
Data used are live births per 1000 population.

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Except for declining birth rates in southern Iowa
counties, rural counties generally had as high birth rates
in 1955 as did the 18 urban counties. Table II illustrates
the change in birth rates in Iowa counties from 1955 to 1967.

TABLE II

CHANGE IN IOWA BIRTH RATES, 1955 TO 1967.*
(Averages of the Counties in Each Category)

Categories	Birth Rate Characteristics				
	1955	1967	Ratio 1967/1965	Ratio Co 1967 State 1965	Ratio Co 1967 State 1967
1. 18 Counties Containing Iowa's 22 Cities enrolling cver 3500	23.8	18.6	.78	.78	1.13
2. 19 counties in south and south-west Iowa—all rural ·	18.6	12.1	.65	.51	.74
3. 19 counties in northwest Iowa—rural	25.0	14.4	.58	.60	.88
4. 21 counties with smallest enrollment	20.6	12.6	.61	.53	.77
5. Iowa Average	23.9	16.4	.69		

*SOURCES: U.S. Census, 1960, Iowa
Iowa Department of Health, Vital Statistics
DPI, Data on Iowa Schools, 1966-7, p 7-9
DPI, Great Plains School District Organization
Study, Final Report, June 1968, pp 26, 38-41

In 1955 southern Iowa counties already had birth rates
below the state average. The average in the 19 southern rural
counties was 18.6, 78 per cent of the state average. Urban
counties had an average birth rate of 23.8, and northern rural
counties 25.0. The state average was 23.9 births per 1000 of
population.

But by 1967 a marked decline had set in in all rural counties. The state average was 16.4 births per 1000 population, the 18 urban counties averaged 18.6, the southern Iowa counties 12.1, and the northern Iowa counties 14.4 births per 1000 population.

Interpreted in terms of a normal class of 25 students, the 1955 birth rates in Iowa generally would have provided almost this optimum number, 23.9 students. But by 1967 there was a great spread between the enrollments in the urban classroom for 1000 population, and the rural classroom. The 18 urban counties would have had 18.6 students per 1000 population, the southern Iowa counties 12.1 students, and the northern Iowa counties 14.4.

Even greater are the extremes in classroom enrollment in 1967 between Iowa's most rapidly growing cities and Iowa's most rapidly declining rural counties. The Linn county classroom would have had 22.2 students, Scott county 22.6, Taylor county 10.3, and Davis county 10.4. Kossuth county, in northern Iowa, would have 15.1 students in a comparable classroom.

In terms of school enrollment, these changing birth rates mean that many rural counties will have need for less than half the facilities of typical urban counties per 1000 people, and for only two-thirds the facilities they themselves needed in 1955. The factors of out migration of young people and of vacated farms and business houses further reduces the need for facilities in rural counties as compared to urban counties.

2. Exodus of Child Bearing Age Adults to the Cities from Rural Counties.

Lower birth rates in rural counties could suggest that there are fewer prople per 1000 population in the child bearing age in rural counties than in the cities. Age characteristics of the population support this contention. The average age of people in rural counties is higher than that in urban counties, the per cent of the people in the 18-64 wage earning age is higher in urban centers, and rural counties have a much larger portion of the retired people than do urban areas. These data are shown in Table III.

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TABLE III

AGE CHARACTERISTICS OF THE POPULATION IN IOWA (1960)*

Categories of Counties	Median Age in Years	Per cent of Population 18-64 yrs	Per cent of Population over 65 yrs
1. 18 counties containing Iowa's 22 largest schools	29.4	53.7 %	11.1 %
2. 19 southern Iowa counties-rural	35.7	51.2	15.2
3. 19 northwestern Iowa counties-rural	30.5	50.5	11.9
4. 21 counties with smallest enrollments	34.5	50.8	14.8
5. Iowa average	30.3	51.1	13.2

*SOURCES: Same as Table II

The urban counties have an advantage of 1.1 years on northern Iowa rural counties, and a significant 6.3 years on the southern Iowa counties. Urban counties have 2.5 per cent more of the population in the 18-64 age group than southern counties, and 3.2 per cent more than northern Iowa counties. Southern Iowa counties have 4.2 per cent more in the above 65 age group than the cities, while northern Iowa counties have 3.7 per cent more than the cities.

When extremes in city growth and rural decline are compared the results are again startling. In average age of population, Linn county has 28.5, Blackhawk 26.8; while among southern Iowa counties Wayne has 40.1 years and Taylor 38.6; and northern Iowa county of Kossuth has an average age of 28.1 years. In percentages of population between 18 and 64 years Polk county has 55.2 per cent, Linn 54.7, Taylor 49.8 and Monroe 49.5, and Kossuth 49.8 per cent. In terms of per cent of population over 65 years, Linn county has only 9.9 per cent, Scott 9.8, Taylor 18.6, Wayne 19.1, and Kossuth county 11.5 per cent. These data point to more people in the urban counties in the child-bearing age, and thus, a greater potential for increasing school enrollments in the future.

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3. Migration of Families from Rural Counties to the Cities.

Increasing size of farms and declining populations of small towns suggest an added factor of decline in rural school enrollments, and a proportionate increase in school populations in the cities. Table IV shows the change in population in selected counties from 1940 to 1960, the projected change from 1960 to 1980, and the expected relation of 1940 to 1980 populations.

TABLE IV

CHANGE IN POPULATION IN SELECTED IOWA COUNTIES, 1940 to 1980*
(Median Figures in Each Group of Counties)

Categories of Counties	Per cent Change 1940 to 1960	Per cent of Change 1960-1980	Index of Change 1980 over 1940
1. 18 counties with 22 largest schools	+ 14.0%	+ 9.7%	1.35
2. 19 southern Iowa counties-rural	- 19.2	- 29.5	0.53
3. 19 northwestern Iowa counties-rural	- 3.5	- 16.7	0.77
4. 21 counties with small-est enrollments	- 17.9	- 25.4	0.62
5. Iowa Average	+ 9.0	+ 2.0	1.11

*SOURCES: Same as Tables II and III

Iowa population has grown 9 per cent from 1940-60, it is expected to increase another 2 per cent from 1960 to 1980. The 22 cities had a median increase of 14 per cent from 1940 to 1960, and expect another 9.7 per cent median increase from 1960 to 1980; at which time their populations will be one-third larger than in 1940. Southern Iowa counties suffered a 19 per cent loss from 1940-60, expect a larger 30 per cent loss from 1960 to 1980, at which time they can expect only 53 per cent of the population they had in 1940. Northern Iowa counties lost only 3.5 per cent from 1940-60, but can expect a larger 16.7 per cent loss from 1960

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to 1980, at which time they will have 77 per cent of the 1940 population. In terms of school facilities, this population loss can mean half the children in the southern counties in 1980 that they had in 1940.

Again, the extremes in growth potential are evident in a comparison of selected rural and urban counties. Linn county can expect 274 persons in 1980 for every 100 they had in 1940, Scott county 188; Monroe can expect only 40 persons for each 100 in 1940, Taylor 43; and Kossuth county in northern Iowa could have 77 persons for each 100 in 1940.

In terms of relative school enrollment in 1980 as compared to 1940, Taylor county can expect the class to drop from 25 to 11 students, while the Linn county classroom would have been divided to accomodate the 65 students which compared to the 25 in 1940.

4. <u>Changes in Enrollment from 1961 to 1966.</u>

As shown in table I birth rates in Iowa generally remained at a high level until after 1960. The first real affect of declining birth rates was felt in the September 1968 kindergarten enrollment. Thus, if there were no out-migration of child-bearing families from rural counties, the enrollments from 1961 to 1966 should have shown the affect of this increased birth rate; they should have been larger in 1966 than in 1961. This was true of the 18 urban counties where enrollments increased 10.6 per cent in the five year period. They increased a much smaller 1.8 per cent in the 19 northern Iowa counties; and they decreased a median of 2.5 per cent in the 19 southern Iowa counties.

A comparison of the rapidly growing city and the declining rural county makes the contrast more obvious. Scott county had an enrollment increase of 24.3 per cent from 1961 to 1966; Linn saw an increase of 22.8 per cent; of the southern Iowa counties Wayne lost 13.0 per cent of its students; Taylor 12.2 per cent; Ringold and Decatur each 10.6 per cent; while Kossuth county gained 4.6 per cent. These data are shown in Table V.

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TABLE V

CHANGE IN PUBLIC SCHOOL ENROLLMENT, 1961-2 to 1966-7.*
(Medians of the Counties)

Category of Counties	Enrollment Change 1961-2 to 1966-7
1. 18 urban counties	+ 10.6 %
2. 19 southern Iowa counties	- 2.5
3. 19 northern Iowa counties	+ 1.8
4. 21 smallest enrollment counties	- 2.5
5. State Average (Median)	+ 1.1

*SOURCES: DPI, Data on Iowa Schools, 1966-7, pp 7-9

The demographic factors discussed in Part II support the contention that small schools will have about 50-65 per cent of the students in 1978 that they had in the early 1960's; that the loss will be in rural counties and small schools and some of this loss in rural counties will be reflected in higher enrollments than the birth rates would predict in the city schools. The inferences that one can draw from these data are basic to the problems that small schools face today, and will find more perplexing in the future:

1. Adequate staffing
2. Adequate curricular offerings
3. Per Pupil costs of operation

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III

STAFFING PROBLEMS OF THE SMALL SCHOOL

Staffing problems in small schools result from state laws
demanding wider curricular offerings and special services, and
from the smaller class sizes that must result in small schools.
Generally these staffing requirements can not be fully met; if
they are it is at a much increased per pupil cost of operation.

1. _Schools Deficient in Staffing and in Curricular Offerings, 1968-9._

During December 1968 the Iowa Department of Public Instruc-
tion notified 116 Iowa School districts (25.4 per cent of the 455
schools) that they were deficient in either staffing or curricular
offerings in terms of the criteria set out by the 1965 Iowa Legisla-
ture. Table VI shows how these 116 schools were distributed in
enrollment. Sixty-eight per cent of Iowa districts enroll less
than 1000 students; 98.6 per cent of the deficient schools were in
this lowest two-thirds of Iowa schools by enrollment category.

TABLE VI

IOWA SCHOOLS EXHIBITING DEFICIENCIES IN 1968-9*

ADM of School 1968-9	Schools in Category		Number of Schools with Deficiencies	Per cent of Schools in Category with Deficiencies
	Number	Per cent of 455		
Below 500	123	27.0 %	60	48.8 %
500-749.9	120	26.3	41	34.2
750-999.9	65	14.4	11	16.9
1000-1499.9	60	13.3	3	5.0
1500-1999.9	22	4.8	0	0.0
2000-299.9	39	8.5	1	2.6
3000 up	26	5.7	0	0.0
TOTALS	455	100.0	116	25.5 %

*SOURCE: Direct data from Department of Public Instruction
December 1968

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The ability of schools to meet the standards set by the 1965
Iowa Legislature for staffing and for curricular offerings increases
as the size of the school increases. If 1200-1500 is considered the
smallest desirable enrollment, then it can be seen that very few
school districts with this enrollment or greater have a problem in
meeting these standards.

2. Teaching in Major Area of Preparation.

Research has shown that teachers in smaller schools are
more likely to be teaching in other than their major area of prep-
aration, and also, are likely to be teaching subjects requiring
several daily preparations. In 1966-7, in Iowa schools with under
500 enrollment (119) only 23.2 per cent of class assignments were
in the teacher's major area of preparation; while in the 58 schools
with more than 2000 enrollment 44.2 per cent of class assignments
were in the teacher's major area of preparation.[1]

3. Requirements that High School Curricular Offerings be Increased.

New problems in staffing were created for the small school
by the 1965 Legislature in the section on Standards (Section 257.25).
These included foreign language, advanced courses in science, mathe-
matics and vocational areas, and in art. Also added to the staff
were such personnel as elementary principals, guidance counselors
and librarians. It is the contention of the writer that schools
with under 1000 enrollment can not fully utilize such specialized
personnel; if they do fully meet staffing requirements of the 1965
Iowa Code it will be at the expense of a much increased per pupil
cost of operation. The following table suggests the writer's
concept of staffing requirements of schools, using 500, 1000 and
1500 enrollments.

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[1]DPI, Data on Iowa Schools, 1966-7 page 82

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TABLE VII

ADMINISTRATIVE AND SUPERVISORY STAFFING RATIOS*

	Criteria-Students per Staff Person	Enrollments in Schools (kg-12)		
		500	1000	1500
Probable Distribution of students				
Kg-6		270	540	810
7-12		230	460	690
Staffing Needs				
Superintendent	1000	.50	1.00	1.00
Asst. Supt.	1500			.50[a]
Secondary Principal	500	.50	1.00	1.40
Elementary Principal	500-600	.50	1.00	1.50
Secondary Guidance	300	.75	1.50	2.00
Elementary Guidance	?	.50	1.00	1.50
Library	500	1.00	2.00	3.00
TOTAL NEEDED		3.75	7.50	10.90
MUST EMPLOY		6.00	8.00	11.00
Pupil/Staff Ratio		1/83	1/125	1/136
Per cent Utilized		62.5 %	93.3 %	99.1 %

*SOURCES: DPI Standards; Code of Iowa, 1966, Section 257.25;
        Personally devised ratios.
a. In smaller schools the district secretary is about half
        time.

It could well cost the school of 500 students $60,000 a year
for the 6 persons listed. With 62.5 per cent utilization there is
a financial waste of $22,500 in attempting to meet staffing standards.
Since one-fourth of Iowa schools have less than 500 students the waste
would increase as the enrollment drops from 500 students to a low of
200 students.

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INADEQUATE CURRICULAR OFFERINGS IN SMALL SCHOOLS

Sixteen units (a subject carried 55 minutes a day five days a week for a school year) are normally required for graduation from a four year high school. Some authorities suggest that the curricular offerings should be three times the graduation requirements (48 units). Table VIII shows that no school in Iowa with less than 750 students (55.5 per cent of Iowa's 455 schools) meets this recommended level of curricular offerings. Only 14.4 per cent of Iowa's schools meet the 48 unit recommendation.

TABLE VIII

CURRICULAR OFFERINGS IN IOWA SCHOOLS 1966-7*

Number of Units	Enrollment by Categories							Total	Per cent of Total
	Under 500	500 749	750 999	1000 1499	1500 1999	2000 2999	3000 up		
60 up						6	19	25	5.5 %
54-59.9			1	1		6	4	12	2.6
48-53.9			3	4	10	12	1	30	6.7
42-47.9	1	8	12	27	18	6	1	73	16.0
36-41.9	25	68	40	23	2	2		160	35.1
30-35.9	77	43	14	2		1		137	30.1
Under 30	17	1						18	4.0
TOTALS	120	120	70	57	30	33	25	455	100.0

*SOURCE: Data on Iowa Schools, 1966-7, p 79

Data previously presented which suggested a high degree of mobility in Iowa youth would reinforce the contention that rural youth demand as wide a range of curricular offerings as do urban youth. Rural youth will be living next door to, and competing with urban youth for jobs after high school. Table VIII shows that 285 of the 310 (92 per cent) schools with enrollments of under 1000 students offer less than 42 units of work; while only 5 per cent (5 of 88 schools) in the above 1500 enrollment area offer less than 48 units of work.

V

HIGH PER PUPIL COSTS IN SMALL SCHOOLS

The per pupil costs in small schools have always exceeded
those in larger schools, due largely to smaller teacher/pupil
ratios and to the utilization of facilities and equipment. The
difference is greater at the secondary level than at the elemen-
tary level. But the spiral of increasing costs, the demand for
wider curricular offerings, and the requirements of increased
administrative and supervisory staffing have aggravated the
differences in per pupil costs between the small and the large
districts. Table IX illustrates the lower pupil/teacher ratios
in small schools in the three levels of elementary, junior and
senior high school.

TABLE IX

PUPIL/TEACHER RATIOS IN IOWA PUBLIC SCHOOLS 1966-7*

Enrollment Category	Number of Schools	Pupil/Teacher Ratios by Departments		
		Kg-6	7-9	10-12
Under 500	120	19.7	21.0	11.8
500-749.9	120	20.8	15.8	14.9
750-999.9	70	21.6	18.5	15.7
1000-1499.9	57	22.6	25.8	17.6
1500-1999.9	30	23.6	20.7	17.8
2000-2999.9	33	24.3	21.5	19.3
3000 up	25	28.1	22.0	21.7
TOTALS	455			

*SOURCE: Data on Iowa Schools, 1966-7, p 31

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The more nearly optimum elementary ratio in smaller schools justifies maintaining elementary schools at more than one site in a district. Ratios show less divergence between small and large schools in the junior high than in the senior high. At the high school level the school under 500 has only 66 per cent the utilization of teachers as does the school in the 1000-2000 enrollment range. In such a comparison a $7500 teacher's salary would mean a per pupil charge of $150 in the smallest schools if the teacher instructed 50 students a day, and $50 per student if the load could be held at 150 students a day. Or with a 66 per cent utilization as compared to the middle sized school, the smaller school would be wasting $2500 of the $7500 of teacher's salary.

Only in general education courses such as English, social studies, and basic mathematics and science courses can the small school expect to approach the 25 per teacher optimum. In the advanced courses in mathematics, science, in foreign language, and in many vocational courses the classes will tend to have fewer than 10 students, resulting in very high per pupil costs of instruction.

Per pupil costs figures for 1967-8 show that operation costs per pupil decrease steadily from the smallest to the largest enrollment categories.

TABLE X

PER PUPIL COSTS OF OPERATION (kg-12) 1967-8*

Enrollment Category	Number of Schools	Per Pupil Costs of Operation		
		Highest	Mean	Lowest
Under 500	123	$ 991	$ 739	$ 469
500-749.9	120	873	761	489
750-999.9	65	917	636	507
1000-1499.9	60	854	627	470
1500-1999.9	22	794	604	506
2000-299 9.9	39	856	591	450
3000 up	26	693	573	470
AVERAGE	455 (total)	$ 991	$ 612	$ 450

*SOURCE: DPI, Data which will be included in Data on Iowa Schools, 1967-8.

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NOTE: Costs of operation omit:
        The schoolhouse fund
        Capital Outlay in the General Fund
        Debt Service in the General Fund

The data in Table X shows a change in a trend that had existed for many years: an upturn in per pupil costs for the largest schools. Probably the fact that the largest schools now have the lowest per pupil costs of operation is due to the demands on all schools for broader curricular offerings and for more special-ized personnel. Larger schools always have had both of these advantages. It is costing the smaller schools more to attain these same ends.

The $739 mean cost of operation in the 123 schools with less than 500 enrollment is 18 per cent above the $627 mean of the schools in the 1000-1500 enrollment bracket, and 29 per cent greater than the $573 mean of the schools enrolling more than 3000 students. If higher expenditures mean better schools, then the $999 top in the smallest schools would be the best in the state. It spends 45 per cent more per pupil than the top school in the largest enrollment group.

Higher per pupil costs of administration are a necessary attribute of smaller enrollments. Administration refers to those costs of management which include the board of education and the central office. The salaries and office expense of principals and supervisors are included under instructional costs.

The staffing ratio table (Table VII) suggests that enroll-ments in excess of 1000 are necessary in order to more efficiently utilize administrative personnel. The following table shows that per pupil administrative costs decrease steadily as size of enroll-ment increases.

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TABLE XI

ADMINISTRATIVE COSTS PER PUPIL IN IOWA'S SCHOOLS 1966-7.*

Enrollment Category Grades 9-12	Number of Schools	Administrative Costs Per Pupil	Per cent of Total Operation Costs
Under 100	27	$ 50.34	7.07 %
100-149.9	79	41.76	6.89
150-199.9	82	35.15	5.94
200-299.9	113	30.32	5.45
300-399.9	52	26.27	4.87
400-499.9	24	22.82	4.27
500-699.9	37	22.04	4.27
700-999.9	16	17.08	3.60
1000 up	23	12.07	2.36
Total Schools	455		
AVERAGE-ALL SCHOOLS		$ 21.64	4.67 %

*SOURCE: DPI, "Iowa Public School Data, 1966-7 School Year" (Mimeographed)

The $50.34 per pupil cost of administration in the 27 smallest schools is 1.91 times the $26.27 cost in schools with 1000-1500 total enrollment (200-399 in grades 9-12), and 4.16 times the per pupil cost of $12.07 in Iowa's 23 largest schools. (These 23 largest schools enrolled 38.9 per cent of Iowa's 642,852 Average Daily Membership in 1967-8.) Also the per cent of the operating costs in the smallest schools allocated to administration is 1.45 times that of the 1000-1500 enrollment category, and 3.07 times the administrative costs in the largest systems. Larger school districts, even with the same number of attendance areas, could reduce excessive costs of administration. Larger high school enrollments will do much to reduce the higher per pupil costs of instruction now existing in smaller schools as compared to Iowa's larger systems.

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PROBLEMS IN FINANCING SMALL SCHOOLS CREATED BY THE 1967
IOWA SCHOOL SUPPORT LAW

Before 1967 the higher per pupil costs of operating the smaller
schools were borne entirely by the local district through the
property tax levy for schools. Even state aid was paid on a per
pupil basis (except for the small amount of equalizing aid, none of
which went to the small schools because of higher per pupil wealth.)
and so was not affected by enrollment or per pupil costs. The
1967 School Support Law changed the incidence of financing local
schools in three ways.

1. A countywide uniform millage is levied to support 40% of
the total costs of operation of all schools in the county. (The
schoolhouse fund, state and federal aids are deducted.) The proceeds
from this countywide levy are distributed among all public schools
on an average daily membership basis (ADM). In 1967-8 the countywide
millage varied from 9.49 mills in Carroll county to 23.17 mills in
Linn county. The per pupil amount distributed throughout the county
varied from $239 per pupil in Audubon county (19.76 mills) to $130
per pupil in Monroe county (20.57 mills). In this area the smaller
school district generally contributes to the education of other
children in the county. This results from two factors: (a) higher
taxable values per pupil in smaller districts tend to raise more
money per pupil on a given countywide levy in the small district
than in the larger one; and (b) higher per pupil costs in the smaller
school boosts the per cent of total operation costs of the larger
school shared countywide. These data will be explained further in
relation to Table XII.

2. Of the income tax collected in a county 40 per cent is re-
turned to the county to be distributed on an average daily member-
ship basis among all schools in the county. This tax reverses the
above incidence from rural property to incomes, most of which are
in the larger towns and cities.

3. In 1968-9 $111,000,000 raised from income and consumption
taxes by the state is returned to local districts in terms of
relative per pupil wealth and total expenditures of the district.

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TABLE XII

COMPARISON OF FINANCIAL DATA IN SELECTED IOWA SCHOOLS
BASED UPON SELECTED ENROLLMENT CATEGORIES FOR 1967-68 and 1968-69*

Characteristics Mean Figures	23 Smallest Schools	16 Schools Each from a county with a smaller school	23 Schools ADM 1200-1500	22 Schools ADM Over 3500	State Averages
1. ADM 1967-68	258	1,358	1,315	15,779	702(med)
2. TAXABLE VALUE Per ADM 1967-8	$15,810	$10,674	$10,670	$ 7,974	$9,845(med)
3. OPERATING COST Per ADM 1967-8	$ 799	$ 587	$ 614	$ 571	$ 638
4. GENERAL FUND Millage Levy					
1966-7	39.97	42.92	44.30	52.52	42.71
1967-8	40.41	39.04	42.01	48.66	
Change (mills)	+0.44	-3.88	-1.29	-3.86	-1.23(est)
5. COUNTY EQUAL- IZATION					
a. Property Tax 1967-8					
Mills	16.17	16.17	17.27	19.79	17.45
Dollars per ADM	$ 187	$ 187	$ 180	$ 176	$181
b. County Income Tax Distr. 1968-9 Per ADM	$ 46.00	$ 46.00	$ 45.90	$ 63.02	$ 43.75
c. Percent of County Fund From Income	19.7%	19.7%	21.2%	27.0%	19.6%
6. STATE AID					
a. Percent of allowable 1967-8 expenditures	60.4%	71.9% -	71.8%	79.1%	75.0%
1968-9	59.8%	69.5%	72.1%	79.5%	75.0%
b. Dollars per ADM in Aid 1967-8	$ 150	$ 123	$ 131	$ 131	$ 142
1968-9	197	149	169	163	172
Increase $	+47	+26	+38	32	30
Increase %	31.3%	21.4%	28.9%	24.4%	

* SOURCES: DPI, "Data on Distribution of State Aid Funds to Public High
   School Districts," (Mimeographed) 1967-8; 1968-9
         "Iowa Public School Data" (Mimeographed), 1967-8 school
   year; 1966-7.

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The three premises stated on the preceding page will be
analyzed in relation to data in the above table. The detail for
each category of school is found in Tables VI-X in the Appendix.

1. <u>Countywide sharing of 40 per cent of the General Fund costs in
the county</u> (less deductions for state and federal aids).

Such a sharing places a higher per pupil contribution on
the small, generally wealthier school, than the school with larger
enrollment which generally has less per pupil wealth. That the
smaller schools tend to have larger per pupil wealth can be
established by reference to line 2 in Table XII. The per pupil
wealth decreases as the enrollment in the category increases. The
$15,810 mean per pupil taxable valuation of property in the smallest
schools is 1.49 times that of the $10,670 in the 1200-1500 enroll-
ment category, and 1.99 times that of Iowa's 22 largest school
districts. For each 10 mills of countywide tax the small school
would raise $158.10 per pupil, the 1200-1500 enrollment school
would raise $106.70 per pupil, and the city school district would
raise $79.74 per pupil in enrollment. Since the proceeds are
divided upon an ADM basis in the county, each school would receive
the same amount. In the first comparison the small school would
share $51.40 per pupil with the 1200-1500 school enrollment group,
or $78.36 per pupil (about half of what the small school raised with
this millage on its property) with the largest school.

Also, because its costs per pupil are higher, the small
school would receive back a smaller per cent of total costs than
would the larger school. It asks for 40 per cent of $799 (less
deductions) while the school with 1200-1500 enrollment asks for
40 per cent of $587 per pupil (less some aids) from the countywide
levy.) Each gets back the same amount per pupil. A hypothetical
problem involving the <u>mean</u> school in the first two categories of
Table XII appears on the following page:

TABLE XIII

	Smallest School	Paired School Same County	Total Sums of data for two schools
Enrollment	258	1358	1616
Per Pupil Operating Costs	$ 799	$ 587	
Total Operating Costs	$206,142	$797,146	$1,003,286
Less $200 per pupil aids			323,200
Total costs allowable against county 40% of costs			670,286
40% of costs			268,144
Per ADM distribution in county	$ 166	$ 166	$ 166
Percent of per pupil operating costs	20.8%	28.3%	
Raised per pupil ADM	$ 235	$ 159	$ 166 (14.85 mills)

Thus the small school would contribute to the county fund
$235 for each of its students in average daily membership, while its
larger neighbor would contribute $159 per pupil. Since each would get
back $166 per pupil the smaller school would receive but 20.8 per cent
of its $799 per pupil cost while the larger school would receive back
28.3 percent of its $587 per pupil cost of operation. These data would
suggest that the financial welfare of the smaller school district would
now be better served by combining with other districts in the area rather
than remaining alone. This was not true before the 1967 law was passed.
Higher per pupil valuations made it possible to spend more money per
pupil at the same or lower rate than its neighbor whose valuations were
lower and who spent less money per pupil.

2. The 40 percent of income tax collected in the county distributed
   throughout the county on an ADM basis.

Larger income taxes per capita are paid in the city than in
rural areas. Thus the rural areas will receive a contribution from
urban residents in this regard. This can be shown by the fact that
urban areas contributed an average of $63.02 per ADM in 1968-9 com-
pared to $46.01 per pupil in the counties containing the smallest

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and the paired schools.

Income tax payments per pupil in 1968-9 ranged from a low in Ringgold county of $23.83 per pupil to a high in Dubuque county of $102.39 per pupil. This wide range results from two factors: (a) Difference in relative incomes in urban counties as compared to rural counties, and particularly southern Iowa counties; and (b) the percent of students in parochial schools. Since county equalization funds are distributed only to students enrolled in public schools, the per pupil distribution is higher where considerable of the students attend parochial schools. The median county refund per pupil in income tax in 1968-9 was $43.75 per pupil, with one-half of the counties distributing between $37.30 and $50.60 per pupil in ADM.

However, the largest share of the county equalization fund comes from the uniform property tax millage. Statewide the county equalization fund averages $181 (1967-8) from the countywide millage on property in the county, and $43.75 from the 40 percent refund of income taxes collected in the county (1968-9), a total of $223.75 in county equalization funds. The income factor averages 19.6 percent of the total. There is a wide range, however, in the percent of the county equalization fund from income, from 33.5 percent in Dubuque county to 10.2 percent in Ringgold County, a southern Iowa county with no cities and with no children attending parochial schools.

3. Distribution of State Aid

The $111,000,000 of state aid in 1968-9 was distributed on a formula which considers:

    a. Relative wealth of districts within the state. In determining wealth, .7 of the market value of property (assessed value by law is 27 percent of market value) and .3 of the gross income in the district.

    b. Per pupil expenditures.

    c. The public school ADM plus one-half of all children from 5-21 not in public schools.

The authors of the compromise State support bill may not have intended it thus, but in operation there is no pattern of equalization observable in the formula. By establishing no ceiling on per pupil expenditures eligible for state aid the relative wealth part of the formula has been nullified by the total expenditure part of it. In fact, if there is a pattern of state aid it shows that aid paid is:

    a. Directly proportional to
        (1) Total per pupil expenditures
        (2) Per pupil taxable valuation of property

    b. And inversely proportional to
        (1) Percent of allowable aid
        (2) Enrollment in the district

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Mean Figures	State Aid Per ADM 1968-9	Directly Proportional to Taxable Value Per ADM	Expend. Per ADM	Inversely Proportional to Percent of Aid Allowed	Enrollment of Dist.
23 Smallest Schools	$197	$15,810	$799	59.8%	258
23 Schools with ADM 1200-1500	$169	$10,670	$614	71.1%	1,315
22 Cities with ADM over 3500	$163	$ 7,974	$571	79.5%	15,779

Concisely, largest amounts of aid go to:

a. The smaller schools because they have higher pupil costs due to lower teacher/pupil ratios.
b. The schools who spend more dollars per pupil.
c. The schools with higher per pupil values because they can afford to spend more on education per pupil.

Certainly, this was not the intent of the law.

Possibly, the last minute compromise to get the bill ready before adjournment of the General Assembly in 1967 failed to recognize the effect of the "1.00-(.25 x)"part of the formula. This tends to constrict the range of percents of state aid allowable. Some computations would show that districts whose wealth had a range of 4 to 1 would receive aid which ranged only from 7 to 4.

The $28.00 per pupil difference in state aid between that given the 23 smallest schools and the 23 schools with enrollments from 1200-1500 students represents a 1.76 mill rebate to the small school for this higher per pupil cost. This rebate comes from income and sales taxes paid by all people in Iowa. If it supports inefficiency in operation because of lower teacher/pupil ratios and less effective utilization of buildings and equipment, then all Iowans who pay this extra cost are concerned. They are justified in asking that the smaller school either (a) combine with a larger neighbor to reduce these per pupil costs, or (b) be limited in payment of state aid to a foundation level. Additional costs would then come from local property taxes.

Change in State Aid Perspective from 1967-8 to 1968-9

The discrepancy between the factors on wealth and actual aid paid have increased from 1967-8 to 1968-9. This fact is due to two factors:

a. Some special equalization aid was paid to those with lower per pupil taxable values (mainly the cities) in 1967-8. This was not available in 1968-9; and

b. The per pupil costs of operation increased by a greater number of dollars in the smaller schools than in the larger schools.

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Table XII illustrates the fact that state aid payments to the smallest schools increased $47.00 from 1967-8 to 1968-9, or 31.3 percent. The cities had an average increase of $32.00 or 24.4 percent. On the basis of state average aid the increases would be 27.3 percent and 18.6 percent respectively.

Also, from Tables VI and VIII in the appendix one can note that: The 22 cities were entitled to 79.5 percent aid, but received $9.00 less per pupil than the state average in 1968-9; the 23 smallest schools were entitled to 59.8 percent state aid but received $25.00 per pupil more than the state average.

4. The Local Property Tax to Provide the Remainder of the Costs

The countywide property tax, the distribution of 40 percent of the income tax collected in the county, and the state aid formula do not cover all of the per pupil costs in the General Fund. The remainder must be obtained by a property tax levied against the property owners in each specific district. The greater the per pupil expenditure, the greater will be the amount per pupil which must be made up by this local property levy. Here is where the smaller schools are finding themselves at a disadvantage. Their expenditures have risen rapidly to meet (a) inflation, (b) greater curricular demands, and (c) increased staffing requirements. The 1.76 mill rebate is only a part of these extra expenditures due to less efficient operation in the small school.

Note that in Table XII the smallest schools had a 39.97 mill levy in 1966-7 under the old laws, and a 40.41 mill levy in 1967-8, an increase of 0.43 mills. On the other hand, their larger neighbors had millages of 42.92 in 1966-7 (above that of the small schools) and 39.04 mills in 1967-8, a drop of 3.88 mills. The countywide millage levy, and the increased per pupil costs has removed any advantage property taxwise that accrued to the small school in the past with its scattered population and higher per pupil valuations.

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5. Effect of Economic Growth Factor on Expenditures.

No school is permitted to increase its budget for any year over the preceding year by more than the economic growth factor. This factor is the three year average of growth in Iowa in income tax collections, sales tax collections, and property assessments. In 1967-8 it was 13+ per cent, and in 1968-9 11- per cent, about a 25 per cent increase over the two year period. Twenty-five per cent of $800 is $200, and 25 per cent of $600 is $150. Thus in two years, the smaller, higher spending district could increase its budget by a figure $50 more per pupil than the larger, more economical school. Obviously, such procedures do not make for efficient operation. Rather, they aggravate an already undesirable factor in the law—paying state aid on an unlimited general fund expenditure. Such benefit to the small school is not likely to continue. Both those paying state income and consumption taxes, and local property owners will see the need of more efficient operation which can come only by larger administrative units and larger high school enrollments.

SUMMARY AND CONCLUSIONS

It has been the purpose of this paper to show that (a) population trends, (b) curriculum and (c) staffing demands, and (d) new methods of financing education are placing the small school in an increasingly precarious position. This precarious position exists both in terms of the quality of education that can be offered in the district, and the per pupil costs of such an education. The small school can visualize half empty classrooms as those starting to school beginning in 1968-9 move up through the grades; and the small school will find it increasingly expensive to provide the curricular offerings and the specialized staff now demanded by the 1965 legislative enactments. Nor can small schools expect proportionate relief from the new tax law. Rather, they will find themselves paying from local taxes an increasing portion of these higher costs.

1. What sized district will best serve rural counties?

Careful study of the data provided in this report, and a study of individual Iowa school districts, might suggest that the small school's interest will best be served, if through reorganization, it can become part of a district with at least 1200 students. Districts with 1200 to 2000 students seem to be able to meet realistic staffing and curricular offering standards, and at a reasonable per pupil cost. The figures suggested by the Great

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Plains study as optimum are unrealistic for Iowa in 1969. Thirty-eight Iowa counties in 1966-7 had enrollments less than the 3500 student figure recommended in the Great Plains report. Nor can all counties boast a town of 2500 population. To do either would result in districts so large that the bus ride of the high school student would be excessive.

But the two principles of the Great Plains study have merit. School districts should include more than the number of students now in two-thirds of Iowa's districts if they are to meet staffing standards and curricular needs at a reasonable per pupil cost. Some further consolidation in the immediate future is imperative.

2. What should be the center of a school district?

Many Iowa counties do not have a town larger than 2500 persons. But the Great Plains study principle is sound. New districts should be organized around a larger town. However, lower taxable values, and other problems of larger districts do not suggest that Iowa's largest cities should be the centers of districts containing large rural areas. Nor should districts be organized so that a new high school is built in the open country, nor in a town that is small and declining in population. Those districts who did build in the country have experienced greatly increased costs. On top of this they have a disadvantage in water supply, sewage disposal, fire protection, police protection, and transportation of pupils and of staff. Thus further planning should attempt to make a growing community the center of the expanded district.

Some school buildings in some small communities will need to be abandoned as enrollments decrease. There is a time at which repairs to the building, and increased costs of operating several buildings, far outweigh the cost of new facilities in a central site, and more transportation. Unfortunately, most small small district buildings are a patchwork of three different epochs:

a. 1912-25. A building was built to house grades 1-12 in a small district, either an independent town district or a small consolidated district averaging 24 sections.

b. 1934-50. The gym became too small for a growing interest in athletics, and a new one was built, usually attached to the old building.

c. 1954-63. As the birth rate increased, the elementary building was not adequate. Many new elementary buildings were constructed in small communities. Most were separated by an entryway from the old building. Others built new high school buildings and transferred the elementary grades to the old high school section.

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Building parts at three different times means that there will still be value in some parts of the building for another fifty years, even though the old section has already been amortized. But this issue will have to be faced as enrollments decrease and better high school facilities are demanded.

3. How can specialized services be made available?

A district in excess of 1200 students should make it possible to provide most of the ordinary needs for staffing and curriculum. But some areas of special education, advanced courses, pupil accounting, financial accounting, in-service education, curriculum supervision and construction, and central purchasing will demand larger units. What is the purpose of the Intermediate Unit? The new Area Vocational School?

The desirable school district is one that can furnish a quality education for all students at a reasonable cost. It's major tasks center around:

a. Equality of educational opportunity
b. Equity in the distribution of the tax burden
c. Reasonable distances from the high school attendance center

Neither the 3500 pupil minimum in total attendance, nor a town of 2500 or more should be considered necessary for reorganization. But the principles involved are valid. Districts must be larger, and they should center around growing towns.

4. What should small rural districts do at this time?

The initiative in these reorganizations should come from the rural people themselves. Reorganization should not have to be mandated by an Iowa Legislature. Local people are aware of their particular problems. They should work together on a large area or a countywide basis to draw up a desirable district and to suggest the location of schools. This they should have ready to present to the Commission which the 1969 General Assembly may appoint to study Iowa school districts. They can seek help from specialists in school organization from the Department of Public Instruction or from the four Universities in Iowa.

Some buildings will have to be closed. It is a tragedy that reorganization could not have preceded this last wave of building. But it is expensive to operate several buildings with small total enrollments and small teacher/pupil ratios. How far can Iowa look into the future in planning an educational program?

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APPENDIX TABLE I

Dilemma of the Small School

DEMOGRAPHIC DATA ON 18 Iowa COUNTIES CONTAINING THE 22 SCHOOLS WITH ENROLLMENTS OVER 3500 STUDENTS, 1967-8*   (Column B on Table I in Text)

County	Cities	Birth Rates Per 1000 Population			Age of Pop. 1960 Ave Percent Percent			Change in Pop.			School Enroll Change
		1955	1967	1967 Co 1955 St (a)	Age 18-64 yr	Percent	over 65	1940-60 %	1960-80 %	1980 1940 (b)	1961-6 12
1	2	3	4	5	6	7	8	9	10	11	12
1. Polk	Des Moines West D.M.	23.7	18.7	.78	29.4	55.2%	9.7%	+ 36%	+ 32%	1.81	+11.3%
2. Linn	Cedar Rapids	24.9	22.2	.93	28.5	54.7	9.9	+ 53	+ 79	2.74	+22.8
3. Scott	Davenport Bettendorf	23.9	22.6	.95	29.0	53.8	9.8	+ 41	+ 38	1.88	+24.3
4. Blackhawk	Waterloo Cedar Falls	25.8	20.6	.86	26.8	53.8	11.3	+ 52	+ 38	2.12	+15.7
5. Woodbury	Sioux City	26.8	17.8	.75	30.2	52.5	11.5	+ 3	- 2	1.02	+ 6.4
6. Pottawattamie	Council Bl.	26.2	18.5	.78	28.1	51.8	9.9	+ 25	+ 35	1.68	+ 5.1
7. Clinton	Clinton	23.0	18.4	.77	31.2	52.5	11.4	+ 23	+ 12	1.37	+11.2
8. Story	Ames	28.0	20.2	.85	24.6	58.8	9.9	+ 47	+ 31	1.92	+10.0
9. Cerro Gordo	Mason City	23.8	14.3	.60	30.6	52.1	11.8	+ 11	+ 6	1.18	+ 6.5
10. Wapello	Ottumwa	22.1	14.7	.62	32.5	52.9	12.2	+ 5	- 17	0.86	+ 1.7
11. Webster	Ft. Dodge	25.9	16.8	.70	29.7	51.2	11.6	- 15	+ 7	1.23	+ 9.6
12. Dubuque	Dubuque	27.1	22.2	.93	26.1	51.5	10.3	+ 26	+ 25	1.69	+39.1
13. DesMoines	Burlington	20.1	17.0	.71	32.2	53.2	12.3	+ 12	+ 8	1.32	+13.0
14. Johnson	Iowa City	32.3	23.6	.99	24.4	60.5	8.3	+ 61	+ 61	2.60	+19.8
15. Marshall	Marshalltown	23.2	18.6	.78	31.9	53.0	12.6	+ 7	+ 6	1.14	+ 9.4
16. Jasper	Newton	25.6	14.1	.59	30.3	53.1	11.0	+ 11	+ 7	1.20	+ 6.2
17. Lee	Ft. Madison Keokuk	23.1	14.4	.60	32.6	53.0	12.2	+ 8	- 3	1.04	+ 5.4
18. Muscatine	Muscatine	23.3	19.3	.81	31.5	51.5	13.4	+ 8	+ 7	1.11	+15.5
	AVERAGES	23.8	18.6	.78	29.4	53.7	11.1	± 23	+ 20	1.55	±12.9
	Medians	23.8	18.6	.78	30.0	53.0	11.3	+ 14	+ 10	1.35	+10.6

NOTE: (a) Column 5 is the index of the 1967 birth rate divided by the State Average in 1955.
(b) Column 11 is the index of the 1980 projected population divided by the 1940 population.

* SOURCES: Iowa Dept. of Health, Vital Statistics (3-5); DPI, Data on Iowa Schools, 1966-7(12)
U.S. Census, 1960, Iowa (7-8-9) Great Plains Report, 1968 (6,10)

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APPENDIX TABLE II

Dilemma of the Small School

C. DEMOGRAPHIC DATA COVERING 19 COUNTIES IN SOUTH AND SOUTHWEST IOWA (LOWEST 3 TIERS OF COUNTIES) *

(Largest City involved-- 7667 Population)

County	Largest City 1960		Birth Rates Per 1000 POP.		1967 1955 St.	Age of Pop. 1960 Ave. Age	% 18-64 yrs.	% Over 65 yr.	Change in Population 1940-60 %	1960-80 %	1980 1940	School Enrollment Change 1961-6
			1955	1967	(a)						(b)	
Medians of County Aves.												
1. Fremont	Sidney	1057–	16.7	12.1	.51	35.7	52.1	14.7	– 29.5	– 36.5	0.45	– 5.2
2. Page	Shenand.	6567–	18.9	11.6	.46	37.5	53.3	16.6	– 15.3	– 29.5	0.60	– .1
	Clarinda	5901+										
3. Taylor	Bedford	1807–	17.8	10.3	.43	38.6	49.8	18.6	– 28.0	– 41.0	0.43	– 12.2
4. Ringold	Mt.Ayr	1738–	18.2	9.9	.41	36.1	50.6	15.8	– 29.0	– 40.0	0.43	– 10.6
5. Decatur	Lamoni	2173+	15.6	13.7	.57	34.9	53.0	16.6	– 25.0	– 38.8	0.46	– 10.6
6. Wayne	Corydon	1687–	17.5	11.7	.49	40.1	51.1	19.1	– 26.5	– 37.0	0.46	– 13.0
7. Appanoose	Centerv.	6629–	18.0	13.3	.56	39.8	50.6	19.3	– 23.8	– 38.0	0.41	+ 0.7
8. Davis	Bloomfield	2771–	19.0	10.4	.44	34.6	50.8	14.8	– 17.9	– 23.3	0.63	+ 1.2
9. Van Buren	Keosaq	1023–	19.8	14.1	.59	37.3	50.6	16.9	– 19.0	– 23.2	0.62	– 6.6
10. Monroe	Albia	4582–	17.9	12.3	.57	35.7	49.5	16.3	– 43.5	– 29.2	0.40	– 2.5
11. Lucas	Chariton	5042–	17.1	11.7	.49	37.6	51.2	17.8	– 24.5	– 24.5	0.57	– 0.5
12. Clarke	Osceola	3350–	17.4	11.9	.50	36.9	51.1	16.8	– 19.2	– 31.0	0.55	+ 1.4
13. Union	Creston	7667–	17.4	14.7	.61	36.8	50.3	17.3	– 15.5	– 29.6	0.59	+ 1.9
14. Adams	Corning	2041–	20.1	12.1	.51	35.0	50.5	14.9	– 26.6	– 37.0	0.46	– 7.3
15. Montgomery	Red O.	6421–	19.9	12.8	.54	35.9	50.6	16.5	– 7.8	– 25.6	0.69	– 13.3
16. Mills	Glenwood	4783+	23.2	12.8	.54	31.5	53.4	11.5	– 13.5	– 20.7	0.68	– 2.9
17. Cass	Atlantic	6890+	21.8	12.9	.54	34.5	51.8	14.8	– 4.2	– 14.7	0.82	+ 9.3
18. Adair	Greenfld.	2243+	20.5	11.5	.48	35.7	51.7	14.9	– 17.5	– 28.5	0.59	+ 2.1
19. Madison	Winterset	3639+	16.9	11.1	.45	35.2	50.2	15.8	– 15.5	– 23.2	0.65	+ 0.1
AVERAGES			18.6	12.1	.505	35.7	51.2	15.2	– 21.2	– 30.1	0.53	– 2.7
MEDIANS			18.0	12.1	.505	35.9	50.8	16.3	– 19.2	– 29.5	0.57	– 2.5
Note Column		3	4	5	6(a)	7	8	9	10	11	12(b)	13

(a) Column 6 is the county birthrate in 1967 compared to the state average in 1955.
(b) Column 12 compares the projected county population in 1980 to actual population in 1940.

* SOURCES: Same as Table I.

APPENDIX TABLE III

Dilemma of the Small School

D. DEMOGRAPHIC DATA COVERING 19 COUNTIES IN NORTHCENTRAL AND NORTHWEST IOWA. (Top 3 tiers)
(Largest City Involved - 8864)   See Column D on Table I in Text.

County	Largest City		Birth Rates Per 1000 Pop.			Age of Pop. 1960			Change in Population			School Enrollment Change 1961-66
			1955	1967	1967*/1955 St	Ave Age	% 18-64 yrs	% Over 65	1940-60 %	1960-80 %	1980/1940	
1. Lyon	Rock Rapids	2790+	26.4	15.3	.64	28.2	50.1%	10.2%	- 5.5%	-18.5%	0.77	+ .6%
2. Osceola	Sibley	2852+	28.3	13.9	.58	29.6	50.5	10.8	- 5.5	-18.0	0.77	-18.4
3. Dickinson	Spirit Lk.	2685+	22.8	11.9	.49	34.0	51.4	13.3	+ 3.1	-16.7	0.86	+15.2
4. Emmet	Estherville	7927+	26.7	15.0	.62	29.1	49.6	11.4	+11.2	- 4.0	1.06	- 1.8
5. Sioux	Orange City	2707+	27.5	16.8	.70	26.7	49.4	10.5	- 3.5	-13.7	0.83	+ 7.4
6. O'Brien	Sheldon	4251-	25.8	14.4	.80	31.2	50.0	13.1	- 2.0	-15.5	0.82	+ 1.8
7. Clay	Spencer	8864+	25.4	14.1	.59	30.7	50.9	11.4	+ 4.0	-12.7	0.91	- 2.3
8. Palo Alto	Emmetsbg.	3887+	25.5	13.2	.55	28.8	48.8	11.5	- 8.7	-26.6	0.67	+ 5.5
9. Kossuth	Algona	5702+	25.9	15.1	.63	28.1	49.8	10.1	- 5.2	-19.0	0.77	+ 4.6
10. Plymouth	LeMars	6767+	26.9	15.1	.63	28.7	49.8	11.5	+ 1.5	- 8.9	0.92	+ 6.0
11. Cherokee	Same	7714+	27.3	15.1	.63	32.5	51.4	13.2	- 3.8	-16.5	0.81	+ 8.6
12. Buena Vista	Stm. Lk.	7728+	24.1	13.0	.54	31.8	51.1	13.2	+ 6.5	-12.5	0.93	+11.8
13. Pocahontas	Same	2311+	35.3	15.4	.65	31.5	49.5	12.4	-13.7	-23.5	0.61	+ 2.2
14. Humboldt	Same	4031+	24.9	13.4	.56	30.9	50.2	11.2	- 2.0	-14.0	0.84	+ 7.1
15. Winnebago	Forest Cty.	2930+	22.0	13.6	.57	31.6	52.5	12.5	- 6.5	-15.3	0.79	+ 5.4
16. Hancock	Britt	2042+	24.6	12.4	.52	30.5	50.8	11.4	- 5.2	-19.8	0.76	- 2.0
17. Wright	Eagle Grove	4381+	22.9	13.2	.55	31.3	50.3	12.7	- 4.0	-18.3	0.79	- 1.6
18. Worth	Northwood	1768+	20.3	10.8	.42	32.9	51.6	12.2	-10.4	-27.5	0.65	-13.7
19. Franklin	Hampton	4501+	21.6	13.3	.56	30.7	50.3	11.5	- 7.2	-20.7	0.73	- 2.9
AVERAGES			25.0	14.4	.60	30.5	50.5	11.9	- 3.0	-17.8	0.79	+ 1.7
MEDIANS			25.3	13.9	.58	30.7	50.3	11.5	- 3.8	-16.7	0.77	+ 1.8
NOTES: Column		3 (c)	4	5	6 (a)	7	8	9	10	11	12 (b)	13

(a) Column 6 compares the county birth rate in 1967 with the state average in 1955.

(b) Column 12 compares the population projected in each county for 1980 with its 1940 population.

(c) Column 3 is the population of the largest town in the county. The + or - designates change from 1950 census.

APPENDIX   TABLE IV

Dilemma of the Small School

DEMOGRAPHIC DATA COVERING THE 21 IOWA COUNTIES WHO ENROLLED THE SMALLEST NUMBER OF STUDENTS In 1966-67.

County	Part of State	Birth Rates Per 1000 Population			Age of Population			Change in Population		1980/1940	School Enrollment Change 1961-6
		1955	1967	1967 / State '55	Ave Age	Percent 18-64	Percent Over 65	1940-60 %	1960-80 %		
1	3	4	5	6	7	8	9	10	11	12	13
1. Adams	SW	20.1	12.1	.51	35.0	50.5%	14.9%	-26.6%	-27.0%	0.46	- 7.3%
2. Osceola	NW	28.3	13.9	.58	29.6	50.5	10.8	- 5.5	-18.0	0.77	-18.4
3. Ringold	SW	18.2	9.9	.41	36.1	50.6	15.8	-29.0	-40.0	0.43	-10.6
4. Clarke	SC	17.4	11.9	.49	36.9	51.1	16.8	-19.2	-31.0	0.55	+ 1.4
5. Wayne	SC	17.5	11.7	.49	40.1	51.1	19.1	-26.5	-37.0	0.46	-13.0
6. North	NC	20.3	10.8	.45	32.9	51.6	12.2	-10.4	-27.5	0.65	-13.7
7. Adair	SW	20.5	11.5	.48	35.7	51.7	14.9	-17.5	-28.5	0.59	+ 2.1
8. Monroe	SC	17.9	12.3	.51	35.7	49.5	16.3	-43.5	-29.2	0.40	- 2.5
9. Davis	SC	19.0	10.4	.43	30.6	50.8	14.8	-17.9	-23.3	0.63	+ 1.2
10. Decatur	SC	15.6	13.7	.57	34.9	53.0	16.6	-25.0	-38.8	0.46	-10.6
11. Van Buren	SE	19.8	14.1	.59	37.3	50.6	16.9	-19.0	-23.2	0.62	- 6.6
12. Taylor	SW	17.8	10.3	.43	38.6	49.8	18.6	-28.0	-41.0	0.43	-12.2
13. Ida	NW	23.6	13.2	.55	34.0	50.4	14.3	- 7.2	-24.5	0.70	- 0.5
14. Fremont	SW	16.7	12.1	.51	35.7	52.1	14.7	-29.5	-36.5	0.45	- 5.2
15. Lucas	SC	17.2	11.7	.49	37.6	51.2	17.8	-24.5	-24.5	0.57	- 0.5
16. Audubon	WC	21.7	14.2	.59	32.0	49.9	13.1	- 7.0	-25.4	0.68	- 1.9
17. Mills	SW	23.2	12.8	.53	31.5	53.4	13.5	-13.5	-20.7	0.68	- 2.9
18. Pocahontas	NC	25.3	15.4	.64	31.5	49.5	12.4	-13.7	-23.5	0.61	+ 2.2
19. Franklin Central	SW	21.6	13.3	.55	32.8	52.7	12.4	- 7.2	-20.7	0.73	- 2.9
20. Mitchell	NC	26.9	13.7	.57	30.4	48.3	13.2	- 0.8	-10.8	0.89	+ 5.6
21. Howard	NE	24.1	14.1	.59	32.7	49.5	13.8	- 6.0	-15.6	0.79	- 0.6
AVERAGES		20.6	12.6	.525	34.5	50.8	14.6	-18.4	-27.4	0.60	- 4.6
MEDIANS		19.8	12.3	.51	34.9	50.6	14.8	-17.9	-25.4	0.62	- 2.5
PERCENT OF CITY (Med)		83%	65%		116%	95%	113%				