POSITION PAPERS

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THE PROJECT OFFICE IN IOWA

The Great Plains School District Organization Project
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TABLE OF CONTENTS

1. The Classroom Teacher's Concept of an Optimum Education Situation
David A. Grosland
Chairman, Great Plains Project Committee, Iowa Association of Classroom Teachers, Des Moines, Iowa

2. Selected Comparisons of Teacher and Curriculum Characteristics Related to Educational Innovation For the Great Plains
E. James Maxey and Donald R. Thomas
Iowa Educational Information Center, University of Iowa
Iowa City, Iowa

3. School Food Service and School District Organization
Vern Carpenter
School Lunch Consultant-Auditor, Department of Public Instruction
Des Moines, Iowa

4. Iowa School District Organization
Ellis G. Hanson
Iowa Director, Great Plains School District Organization Project

5.

Published Under Separate Cover:

5. People, Places, Perspectives: The Great Plains States
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THE CLASSROOM TEACHER'S CONCEPT OF AN OPTIMUM EDUCATION SITUATION

by

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CHAPTER PAGE

Administration 31
Area 31
Board 31
Administrator 31
Consultant (research) 32
Community complex 32
Administrator 33
Advisor 33
Department chairman 33
Physical environment 33
Media center 34
Services 35
Personnel 35
Physical environment 37
Materials 37
Equipment 38
Innovation 39
IV. CONCLUSION 41
APPENDIX A 45
SUMMARY 46

CHAPTER I

INTRODUCTION

Recently, I asked my senior class in English literature why poetry was important.

"It isn't," a willowy brunette answered from the back of the room.

"Why not?" I asked as soon as the ripple of giggles had quieted.

"Because we learn all about it in school," was the simple reply.

This incident reflects the most serious problem facing public education today -- the problem of relevancy. Gone is the day when a student in our classes reacted blindly when we teachers assigned a passage, or a formula, or a project. Today, the student demands to know why and how education relates to him as an individual and as a member of society. And the key to our educational system's worth is more and more the amount of relevancy it can demonstrate to the students. We need to show that it is not the unimportant but the vital that is presented in school.

Statement of the problem. The purpose of this paper is to present the Iowa Association of Classroom Teachers' viewpoint regarding the educational situation that best allows the student to be

Definition of terms. We believe that the following definition of terms might help to clarify portions of the paper so that long explanations will not be necessary at the point where they are used.

Bi-area curriculum. This refers to two possible courses of study (selections of courses). One, the academic, usually leads to a college program. The other, the vocational, usually leads to a craft, trade, or vocation, or to a (post-high school) trade or business school. A student in one area should concentrate on courses within that area, but not be entirely limited to that area.

Elementary level. The elementary level is the grades from kindergarten through six.

Foundation core (courses). Foundation courses are basic courses, some of which are needed by almost everyone, regardless of interest or vocational plans.

Principles; basic, internal. Basic principles are those ideas, concepts, and procedures that should be learned because they are so elementary that almost everything else stems from them, or from variations of them. For example, in arithmatic a basic principle might be the concept that 'numbers react and can be dealt with in an orderly, logical manner,' or that when 'two numbers (or things) are added together, the whole is equal to the parts.' A general principle might be that when two different things are brought together, the clash results in a compromise. (This is derived from Hegel's 'thesis-antithesis--synthesis' theory.) As can be imagined, general principles exist for life in general, and specific principles exist for specific areas and/ or

a 'compromise' of the two to result. He gets green. Whether he knew what would happen or even planned it would depend on his previous experience, but again an internal principle has been applied successfully to an external situation.

Structural organization. (See Appendix A.) This is the pattern of administration, services and attendance centers designed to provide effective operation of the education situation.

Community attendance complex. This is the functional part of the total structural organization consisting of a high school (of approximately 1,000 students, 50 teaching faculty, and appropriate administrators (principals, advisors, counselors, and department chairmen), and its feeder schools -- those attendance centers that contribute their graduates to the high school student body. The feeder school will probably consist of two or three junior high schools and four to nine elementary schools. The entire community complex will probably have a student population of about 3,000.)

Area unit. This is a geographically and economically functional unit comprised of five or more local units in order to provide all educational services efficiently to the students within its geographic and economic area. The 'central' or 'area' administrative functions will be provided at this level.

State unit. This is a state-wide unit supporting and co-ordinating the area and the local units with such services that they themselves cannot efficiently perform.

Teaching faculty. This is the body of certified, qualified teachers actively teaching fulltime in the classroom.

Even within the concept of educational needs, we are limited by time and space to such an extent that we can only scratch the surface in this paper. We strongly urge interested parties to investigate these areas much more deeply. Perhaps this could be done by special committees of experts. If so, we again caution that the true educational experts are actively practicing classroom teachers, and that they need release time and opportunity to fully investigate even their own speciality.

for teachers and students.

To solve these problems, the entire educational system, as a whole, should be concerned with the teaching of certain fundamental, internal principles and with the application of these principles to specific, external situations. The aims of education are the same for all levels. Education levels vary only in the stage of development that our student has reached. We must, of course, realize that our students stage of development in learning and applying these principles is determined by a complex set of influences. Among these influences are mental age, chronological age, physical co-ordination, emotional development, home environment, social environment, and educational situation, both past and present. After about five years of informal development, the child has his first formal experiences with primary basic skills -- the learning of the most basic principles and their application to the most basic of external situations -- at the elementary level (K-6).

Elementary. The child beginning the educational experience is, by nature, a curious individual and an avid learner. He has a natural talent for association and comparison. We must be very careful to encourage him to explore, compare, and learn. To do this, we must provide him with experiences that foster a sense of satisfaction and achievement -- a feeling that education is worthwhile. (Of course he won't think of it in just those terms.) Since each child is an individual and since he is at an unique stage of development, we must

As stated earlier, people must be able to think if they are to be meaningful members of society. If this is so, one of the most important things for us to do on the elementary level -- or on any other level -- is to help our students learn to think. Furthermore, we want this thought process to be rational, logical, and analytical, but allow for intellectual intuitiveness as well. We then need to establish classroom procedures and course content that encourage and extend learning. We can best encourage and extend learning by presenting situations through inductive procedures that prompt discovery; for discovery produces most of an individual's potential creative thought. We can develop insights and understandings through the conceptual framework of this approach. And these insights and understandings allow us to present many things previously thought too difficult for elementary students. The fact that very young children can learn relatively difficult aspects of science, mathematics, and other subjects in this way should show us why we must use the discovery approach as one of our various procedures.

We should not consider this approach as a panacea for elementary education, however. Our decisions must be made as to content and course procedure only after we carefully consider the individual's ability to understand and the relative importance of the ways in which he learns most effectively.

Elementary education must be based on a close correlation between broad areas of content and our student's general knowledge. Because

apply these principles, both old and new, to more and more complex, external situations. It becomes increasingly important, as we proceed to higher and higher levels, that we show more and more relevance -- i.e. application of this education to the life experience. For as the individual becomes more competent or at least thinks that he is he tends to lose his interest in learning for learning's sake. He becomes concerned with the life soon to confront him in his society and demands to know how his education will apply. This we must show him if we are to continue to be effective!

Junior high school. There are other factors to be considered besides this demand for relevancy; for example, we must consider the nature of the junior high student. He is a restless animal. His physical growth demands that he move his muscles often for these growing limbs need testing and training. Because of this, he likes to work with his hands as much as with his brain. But his attention span is quite short. He knows few bounds as far as social graces are concerned and likes to test the patience of all adults, even though deep down he means to please and wants his just rewards. He thrives on variety and detests repetition. He is easily motivated but also is easily bored. He is highly impressionable. And because of his characteristics, his needs demand techniques that are not like the ones we might use in either lower levels or higher ones. Regardless of these common qualities, however, we can not lose sight of the fact that each junior high student still has great individual differences.

apply the methods and principles of science to the problems of their environment.

The junior high social studies program should prepare our students for effective American citizenship and for understanding the organization and institutions of society and man's behavior in it. We should create a workshop within the social studies classroom, where our students may study social, economic, and political questions in perspective of history, both past and future. Our course offerings should stress the study of a few major problems rather than all problems; they should aid the student in understanding interrelationships among social, economic, and political problems and issues; and they should develop a wholesome allegiance to the ideals of American democracy through inductive procedures.

The junior high school mathematics program should develop an understanding of and facility for computation, ability in the use of problem-solving method, and some understanding of the basic nature and structure of mathematics as it relates to our modern and everchanging world. In order to provide for the future educational, vocational, and cultural needs of our students, we need to offer such courses as modern mathematics, general mathematics, commercial mathematics, vocational mathematics, algebra, and geometry.

The industrial arts and homemaking arts programs at the junior high school level should be offered to both boys and girls. The industrial arts program should be composed of exploratory courses

outside world may be a college or an occupation, and while he is fascinated by it, he is also a little afraid of it. He is extremely concerned with peer attitudes, and yet he is definitely an individual. He has pretty well mastered the basic skills. So now he must be convinced of education's value -- i.e. relevancy -- for at the moment he's not too sure that it is really all that it claims to be. He wonders if education has anything else of a practical nature to offer. And these are the individuals we must work with on the secondary level. We must influence their attitudes, which produce drop-outs, by presenting a meaningful curriculum and educational environment.

Like the elementary environment, the secondary situation must accomodate individual differences of interest and aptitude. Secondary curriculum demands even more flexibility than the elementary curriculum for we assume that the basic skills and communications areas have been mastered. We must now offer content that applies directly to each individual's frame of reference. If we are to do this, it is evident that we must offer a large number of courses in order to cover the various areas that students are likely to be interested in, many of which may be nine week courses instead of the traditional eighteen or thirty-six week offerings. Realizing that students at this senior high level may be interested in and planning for either an academic or a vocational follow-up to their senior high education, we must offer a bi-area curriculum -- one that is slanted in both directions. We can thus allow a student to follow his individual interests and abilities

tastes, and aptitudes. In English, he might choose one or several of these: advanced writing, of expository -- including journalism -- or creative nature, advanced literature, of American, English, or genres -- such as poetry, short stories, or novels --, research techniques, drama and stage production. And in foreign languages, he could learn not only the language, including writing skills and speaking skills, but also the cultural background of the native country -- such as Germany, France, or Russia.

In mathematics, he might pursue advanced algebra and calculus. And in science he could select from the areas of advanced chemistry, biochemistry, physiology, geology, astronomy, and physics.

In the social sciences, he might investigate political science, European culture and governments, Asian culture and governments, sociology, anthropology, psychology, philosophy, and economics -- both theoretical and applied.

On the other hand, our student may choose to follow the vocational line of study. As in the academic line of study, he should start with the fundamental core courses, adding other subjects from those that might help him in his interest areas or future vocation. In English, he might select a course in business English; and in mathematics, a course in business mathematics or computer programming; and in science, a course in photography.

If he plans to start working in an office, he might investigate business education. Here he could specialize in a clerical area, taking a selection of typing, bookkeeping, filing, and card-punch.

course content and sequence involving his interests and abilities, he often begins to see that education can be relevant and practical. Hopefully with this insight, his attitude changes. The change in attitude allows him to make more progress in preparation for life. Therefore, he is more likely to succeed -- as an individual and as a member of society.

Teachers. The most important of all these seven areas is the teachers. We teachers must, of course, be well-trained. Our knowledge of subject matter must be excellent and we must be trained in the raft of teaching. And we must have frequent in-service sessions to help to keep the fine edge on current knowledge and techniques. But to really be proficient, we need practical as well as theoretical experience. We do not get enough practical experience through present "student-teaching" programs. Perhaps an answer to this deficiency is an internship of at least one year at partial salary, as a part of an extended college experience. Young teachers would perform this internship under the guidance of a "master teacher," an experienced teacher of proved outstanding ability -- both ability to teach and ability to guide and counsel.

We also need teachers of diverse backgrounds, with many sets of experiences allowing a pupil-teacher and a teacher-pupil "sympatico." Regardless of how unusual a student's frame of reference, he should be able to find a teacher who could relate to him, and he to the teacher. Teachers with diverse backgrounds, both as staff and as an individual, give more relevancy to a student. These teachers are not likely to stay in their ivory towers but themselves are relevant -- i.e.involved with the world. A teacher can only teach well what he is himself enthused about; if he is involved with and enthused about the world he can teach about it. This also means that a teacher should (be allowed to) specialize in his particular field of interest and ability

special situations. Special classes for exceptional children should be limited to fifteen students. Kindergarten and first grade classes should be limited to twenty; other classes in elementary and secondary schools should be limited to twenty-five. Furthermore, we urge that total enrollment for a teacher in a departmentalized secondary situation be limited to one hundred. Particulars of class size and number should be determined within the local structural unit and depend on the needs of that student body, but we stress that class size does have an important impact on teaching effectiveness. Small class size allows us to have individual contact with each student in meaningful quantity. A great quantity of individual contact becomes especially important and effective in classes such as special education and composition, since these require a uniquely personal touch.

Educational Services. We also need ample educational services in order to give quality, individualistic instruction. And the service in closest contact with the average student is guidance. The guidance counselor must, first of all, be an excellent classroom teacher with enough classroom experience to have proven himself. If he can counsel in the same building that he taught in, he will have the immediate advantage of having already established rapport and of having already become familiar with the background of the school and the student body. He also should have excellent training in counseling. This training should have been theoretical -- in the areas of psychology of learning and of the learner; and it should have been practical -- in the area of applied social work. Social work would allow him to understand why

to allow him to perform his specialty efficiently. These facilities should include private, comfortable counseling rooms, quiet, comfortable testing centers, varied, proven means of evaluation, and a load compatable with the amount of his clerical assistance and the inclusiveness of his duties. For example, if a normal counselor-student ratio is 1/300, lack of clerical assistance should lower the ratio -- perhaps to 1/250 or to 1/200. If he must test as well as interpret test results, the ratio should be further lowered, so that the counselor's load is in proportion with his functional duties at all times.

Physiological and health services are also necessary within the framework of the education situation. We should provide the services of a nurse in every large attendance center and of, at least, a nurse's aide in every center. In addition to this, a doctor should be available in case of emergency -- probable serving a community complex. (a complex is roughly defined as a high school of approximately 1,000 students, 50 teaching faculty, with its corresponding junior highs and elementary schools.)

This staff's functions would probably involve the preliminary 'diagnoses' of illnesses, the possible 'treatment' of minor ailments, the execution of 'minor medicals' -- such as scalp, height, weight, and dental examination, and the keeping of records. In addition to these relatively routine services, the staff would aid in the selection of health, physiological, psychological, and physical education curriculum. They would also deliver lectures for general health information assemblies and conduct discussions with health, physical education.

a unique approach; and we need to provide staff and facilities that are adequate and flexible enough to take care of even the most unlikely possibilities. The program for the handicapped would probably be a function of the area structural unit.

An area of local center services, composed of a large number of staff, is that of auxiliary personnel. These persons would perform a variety of services freeing teachers for increased preparation and increased teaching time. The auxiliary staff member's training would be compatable to his function. One large and presently existing subdivision of auxiliary staff is that of clerical aides, with general business training of a non-professional nature. Their function is to keep attendance, keep records, and file miscellaneous materials. Generally, they are only used in the main office and sometimes in the media center; but they should also be available in the counseling offices, to assist counselors, and in subject department wings, to assist teachers.

A second division of the auxiliary staff is secretarial. Although this staff segment's training is, and should be, more specialized than the clerical division's training, it also is non-professional. The functions of the personnel in this division are in the nature of letter transcribing, letter writing, and appointment making. Usually this staff segment works only in the main office and occassionally in the media center; but secretarial staff should also work for counselors -- with such duties as reference typing and letter writing -- and for

however, this would be done under the teacher's supervision and according to his direction. Always, the actual evaluation would have to be done by the teacher, but the paraprofessional could assume many of the routine, objective procedures and thus allow the teacher to concentrate on the creative, subjective process of instruction.

Administration. Another major area we see affecting instruction is that of administration. We see two general catagories of administrative function. One is concerned with general policy and efficiency, including financing; this administration should exist on an area unit level, and the other is concerned more directly with individualized and co-ordinated instruction; this administration should exist partially on the community complex level and partially within the local attendance center itself. While the school board and superintendent are certainly concerned with individualized and co-ordinated instruction, we feel that their most direct and immediate concerns are in connection with matters of general policy and efficiency. We believe that the area school board, especially, needs to give increasing weight to the empirical judgement (particularly when statistically supported) of experts -- i.e. teachers, consultants, and administrators -- in matters of the educational situation -- i.e. such things as curriculum, texts, and environment. We believe that the area administrator increasingly is and should be a third party member of board-teacher relationships -- serving as an expert in the implementation and implication of proposals. He can and should be assisted by a (committee

insure individualized and co-ordinated instruction. We believe that the community complex and/or local attendance center administrator should be a public relations representative from the school as well as a co-ordinator of program, department heads, and activities. The boys' and girls' advisors function as disciplinarians as well as co-ordinators of program in conjunction with the principal and counselors. They should also work with the counselors and teachers in evaluation of individuals for program selection and for other aspects of school life.

We believe, also, that there should be teachers designated as department chairmen of subject areas, who might be considered as quasi-administrators. We feel that these department chairmen should be master teachers, selected and proven on a basis of performance. These chairmen would be responsible for non-evaluative supervision of and guidance of the teachers and auxiliary personnel within their departments. They would also work with chairmen (of other departments), counselors, and administrators in co-ordination and design of curriculum and procedures. They should be assigned to teach a minimum number of classes to allow time for their research and guidance responsibilities.

Physical Environment. Another important factor in the education situation is the physical environment. In general, the attendance center should be arranged with the media center (to be discussed later) centrally located. We believe that there should be physical subject areas as well as curricular subject areas -- i.e. subject wings; (or, in elementary, lower and upper level). We believe, further, that each

as an area in itself; the media center. Perhaps the media center motto should be: What was best yesterday is only second rate today. (But we don't feel that this motto could be limited to the media center; it applies to all of education.)

The services of our media center should always be directed toward the total objectives of the total educational program. We feel that its primary concern should be to provide service to the students and faculty. Since we believe that education and educators must be relevant, the media center also must strive for relevant and progressive development. Therefore, media center personnel must be allowed to research continually in order to provide better service and materials in the areas of reference, reader guidance, reading guidance, media guidance, media selection, in-service education, material and equipment training (for both students and faculty), and consultant service. And flexibility must be maintained to allow proper guidance for the individual. Because of these necessities, purchasing should be of a nature that provides for continual purchasing of materials and equipment as needed rather than of the present nature that allows only yearly or twice-yearly ordering, which delays shipments from manufacturers for many months because of seasonal loads.

We must also recognize that personnel for such a media center will be an important factor. We will need specialists in all phases of media use, service, development, production, and processing. We can allow more efficient operation of the specialist by providing

is meant to function: as a meaningful and relevant part of the school program. Of course, it also needs the student who is to partake of its offerings, for without the inquiring student and his ever-growing demands for relevancy and immediacy, the media center would soon grow stale and uninviting.

The physical quarters of the local attendance center's media center should be large and expansive enough for both present and future needs, and relevant to the type of curriculum the school intends to provide -- i.e. the type of services the media center must provide. We should design the quarters to provide general reading areas and independent study facilities -- such as study carrels, typing facilities, and audio-visual quarters -- for use of audio-visuals by students and faculty. We also should provide rooms for group study, of various sizes and situated off of the media center but easily accessible to it for convenient access of needed materials. In addition, we need to provide facilities for the development of media, dark rooms, planning rooms, viewing rooms, material storagerooms, equipment repair rooms, TV and radio rooms, and a data processing area, if data processing of tests, profiles, etc. is to be centered in the media center, as it might well be.

If we are to have an efficient media center, we must naturally provide materials (i.e. media) and equipment for using these materials. We should supply books, pamphlets, documents, periodicals, newspapers, and other types of printed media. We need microfilms, micro cards, micro

jector stands, and display facilities.

We felt it necessary to be more specific in relation to the needs of media centers because the concept of a media center is probably the newest concept discussed. It is also one of the most rapidly expanding areas in education today, along with curriculum and procedure. Since the media center is the best source of current and vital materials, we must have operative centers on all levels of the educational structure. There are obviously some functions, equipment, and media that would be impractical and inefficient on a local attendance center level that would be very practical and efficient on a community complex level. At the same time there are many services that would be impractical and inefficient on a community complex level that would be most practical and efficient on an area unit level. The particulars of a media operation, then, must depend upon the needs of the structural unit containing the media center, but it is essential that we supply the media operation that fully meets the needs of its unit. The effective functioning of the media center and the six other areas discussed is essential to high quality, individualized, and relevant education situations throughout each student's K-12 experience.

We strongly recommend that the entire educational environment be involved in constant experimentation. If we want to successfully relate to a changing society, we must constantly be testing new tools and techniques for doing so effectively. Some recent discoveries,

CHAPTER IV

CONCLUSION

In conclusion, we must recognize that education's primary need is relevancy. This is true because education's primary goal is to prepare each student for the society in which he must function and this society is in a constant state of flux. Therefore, we must teach the student to be as flexible as possible, so that he can not only adapt with society, but can, in fact, direct its change for the better. To do this, education must be relevant to the student and to his society.

If we are to prepare out student for a flexible existence, we must begin early, teaching him in a way that leads him to discover basic, internal principles that he can adapt to fit any given, external situation. And we must convince him to apply these principles to whatever external situations confront him. We must, furthermore, show him how to relate, compare, and associate these external situations, proceeding from the known to the unknown, so that the new and different does not frustrate him. Instead, we must have lead him to realize that, although some situations seem strange to him, his core of principles will allow him to solve any situation if he applies them wisely and competently.

research and consultation on a state-wide basis. Again, the structural level of involvement should be determined by function.

In short, we feel, that there should be a state-wide assessment of structural organization within education. This, we feel, will probably result in a structural readjustment that delegates responsibility and co-ordination of the education situation to levels appropriate for fulfilling the needs of all of Iowa's youth.

APPENDIX A

*** SUMMARY ***

The purpose of this position paper, commissioned by the Great Plains School District Organization Project, is to describe the Iowa classroom teacher's concept of the optimum education situation and to suggest means of attaining it. In writing the paper, I have relied largely upon the empirical judgement of the IACT Great Plains Committee and an additional group of classroom teachers who were kind enough to contribute their time, knowledge, and judgement.

Education's main purpose, we feel, is to prepare youth for the society in which it will live. We feel, further, that the fundamental necessity for a successful life in a changing society is the ability to be flexible. And we feel that this ability comes as a part of the ability to think -- i.e. to compare, relate, and associate confronting situations in a rational, logical, and analytical manner. We believe that there are a limited number of fundamentals, in general and in each subject area, and that the learning of and applying of these fundamentals is the basis of the thought process.

We recognize that interest plays an important part in the effectiveness of the educative process. Therefore, if we teachers are to be fully effective in developing each individual's talents, we must demonstrate that education is relevant -- i.e. immediate, vital, and practical. When the student sees the relevancy of an area, he will usually become interested in it and he will become more efficient in what we are helping him to learn. But we must at all times be careful to relate what we are teaching to each individual's interests, experiences, and abilities so that he will remain aware of education's relevance to him.

How, then, can we demonstrate individual relevance? The answer lies in seven major areas of the education situation: administration, classes, curriculum, media, physical environment, services, and teachers. But we must also remember that these seven areas are all dependent upon the structural organization of the school system; some are dependent upon community complex structure, some on area structure, some on state structure, and several on a combination of two or more structures.

on a state-wide basis. Again, the structural level of involvement should be determined by function.

In short, we feel that there should be a state-wide assessment of structural organization within education. This, we feel, will probably result in a structural readjustment that delegates responsibility and co-ordination of the education situation to levels appropriate for fulfilling the needs of all of Iowa's youth.

SELECTED COMPARISONS OF TEACHER AND CURRICULUM CHARACTERISTICS RELATED TO EDUCATIONAL INNOVATION FOR THE GREAT PLAINS

by

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and

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June 12, 1968

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FOREWORD

The impact of scientific, technological, social, and economic change on the American way of life necessitate a re-examination of the educational system. These changes modify established needs and create new needs to be met by the public school system. Instructional programs and supporting services must be developed to meet these needs.

The primary purposes of school district organization are to make possible: (1) the desired quality or excellence of the programs and services; (2) the efficiency of the organization for providing the programs and services; and (3) the economy of operation, or the maximum returns received for the tax dollar invested in education.

The program offering and the personnel responsible for directing the instructional program are vital parts of the educational effort in all school districts. The quality of the programs and of the personnel has a direct relationship to the achievement of educational purposes. Dr. Thomas and Dr. Maxey, Iowa State University, were invited to investigate the relationship between program offerings and staff personnel and the size of school districts in Iowa. They were fortunate in having available computerized data upon which to secure information for this report. This paper is their report to the Project Staff and to interested representatives of the Great Plains States.

The value of this paper rests upon its utilization by those with advisory and/or decision making responsibilities about the educational structure in each state. It represents a beginning point for further study and evaluation, and for establishing criteria upon which guidelines can be developed for effective and constructive school district organization.

Respectfully submitted,

Ralph D. Purdy, Director
Great Plains School District
Organization Project

June 12, 1968

ABSTRACT

This report is presented in three sections: (1) Teacher Characteristics in Iowa, (2) Secondary Curriculum Distribution in Iowa, and (3) Educational Innovations in Secondary Curriculum for the North Central Association Schools of the Great Plains. The data are presented by pupil-enrollment categories and cost-per-pupil categories. The tables will enable administrators in the Great Plains states to compare teacher, curriculum, and innovative characteristics of their schools with other schools of similar size.

The Iowa data in Section I suggest that the best qualified staff are found in school districts with total enrollments of 1,500 and above. Schools in this range have more experienced teachers, better qualified teachers, fewer teacher course preparations, and more specialized personnel.

In Section II the data indicate that as district enrollment increases, the number of course offerings available in such areas as foreign language, business, technical and vocational education also increases. On the other hand, the number of course offerings in homemaking decreases as district enrollment increases.

Section III presents the curriculum, organizational, and technical innovations being used or tried in the North Central-accredited schools. In all four states, at every school enrollment level, it appears that PSSC Physics and Chemistry Study Group Chemistry are the most popular curriculum innovations. At the National level the same courses are also the most popular. The most popular technical innovation in the four states seems to be the use of language laboratories. In some states data processing is the second most popular innovation while in one state television is widely used. Apart from student exchange programs, organizational innovations are being used sparingly.

INTRODUCTION

In order to effectively evaluate the need for change in the organizational patterns of school districts in the Great Plains, it is important to have available as much data as possible. These data will provide school administrators with the necessary tools to approach the problems of organizational and institutional change in secondary education.

Because of this need, Dr. Ralph Purdy and Dr. Ellis Hanson of the Great Plains Project asked the Iowa Educational Information Center (IEIC) to prepare a selected summary of data on teachers and curriculums in Iowa. These data could then be used on a comparison basis by administrators in other states, giving schools in the Great Plains at least some idea of how they compare with schools of the same size in Iowa. One might ask, why should Iowa be chosen as the normative group? The answer is simply that Iowa, at the present time, is the only state that has information of the type contained in this report that is available on a statewide level.

The Iowa Educational Information Center collects pupil, staff, curriculum, financial and physical plant information on nearly all public secondary schools in Iowa as part of the CardPac System of Educational Accounting. Schools which fail to appear on the IEIC files are those which simply do not cooperate in the

In addition Table 2 indicates that teachers in small schools will tend to have three or more course preparations much more frequently than teachers in larger school districts. As districts become large, there is more opportunity to take advantage of specific subject-area preparation of teachers. In larger schools, teachers tend to have fewer preparations and hence will have more time to prepare thoroughly. It is interesting to note, however, that although the number of areas of preparation declines as enrollment increases, the number of subject preparations is about the same at the upper three levels. This might suggest that in order to reduce the number of teacher preparations, the secondary school should be located in a district with at least 1,500 total pupil enrollment.

Table 3 shows that schools with larger enrollments tend to attract teachers with better preparation insofar as number of semester hours of course work is concerned. Table 7 confirms this conclusion in that the larger the school district, the greater the chance of having staff with advanced degrees. An inspection of Table 6 suggests that these same people tend to possess more teaching experience as well.

Tables 4 and 5 were prepared to see if the number of major areas of study in college tends to differ for teachers in different enrollment categories. An inspection of the tables indicates that approximately the same number of major areas of study are characteristic of all teachers at both the undergraduate and graduate level.

Tables 8-10 display salary ranges for administrative, teaching, and other professional personnel by enrollment categories. Again, a large difference between salaries for the largest three enrollment levels and the other four levels is apparent.

Classes will tend to be larger in large school districts, as shown in Table 11. This means that teachers in larger schools will tend to have class enrollments of 20-30 whereas teachers in small schools will have a class enrollment of from 10-15.

The preceding discussion should have suggested to the reader that better quality faculty are found in larger schools. What other staff advantages are available in larger schools? Table 12 suggests that a specialist in Special Education apparently cannot justifiably be hired except in a larger school system, i.e., one of at least 1,000 students. An inspection of Table 13 suggests that apart from guidance counselors, other professional non-teaching personnel such as junior high school librarians tend to be found in larger school systems. This can only mean that more effective reading programs and hence better learning opportunities are available for children in larger school systems.

Tables 14-29 show the typical number of course preparations within subject areas by enrollment levels. With the exception of driver's training, agriculture, and vocational education, the trend seems to be that the number of course preparations within a subject area for a teacher is less for districts with an enrollment size of 1,500 and above than for smaller districts. This conclusion agrees with earlier statements made regarding teacher load in this section. The courses actually used within subject areas for Tables 14-29 are specified in Section II of this report.

TABLE 2

Frequency Distribution of Teachers by Number of Specific Course Preparation Within District Enrollment Categories

No. of Course Preps.	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
10	1						1
9							
8	3	1					
7	12	8	2	2			1
6	67	37	17	11	4	7	8
5	163	132	52	36	13	15	23
4	265	318	203	135	48	81	100
3	214	444	326	289	202	173	348
2	144	318	339	401	376	393	723
1	113	198	198	291	406	409	744
N-Count	982	1456	1137	1165	1049	1078	1948
Mean	3.50	3.01	2.68	2.37	1.95	2.00	1.96
Standard Deviation	1.49	1.30	1.18	1.10	.96	1.03	.99

TABLE 3

Total Semester Hours Earned for Teachers by District Enrollment Category

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	33-289	30-268	40-283	41-276	43-296	33-290	3-297
Mean	150.12	150.06	152.23	151.80	157.44	157.45	163.90
N-Count	1605	2303	1666	1847	1766	1907	5247
Standard Deviation	25.33	23.65	24.80	25.02	27.72	26.20	30.46

TABLE 7

Highest Degree Held for Elementary and Secondary Teachers by District Enrollment Category

	0-499		500-749		750-999		1000-1499		1500-1999		2000-2999		3000 & Above	
	N	* PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC
None	33	2	51	2	36	2	35	1	26	1	21	1	60	1
Bachelors	1287	59	1830	58	1287	59	1418	55	1187	50	1328	53	3119	45
Masters	286	13	423	13	350	16	386	15	547	23	563	22	2052	30
Specialists	13	1	5	0	15	1	13	1	4	0	8	0	24	0
Doctors	0	0	2	0	4	0	2	0	8	0	1	0	46	1
Other	554	25	854	27	502	23	704	28	610	26	608	24	1600	23
Totals	2173		3165		2194		2558		2382		2529		6901	

*Percents are recorded to the nearest whole percent.

TABLE 8

Administrator* Salaries by District Enrollment Category

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	5470-13000	3600-15000	5300-15500	5150-15500	3600-21500	3000-16650	3610-23000
Mean	9153.4	9506.9	9896.4	10390.1	10847.5	10940.4	10939.2
N-Count	193	248	164	151	107	127	282
Std. Dev.	1504.2	1895.4	1809.5	2004.5	2862.6	2557.0	2919.2

*Administrator is defined as either Superintendent or Principal.

TABLE 9

Salaries - Other than Administrators or Teachers by Enrollment Categories

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	3200-8825	4200-10450	3850-10380	2850-11200	3743-16140	3924-12700	2875-17150
Mean	6452.64	6548.80	6895.16	6914.75	8030.23	7642.11	8717.70
N-Count	92	159	124	146	179	218	707
Standard Deviation	1038.42	1040.78	1178.06	1323.90	1969.45	1499.41	2185.99

TABLE 13

Frequency Distribution of Professional Personnel
by District Enrollment Categories

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Elem. Supervisors	27	59	62	75	67	77	288
Jr. High Supervisors	1	19	21	34	38	43	116
Sr. High Supervisors	60	91	54	69	66	76	231
Jr.-Sr. High Supervisors	54	57	27	13	0	8	0
Elem. Guidance Personnel	0	1	0	1	2	2	3
Jr. High Guidance Personnel	0	0	0	0	17	24	115
Sr. High Guidance Personnel	12	28	37	40	55	45	134
Jr.-Sr. High Guidance Personnel	14	16	13	6	0	4	0
Elem. Librarians	0	0	5	5	13	5	15
Jr. High Librarians	0	1	0	7	8	18	51
Sr. High Librarians	12	32	26	36	29	30	48
Jr.-Sr. High Librarians	10	15	8	6	0	2	0
Specialized Personnel	51	72	56	74	65	72	330
School Superintendents	109	115	74	57	29	42	35
Number of Secondary School Buildings in Category	120	142	99	97	53	65	113

TABLE 17

Number of Different Teacher Preparations
in Mathematics by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-6	1-6	1-6	1-6	1-4	1-5	1-5
Mean	2.98	2.64	2.43	2.18	1.83	1.75	1.77
N-Count	166	229	4	191	156	179	357
Standard Deviation	1.53	1.40	1.15	1.11	.79	.83	.81

*Mathematics courses have CardPac ID numbers 4130-4940.

TABLE 18

Number of Different Teacher Preparations
in Health by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-1	1-2	1-1	1-1	1-1	1-1	1-3
Mean	1.00	1.13	1.00	1.00	1.00	1.00	1.14
N-Count	4	8	4	8	6	5	14
Standard Deviation	.00	.32	.00	.00	.00	.00	.52

*Health Courses have CardPac ID numbers 5130-5140.

TABLE 19

Number of Different Teacher Preparations
in Physical Education by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-6	1-6	1-4	1-6	1-6	1-3	1-4
Mean	1.88	1.85	1.48	1.52	1.31	1.33	1.56
N-Count	91	117	93	86	65	60	68
Standard Deviation	.92	1.03	.68	.98	.78	.55	.88

*Physical Education Courses have CardPac ID numbers 5230-5940.

TABLE 23

Number of Different Teacher Preparations in Agriculture
by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-5	1-5	1-4	1-4	2-6	1-4	1-3
Mean	2.69	3.04	2.90	3.08	3.07	2.56	2.00
N-Count	26	47	42	38	15	18	6
Standard Deviation	1.07	1.06	.99	.87	1.18	.82	.57

*Agriculture courses have CardPac ID numbers 8130-8157.

TABLE 24

Number of Different Teacher Preparations in Homemaking
by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-6	1-6	1-5	1-4	1-4	1-4	1-4
Mean	2.73	3.00	2.47	2.36	2.12	2.00	1.85
N-Count	95	116	87	72	50	55	103
Standard Deviation	1.10	1.27	1.18	.95	.82	.83	.78

*Homemaking courses have CardPac ID numbers 8230-8263.

TABLE 25

Number of Different Teacher Preparations in Industrial Education
by District Enrollment Category*

	0-499	500-749	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	1-5	1-6	1-6	1-5	1-4	1-6	1-6
Mean	2.37	2.54	2.45	2.29	2.07	2.12	1.68
N-Count	46	65	49	51	57	59	157
Standard Deviation	1.24	1.41	1.41	1.17	.98	1.17	.87

*Industrial Education courses have CardPac ID numbers 8301-8397.

TABLE 29

Number of Different Teacher Preparations in Distributive Education by District Enrollment Category*

	0-499	500-759	750-999	1000-1499	1500-1999	2000-2999	3000 & Above
Range	0	0	0	2-2	0	1-1	1-2
Mean	.00	.00	.00	2.00	.00	1.00	1.40
N-Count	0	0	0	1	0	4	5
Standard Deviation	.00	.00	.00	.00	.00	.00	.49

*Distributive Education Courses have CardPac ID numbers 8750-8761.

SECTION II

SECONDARY CURRICULUM DISTRIBUTION IN IOWA

The Iowa Educational Information Center collects curriculum information from 700 secondary school buildings, including junior high systems, as part of the CardPac System of Educational accounting. This system was introduced by the Iowa Educational Information Center on behalf of the State Department of Public Instruction and may be briefly described as an automated system of collecting and processing data for the practical use of the schools and the State Department of Public Instruction.

In Appendix A, a record of the CardPac course identification numbers is given. In describing the comparisons of Tables 30-45, courses are combined within subject areas to give 17 broad subject areas. A description of which courses were combined and how the subject area is named in the tables follows:

Subject Area	Table Description	CardPac ID Course Numbers
Communications	Comm.	1030-1940
Fine Arts	Arts	2130-2247
Foreign Language	Lang.	3130-3980
Mathematics	Math	4130-4980
Health	Hlth.	5130-5140
Physical Education	PE	5230-5940
Science	Sci.	6140-6980
Social Studies	Soc.	7140-7880 7942-7950

Courses in distributive education and special education are not found at the small-district enrollment levels.

These tables enable administrators in Iowa to compare their school with all schools in the state that fall into the same enrollment category. Comparisons can also be made with schools in different categories. In some cases, while checking these tables, one will see a greater mean number of courses offered than for a school of the next higher enrollment category.

Example: High schools contained in the category "below 499" district enrollment have a mean for mathematics course offerings of 6.27. If a school building administrator would like to check to see how his school ranks with the mean of other schools in mathematics, the administrator can compare his school with the following table:

500-749	6.50
750-999	6.17
1000-1499	6.03
1500-1999	5.71
2000-2999	5.73
3000-above	6.62

The school buildings in "below 499" enrollment category have a higher mean than four other averages of school buildings in higher enrollment categories. By analyzing the comparison of mathematics offerings by district size, one would think that schools showing a mean of 6.27 offer a greater number of courses in mathematics. Some reasons for these differences might be: (1) in large schools the subject areas in mathematics have been combined into a more modern unified mathematics curriculum; (2) the course offerings may not be structured as algebra, geometry, trigonometry, etc. Rather, the courses might be structured as mathematics 9, mathematics 10, etc. Of course, other possibilities exist. These are given as illustrations.

At the local level, school personnel could find their high school mean for mathematics and compare it with the overall mean of 6.27 and use a simple chart like this to show their school mean in relation to all the other school means in t he State of Iowa. Administrators could also compute the mean of all the enrollment categories in each subject area and come up with a statewide mean in mathematics.

Example: The statewide mean for mathematics is 6.6. For all schools which have a mean of 6.6 a conclusion can be made that their school meets the average of the state in any school size in mathematics offerings.

This is an example of how administrators and other local school personnel can extract statistics from masses of raw data to compare their school or district with others on a statewide basis.

It is important to note that in the category "Health" very few schools, small or large, offer more than two offerings. This means that very few schools regardless of size offer many courses titled "Health." In checking "Physical Education" every enrollment category shows a larger mean. Perhaps the discrepancy is due to Health being taught as a part or section of Physical Education and not as a separate offering.

TABLE 31

Total Junior High School Curriculum Offerings
by Size of District

No. of Offerings by Bldg.	Total District Enrollment						
	Below 499	500 - 749	750 - 999	1000 - 1499	1500 - 1999	2000 - 2999	3000 - Above
181-200							
161-180							
141-160							
121-140							
101-120							
81-100							
61- 80						5	32
41- 60	1	4	3	9	9	18	38
21- 40		20	25	29	15	9	5
1- 20	1		1	1			
Total	2	24	29	39	24	32	75
Mean	31.5	34.0	30.2	35.7	38.0	48.7	56.8
Std. Dev.	20.5	9.1	6.8	8.6	11.2	11.8	10.3

TABLE 33

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment Below 499

No. of Offer.	Com.	Arts	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10																	
9																	
8																	
7																	
6						1											
5	1																
4				1			1										
3		2		1			1	1			1	1	1				
2	1							1									
1			1								1						
Tot.	2	2	1	2		1	2	2			2	1	1				
Mn.	3.5	3.0	1.0	3.5		6.0	3.5	2.5			2.0	3.0	3.0				
SD	2.3			1.2			1.2	1.2			1.4						

TABLE 35

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment 500-749

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10	1																
9	1																
8		1															
7	1	1				1											
6	6	4				2		1									
5	6	3				2		1									
4	4	7		5		6		8									
3		2		4		2	8	3				4	1	1			
2	5	4	2	15	2	10	16	11				9	5	3			
1		2	7		1				1	6		7	14	9	3		1
Tot.	24	24	9	24	3	23	24	24	1	6		20	20	13	3		1
Mn.	4.9	4.1	1.2	2.6	1.7	3.4	2.3	3.1	1.0	1.0		1.9	1.4	1.4	1.0		1.0
SD	2.1	1.9	0.6	0.8	0.8	1.6	0.5	1.2				0.8	0.6	0.8			

TABLE 37

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment 750-999

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10																	
9																	
8																	
7	3																
6	9	2				2											
5	4	6				3											
4	7	7		5		15	1	3									
3	3	4	1	1		3	5	5				1					
2	3	7	2	23	1	6	23	21				7	6			1	
1		2	3		4				1	2		12	8	6		3	
Tot.	29	28	6	29	5	29	29	29	1	2		20	14	6		4	
Mn.	4.8	3.5	1.7	2.4	1.2	3.7	2.2	2.4	1.0	1.0		1.5	1.4	1.0		1.3	
SD	1.5	1.5	1.0	0.8	0.5	1.1	0.6	0.7				0.6	0.6			0.6	

TABLE 39

Junior High Curriculum Offerings by Subject Area for Districts with Total Enrollment 1000-1499

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10																	
9	1																
8	2																
7	4	1				2											
6	11	3		1		8	1										
5	4	6		2		3						1					
4	10	12		14		19	5	4									
3	4	8	4	4		2	10	12			4	2					
2	2	7	4	17	4	4	21	21			16	15	4	1			
1	1	1	12	1	3		2	2	2	11	11	11	15	7			1
Tot.	39	38	20	39	7	38	39	39	2	11	31	29	19	8			1
Mn.	5.0	3.7	1.6	3.1	1.6	4.4	2.6	2.5	1.0	1.0	1.8	1.8	1.2	1.1			1.0
SD	1.8	1.4	0.8	1.2	0.6	1.3	1.0	0.8			0.7	0.9	0.5	0.4			

TABLE 41

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment 1500-1999

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home.	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10	1																
9																	
8	1																
7	2	2															
6	2	3					3										
5	6	3					3										
4	6	7		8			9	3	5			1					
3	1	3	3	5			1	6	9		2	3					
2	5	4	2	11	1		7	12	9		7	4					
1			6		1		1	2	1	5	6	8	9	4	3		
Tot.	24	22	11	24	2		24	23	24	5	6	17	17	4	3		
Mn.	4.6	4.2	1.7	2.9	1.5		3.6	2.4	2.8	1.0	1.0	1.7	1.8	1.0	1.0		
SD	2.0	1.6	1.0	0.9	1.2		1.5	0.9	0.9			0.7	1.0				

TABLE 43

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment 2000-2999

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home.	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10																	
9	3	1															
8	3	1	1	2													
7	2	3		1		1											
6	10	5		3		9											
5	8	9		3		7											
4	5	9	2	11		9	6	4									
3	1	3	2	4		1	15	16			7	6		1			
2		1	11	8		3	11	12			12	13	3	1			
1			6		2	2			7	16	8	10	6	10			2
Tot.	32	32	22	32	2	32	32	32	7	16	27	29	9	12			2
Mn.	5.9	5.0	2.3	4.0	1.0	4.5	2.8	2.8	1.0	1.0	2.0	1.9	1.3	1.3			1.0
SD	1.6	1.5	1.6	1.7		1.6	0.8	0.7			0.8	0.8	0.5	0.7			

TABLE 45

Junior High Curriculum Offerings by Subject Area
for Districts with Total Enrollment 3000 and Above

No. of Offer.	Com.	Arts.	Lang.	Math	Hlth.	PE	Sci.	Soc.	Agr.	Home	Indus.	Bus.	Voc.	Tech.	Mrkt.	Spec.	Driv.
17																	
16																	
15																	
14																	
13																	
12																	
11																	
10	2																
9	7	4															
8	2	10		1		1		1									
7	14	16	5	3		9											
6	12	15	10	14		26						1					
5	11	16	5	13		19	7	3			1	4					
4	18	7	12	32		6	17	14			2	8					
3	8	4	16	10	1	6	38	42			26	28	3				
2	2	2	14	3	7	4	13	15			37	22	1	12			1
1		2	11		14	4	1		18	5	9	6	17	21	2	2	8
Tot.	76	76	73	76	22	75	76	75	18	5	75	69	21	33	2	2	9
Mn.	5.6	5.8	3.5	4.5	1.4	5.0	3.2	3.1	1.0	1.0	2.3	2.8	1.3	1.4	1.0	1.0	1.1
SD	2.0	1.8	1.8	1.2	0.6	1.6	0.9	0.9			0.8	1.1	0.8	0.5			0.4

Tables 46-49 display innovation information for the accredited Iowa schools. It appears from Table 46 that PSSC Physics and Chemistry Study Group Chemistry are by far the most popular recently developed curricular programs that are being used. The most popular per-pupil cost category for finding curriculum innovations in Iowa is $500-$649.

Language Laboratories tend to be the most popular technological innovation in Iowa. The other technical innovations are not really used in any large-scale way. This conclusion follows from the data in Table 47. The second most popular innovation is data processing equipment. Schools are beginning to use computerized grade reporting, attendance reporting, scheduling and business accounting. The most popular per-pupil cost range for technical innovation is $500-$649.

Table 48 indicates that accredited high schools using the "modern" curriculum innovations have an enrollment greater than 200. However, the number of high schools in Iowa with a population exceeding 1,500 is only about 20. Apparently, mathematics and physical science innovations are not nearly as popular as the physics and chemistry innovations. By comparing both Tables 46 and 48 it seems safe to conclude that the larger systems are not using the "modern" curriculum materials any more than the middle-sized systems. Apparently middle-sized systems are also typical with respect to per-pupil cost as well. In other words, more money spent per pupil does not necessarily mean more innovative change in the curriculum.

A reading of Table 49 suggests that although language labs and data processing are the most popular innovations, high schools tend to have an enrollment of about 500 before data processing equipment is found. Also data processing equipment seems to be used more in high schools in the enrollment range of 500-1500 than in the larger high schools. However, many large high schools may have a centralized data processing center at the board of education office. In addition Iowa has several area community colleges that provide processing services for the high schools. This may help account for the small number of large schools with their own equipment.

On the other hand, language laboratories tend to be proportionately more popular in smaller high schools than larger high schools. Schools with a moderate cost per pupil tend to have language laboratories more frequently than schools with high or low cost per pupil.

Tables 50-53 display, respectively, the same data for the accredited secondary schools in Missouri. It is interesting to note that the same pattern that characterizes Iowa schools characterizes Missouri. However, in Iowa there are no accredited schools over 2,500 in size whereas in Missouri there are a few. Of course St. Louis and Kansas City have much larger schools than any city in Iowa. Even with this population difference, however, Iowa seems to have more data processing schools than Missouri. It appears from comparing Tables 47 and 51 that the per-pupil cost for innovative schools in Missouri tends to be lower than in Iowa. A greater proportion of the technical innovations in Missouri have a per-pupil cost of $350-$499 whereas in Iowa a smaller proportion of the technical innovations are found in this cost range.

The summaries for the accredited school sample from Nebraska are listed in Tables 54-57. Although there appears to be a proportionately greater incidence of "modern" math in the schools, PSSC Physics and Chemistry Study Group Chemistry are again the more popular "modern" subjects in the curriculum. Language laboratories are the most popular technical innovation but unlike Missouri or Iowa,

The innovation tables at the end of this section (Tables 70-116) display further comparison information for the interested reader. The tables display the twenty-seven innovations by school size, per-pupil cost and district location.

SUMMARY

This section describes the technical, curricular, and organizational innovations being used in North Central accredited schools by state. It appears that the larger the school, the greater the chance for technological innovation. On the other hand, curricular innovations seem popular at all levels of enrollment. The most popular curriculum innovations are in physics and chemistry. The "modern" math and social studies programs apparently have not had as great an impact upon education as many educators might have anticipated. Language laboratories are popular in all states. Schools must make good use of this type of equipment for listening and recitation.

Schools in the Great Plains do not seem to be making much use of full-time organizational innovations. Most organizational innovations apart from the Student Exchange program have been adopted sparingly. Schools apparently are slow to adopt such changes as flexible scheduling and team teaching. Of course these changes are closely related to the adoption of data processing methods in the school. Perhaps in the near future more schools will join with local banks or industry to share computer time.

As more schools adopt data processing methods, undoubtedly the popularity of scheduling, team teaching, cultural enrichment, and special study hall arrangements will become more popular. These organizational changes are simply difficult to plan without machine availability.

TABLE 47

Number of Technological Innovations Reported in Iowa Accredited Public Secondary Schools by Pupil Expenditure

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Under $350	4							3	75	1	25	1	25	1	25	6
				1	25											1
$350-499	37			1	3			22	59	3	8	2	5	2	5	30
		2	5	8	22	5	14	4	11	2	5	3	8	4	11	28
$500-649	54					2	4	36	67	6	11			1	2	45
		1	2	12	22	6	11	4	7	5	9	2	4	2	4	32
Over $650	27	2	7					15	56	9	33	1	4	1	4	28
		2	7	7	26	6	22	4	15	7	26			2	7	28
Totals	122															
Full Use		2	2	2	2	3	2	85	70	20	16	4	3	5	4	121
Lim. Use		5	4	37	30	19	16	14	11	15	12	6	5	9	7	105

TABLE 49

Number of Technological Innovations Reported in Iowa Accredited Public Secondary Schools by Pupil Enrollment

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Less than 200	6					3	50									3
		2	33	1	17	1	17									4
200-499	67			1	1	2	3	45	67	4	6	1	1			53
		3	4	19	29	10	15	9	13	6	9	2	3	8	12	57
500-1499	34							23	68	10	29	3	9	4	12	40
				13	38	5	15	4	12	5	15	3	9			30
1500-2499	15	2	13	1	7	1	7	14	93	6	40			1	7	25
		2	13	3	20	3	20			4	27	1	7	1	7	14
Over 2500																0
																0
Totals	122															
Full Use		2	2	2	2	3	2	85	70	20	16	4	3	5	4	121
Lim. Use		5	4	37	30	19	16	14	11	15	12	6	5	9	7	105

TABLE 51

Number of Technological Innovations Reported in Missouri Accredited Public Secondary Schools by Pupil Expenditure

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Under $350	3							3	100							3
												1	33			1
$350-499	52	1	2	3	6	2	4	34	65	4	8	2	4	5	10	51
		1	2	16	31	11	21	9	17	3	6	3	6	4	8	47
$500-649	36	7	19	3	8	1	3	27	75	9	25			1	3	48
		4	11	6	17	3	8	3	8	6	17			2	6	24
Over $650	14	1	7					10	71	4	29					15
		2	14	5	36			1	7	4	29			2	14	14
Totals	105															
Full Use		9	9	6	6	3	3	81	77	19	18	2	2	6	6	126
Lim. Use		9	9	27	26	15	14	14	13	14	13	4	4	8	8	91

TABLE 53

Number of Technological Innovations Reported in Missouri Accredited Public Secondary Schools by Pupil Enrollment

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Less than 200	3															0
								2	67							2
200-499	24	2	8	2	8	2	8	9	38			1	4	2	8	18
				7	29	6	25	8	33			1	4	1	4	23
500-1499	43	4	9	2	5	1	2	37	86	5	12	1	2	2	5	52
		5	12	12	28	4	9	3	7	5	12	2	5	5	12	36
1500-2499	30	3	10	1	3			30	100	11	37			2	7	47
		2	7	6	20	2	7			6	20	1	3	2	7	19
Over 2500	5			1	20			5	100	3	60					9
		2	40	2	40	3	60	1	20	3	60					11
Totals	105															
Full Use		9	9	6	6	3	3	81	77	19	18	2	2	6	6	126
Lim. Use		9	9	27	26	15	14	14	13	14	13	4	4	8	8	91

TABLE 55

Number of Technological Innovations Reported in Nebraska Accredited Public Secondary Schools by Per Pupil Expenditure

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Under $350	3			1	33											1
		1	33	1	33	2	67	1	33	1	33			1	33	7
$350-499	40	2	5	1	3	1	3	11	28	1	3			2	5	18
		10	25	11	28	5	13	6	15	3	8	2	5	6	15	43
$500-649	45	12	27	1	2	1	2	19	42	3	7			2	5	38
		5	11	12	27	7	16	6	14	2	5	2	5	3	7	37
Over $650	11	1	9					3	27							4
		3	27	2	18	2	18	1	9							8
Totals	99															
Full Use		18	18	4	4	2	2	38	38	4	4			5	5	71
Lim. Use		20	20	27	27	18	18	16	16	7	7	4	4	10	10	102

TABLE 57

Number of Technological Innovations Reported in Nebraska Accredited Public Secondary Schools by Pupil Enrollment

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Less than 200	20	5	25	1	5			3	15							9
		5	25	8	40	8	40	7	35			1	5	3	15	32
200-499	54	8	15	2	4			19	35					3	6	32
		5	9	12	22	10	19	7	13	2	4			5	9	41
500-1499	18	2	11	1	6	1	6	9	50	1	6			1	6	15
		6	33	4	22			2	11	2	11	1	6	2	11	17
1500-2499	6	3	50			1	17	6	100	3	50			1	17	14
		3	50	3	50					2	33	2	33			10
Over 2500	1							1	100							1
		1	100							1	100					2
Totals	99															
Full Use		18	18	4	4	2	2	38	38	4	4			5	5	71
Lim. Use		20	20	27	27	18	18	16	16	7	7	4	4	10	10	102

TABLE 59

Number of Technological Innovations Reported in South Dakota Accredited Public Secondary Schools by Pupil Expenditure

	Total Schools	T. V. Instr.		Progr. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Under $350	1							1	100							1
																0
$350-499	45	3	7	6	13			5	11	1	2	1	2	3	7	19
		2	4	9	20	7	16	11	24	4	9	1	2	3	7	37
$500-649	14	1	7			1	7	6	43	2	14					10
				5	36	2	14	2	14	3	21					12
Over $650																0
																0
Totals	60															
Full Use		4	7	6	10	1	2	12	20	3	5	1	2	3	5	30
Lim. Use		2	3	14	23	9	15	13	22	7	12	1	2	3	5	49

TABLE 61

Number of Technological Innovations Reported in South Dakota Accredited Public Secondary Schools by Pupil Enrollment

	Total Schools	T. V. Instr.		Prog. Instr.		Teach. Mach.		Lang. Lab		Data Proc.		Tel. Amp.		Gaming		Total
		N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	N	PC	
Less than 200	14					1	7							1	7	2
		2	14	4	29	2	14	4	29							12
200-499	34	2	6	4	12			7	21					2	6	15
				5	15	6	18	6	18	2	6	1	3	2	6	22
500-1499	11	1	9	2	18			3	27	3	27					9
				5	45	1	9	3	27	3	27					12
1500-2499																0
																0
Over 2500	2	1	50					2	100			1	50			4
										2	100			1	50	3
Totals	60															
Full Use		4	7	6	10	1	2	12	20	3	5	1	2	3	5	30
Lim. Use		2	3	14	23	9	15	13	22	7	12	1	2	3	5	49

TABLE 63

Number of Organizational Innovations Reported in Iowa Accredited Public Secondary Schools by Pupil Enrollment

		Less Than 200	200-499	500-1499	1500-2499	Over 2500
No. of Schools		6	66	34	15	
Flexible Scheduling			2	1		
			3	1		
Team Teaching			2	4	7	
		1	3	11	4	
College Credit Courses			2	6	2	
			1	4	4	
Non-graded School				2		
				1		
Teacher Aides			7	4	9	
		1	11	10	1	
Honor Study Halls		1	3	4	1	
		2	8	6	4	
Work-Study Program			17	16	13	
		1	11	8	1	
School-within-a-School						
Cultural Enrichment			3	3	2	
			5	6	3	
Student Exchange		1	15	27	11	
		1	7	1	4	
Optional Class Attendance					1	
Extended School Year			1			
			1			
Totals	Full Time	2	52	67	45	
	Limited Time	6	50	48	22	

TABLE 65

Number of Organizational Innovations Reported in Missouri Accredited Public Secondary Schools by Pupil Enrollment

		Less Than 200	200-499	500-1499	1500-2499	Over 2500
No. of Schools		3	24	40	22	5
Flexible Scheduling					1	
				2		1
Team Teaching				4	8	2
				14	16	2
College Credit Courses			1	6	5	2
			1	3	6	
Non-graded School						
				2	2	1
Teacher Aides		1	5	5	4	1
			5	10		1
Honor Study Halls			2		1	1
			2	5	4	1
Work-Study Program			6	26	23	5
			8	8	5	1
School-within-a-School						
					1	1
Cultural Enrichment			2	4	1	1
			4	3	8	1
Student Exchange			3	11	17	3
				6	2	1
Optional Class Attendance						1
				1		1
Extended School Year				4	1	1
			1			
Totals	Full Time	1	19	60	61	17
	Limited Time		21	54	44	11

TABLE 67

Number of Organizational Innovations Reported in Nebraska Accredited Public Secondary Schools by Pupil Enrollment

		Less Than 200	200-499	500-1499	1500-2499	Over 2500
No. of Schools		20	54	18	12	1
Flexible Scheduling			1			
		2	1		1	
Team Teaching		1		2	1	
		4	11	10	2	1
College Credit Courses		1		2	3	
		2	4	3		
Non-graded School						
		1	1			
Teacher Aides		2	3		3	
		2	9	5		
Honor Study Halls		1	2	4		
		1	11	6	2	
Work-Study Program		2	12	5	6	1
		6	21	6		
School-within-a-School						
Cultural Enrichment			3	1	1	
		6	11		1	
Student Exchange			14	9	5	
		2	4	2		
Optional Class Attendance			1		2	
Extended School Year			3	1		
		3	2	1		
Totals	Full Time	7	38	24	21	1
	Limited Time	29	76	33	6	1

TABLE 69

Number of Organizational Innovations Reported in South Dakota Accredited Public Secondary Schools by Pupil Enrollment

		Less Than 200	200-499	500-1499	1500-2499	Over 2500
No. of Schools		14	34	11		1
Flexible Scheduling						
			2	1		1
Team Teaching				1		1
			6	2		
College Credit Courses			1			
			2	2		
Non-graded School			1			
			1			
Teacher Aides		1	2			
		3	9	1		
Honor Study Halls						
		1	5	2		1
Work-Study Program			2	2		1
			5	2		
School-within-a-School						
Cultural Enrichment				1		
			5	2		1
Student Exchange			6	5		1
		3	2			
Optional Class Attendance						
		1	1			
Extended School Year						
			3			1
Totals	Full Time	1	12	9		3
	Limited Time	8	41	12		4

TABLE 71

Comparison of Innovations in Public Accredited Secondary Schools in Rural Areas with Under 200 Pupils with $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools			2				5	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics							1	
Chem. Study								
CBA Chem.								
SMSG Math								
UICSM Math								
ECSP Phys Sci.				1				
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								1
Program. Instr.				1				1
Teach. Mach.				2				1
Lang. Lab				1				
Data Proc.								
Telephone Amp.								
Gaming								
Flex. Sched.								
Team Teach.								
College Crs.								
Non-graded								
Teach. Aides			1					1
Hon. St. Hall			1					
Work-Study				1				
Sch. -in-Sch.								
Cult. Enrich.				1				
Stu. Exchange								1
Opt. Attend.								1
Ext. Sch. Yr.								
Totals			2	7			1	6
Mean			1.0	3.5			.2	1.2

TABLE 73

Comparison of Innovations in Public Accredited Secondary Schools in Rural Areas with 500-1499 Pupils with $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	2						1	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics		1						
Chem. Study								
CBA Chem.								
SMSG Math		1						
UICSM Math								
ECSP Phys. Sci.	1							
SSSP Phys. Sci.								
Humanities								
T. V. Instr.							1	
Program. Instr.		2					1	
Teach. Mach.								
Lang. Lab	2							
Data Proc.								
Telephone Amp.	1	1						
Gaming	1							
Flex. Sched.		1						
Team Teach.		1						
College Crs.		1						
Non-graded								
Teach. Aides	1	1						
Hon. St. Hall								
Work-Study	1							
Sch. -in-Sch.								
Cult. Enrich.	1	1						
Stu. Exchange	1							
Opt. Attend.								
Ext. Sch. Yr.								
Totals	9	10					2	
Mean	4.5	5.0					2.0	

TABLE 75

Comparison of Innovations in Public Accredited Secondary Schools in Rural Areas with 200-499 Pupils with $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	6		6				3	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	2	1		1				1
Chem. Study	2							
CBA Chem.								
SMSG Math	3		1					
UICSM Math								
ECSP Phys. Sci.	1							
SSSP Phys. Sci.								
Humanities								
T. V. Instr.			2					
Program. Instr.				1				
Teach. Mach.	1	1		1				1
Lang. Lab	4		2	1				
Data Proc.								
Telephone Amp.								
Gaming		1						
Flex. Sched	1		1					
Team Teach.								
College Crs.				3				
Non-graded								
Teach. Aides		1	1					1
Hon. St. Hall	1	1		1				
Work-Study	2		1	2				
Sch. -in-Sch.								
Cult. Enrich.	1							
Stu. Exchange	1			1				
Opt. Attend.								
Ext. Sch. Yr.								
Totals	19	5	8	11				3
Mean	3.2	.8	1.3	1.8				1.0

TABLE 77

Comparison of Innovations in Public Accredited Secondary Schools in Rural Area with Under 200 Pupils with Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	1		3					
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics								
Chem. Study								
CBA Chem.								
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.				2				
Program. Instr.				1				
Teach. Mach.				1				
Lang. Lab				1				
Data Proc.								
Telephone Amp.								
Gaming								
Flex. Sched.				1				
Team Teach.								
College Crs.								
Non-graded								
Teach. Aides								
Hon. St. Hall								
Work-Study			1					
Sch. -in-Sch.								
Cult. Enrich.				1				
Stu. Exchange								
Opt. Attend.								
Ext. Sch. Yr.				1				
Totals			1	8				
Mean			.3	2.7				

TABLE 79

Comparison of Innovations in Public Accredited Secondary Schools in Rural Areas with 500-1499 Pupils with Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	1							
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics								
Chem. Study								
CBA Chem.								
SMSG Math	1							
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								
Program. Instr.								
Teach. Mach.								
Lang. Lab								
Data Proc.	1							
Telephone Amp.								
Gaming								
Flex. Sched.								
Team Teach		1						
College Crs.								
Non-graded								
Teach. Aides								
Hon. St. Hall								
Work-Study								
Sch. -in-Sch.								
Cult. Enrich		1						
Stu. Exchange		1						
Opt. Attend.								
Ext. Sch. Yr.								
Totals	2	3						
Mean	2.0	3.0						

TABLE 81

Comparison of Innovations in Public Accredited Secondary Schools in Towns of 5,000 or Under with Under 200 Pupils with $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	1		2		1		5	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	1	2		1			1	
Chem. Study						1	1	
CBA Chem.				1				1
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities				1				
T. V. Instr.				1				1
Program. Instr.				1				1
Teach. Mach.				1				1
Lang. Lab			1	1		1		3
Data Proc.		1						
Telephone Amp.								
Gaming				1				
Flex. Sched.				1				
Team Teach.			1	1				
College Crs.				1				
Non-graded				1				
Teach. Aides							1	
Hon. St. Hall								
Work-Study				1				
Sch. -in-Sch.								
Cult. Enrich.				1				
Stu. Exchange								1
Opt. Attend.								
Ext. Sch. Yr.								
Totals	1	3	2	14		2	3	8
Mean	1.0	3.0	1.0	7.0		2.0	.6	1.6

TABLE 83

Comparison of Innovations in Public Accredited Secondary Schools in Towns of 5,000 or Under with 500-1499 Pupils with $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	1		1		4		1	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics			1		1			
Chem. Study								
CBA Chem.								
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities					1			
Television								
Program. Instr.		1			1	1		
Teach. Mach.		1			1			
Lang. Lab					2	1		
Data Proc.								
Telephone Amp.						1		
Gaming					1			
Flex. Sched.								
Team Teach.					1			
College Crs.								
Non-graded								
Teach. Aides		1				2		
Hon. St. Hall								
Work-Study					2	1		
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange					1			
Opt. Attend.								
Ext. Sch. Yr.								
Totals		3	1		11	6		
Mean		3.0	1.0		2.8	1.5		

TABLE 85

Comparison of Innovations in Public Accredited Secondary Schools in Towns of 5,000 or Under with 200-499 Pupils with $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	15		19		4		3	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	3	3	5	2	1		1	
Chem. Study	1	1	3	2	1		1	
CBA Chem	1		1	2				1
SMSG Math	2		1	4				
UICSM Math				2				
ECSP Phys. Sci.		1						
SSSP Phys. Sci.								
Humanities								
T. V. Instr.		1	4	1	1			
Program. Instr.		4		4	1	1		
Teach. Mach.	1	1		3	1	1		
Lang. Lab	8	2	6	2	1	1	1	
Data Proc.	2	2						
Telephone Amp.		1						
Gaming		1	1					
Flex. Sched.		1		1				
Team Teach.				3				
College Crs.	1						1	
Non-graded								
Teach. Aides	1	2		2	1	2		1
Hon. St. Hall		3	2	6	1			
Work-Study	3	2	5	6	1	2		
Sch. -in-Sch.								
Cult. Enrich.	1		1	5	1	1		
Stu. Exchange	2	3	4	2				
Opt. Attend.								
Ext. Sch. Yr.	1		1	1		1		
Totals	27	28	34	48	10	9	4	2
Mean	1.8	1.9	1.8	2.5	2.5	2.3	1.3	.7

TABLE 87

Comparison of Innovations in Public Accredited Secondary Schools in Towns of 5,000 or Under with Under 200 Pupils with Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri	S. Dakota
No. of Schools	1		5			
PSSC Physics						
Chem. Study						
CBA Chem.						
SMSG Math						
UICSM Math						
ECSP Phys. Sci.						
SSSP Phys. Sci.						
Humanities						
T. V. Instr.			1	1		
Program. Instr.				1		
Teach. Mach.				1		
Lang. Lab	1		1			
Data Proc.						
Telephone Amp.						
Gaming						
Flex. Sched.						
Team Teach.		1		2		
College Crs.						
Non-graded						
Teach. Aides						
Hon. St. Hall		1				
Work-Study				2		
Sch. -in-Sch.						
Cult. Enrich.						
Stu. Exchange				2		
Opt. Attend.						
Ext. Sch. Yr.						
Totals	1	2	2	9		
Mean	1.0	2.0	.4	1.8		

TABLE 89

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 500-1499 Pupils with Under $350 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	2				1			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics								
Chem. Study								
CBA Chem.								
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								
Program Instr.								
Teach. Mach.								
Lang. Lab	1				1			
Data Proc.	1							
Telephone Amp.	1							
Gaming	1							
Flex. Sched.								
Team Teach.	1							
College Crs.								
Non-graded	1							
Teach. Aides								
Hon. St. Hall								
Work-Study	1				1			
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange	2							
Opt. Attend.								
Ext. Sch. Yr.								
Totals	9				2			
Mean	4.5				2.0			

TABLE 91

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5000-399,999 with 200-499 Pupils with $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	1		4		2		1	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics				1	1			1
Chem. Study		1			1			
CBA Chem.				1				
SMSG Math				2				
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.			1	1				
Program. Instr.				1		1		
Teach. Mach.								
Lang. Lab	1		1	1	1	1		
Data Proc.								
Telephone Amp.						1		
Gaming				2				
Flex. Sched.								
Team Teach.				1				
College Crs.				1				
Non-graded								
Teacher Aides				1	1			
Hon. St. Hall				1		1		1
Work-Study		1	1	2		1		1
Sch. -in-Sch.								
Cult. Enrich.		1						1
Stu. Exchange	1		2		1			
Opt. Attend.								
Ext. Sch. Yr.								
Totals	2	3	5	15	5	5		4
Mean	2.0	3.0	1.3	3.8	2.5	2.5		4.0

TABLE 93

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 1500-2499 Pupils and $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S.Dakota	
No. of Schools	5		1		2			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	1	3						
Chem. Study	3							
CBA Chem.		1			1			
SMSG Math	2	2						
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities	1	1						
T. V. Instr.				1				
Program. Instr.		2		1		1		
Teach. Mach.		1						
Lang. Lab	4		1		2			
Data Proc.	1	1		1				
Telephone Amp.		1		1				
Gaming		1			2			
Flex. Sched.								
Team Teach.	2	2						
College Crs.		1						
Non-graded								
Teach. Aides	3				1			
Hon. St. Hall		2				1		
Work-Study	4		1		1			
Sch. -in-Sch.								
Cult. Enrich.	1	1		1				
Stu. Exchange	4	1			1			
Opt. Attend.		1						
Ext. Sch. Yr.								
Totals	26	21	2	5	8	2		
Mean	5.2	4.2	2.0	5.0	4.0	1.0		

TABLE 95

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 200-499 Pupils with $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	9		3				2	
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	2			1				1
Chem. Study		3		2				
CBA Chem.	1							
SMSG Math		1	1					
UICSM Math								
ECSP Phys. Sci.		1						
SSSP Phys. Sci.								
Humanities								
T. V. Instr.			1	1				
Program. Instr.		2		1				1
Teach. Mach.		1		1				
Lang. Lab	7		3				2	
Data Proc.	1	1		1				1
Telephone Amp.								
Gaming								
Flex. Sched.	1							
Team Teach.		1		1				1
College Crs.								1
Non-graded							1	
Teach. Aides	1	1		1				
Hon. St. Hall	1	1						1
Work-Study	5			1			1	
Sch. -in-Sch.								
Cult. Enrich.		1		1				
Stu. Exchange	5		3					
Opt. Attend								1
Ext. Sch. Yr.			2					
Totals	24	13	10	11			4	7
Mean	2.7	1.4	3.3	3.7			2.0	3.5

TABLE 97

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 1500-2499 Pupils with $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	4		3		4			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	2		3			1		
Chem. Study	3		1		2			
CBA Chem.				1		1		
SMSG Math						1		
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities	1		2		3			
T. V. Instr.			2	1				
Program. Instr.				1		1		
Teach. Mach.			1					
Lang. Lab	4		3		3			
Data Proc.		1	2		2	1		
Telephone Amp.								
Gaming			1					
Flex. Sched.				1				
Team Teach.			1		1	2		
College Crs.		1	2			2		
Non-graded								
Teach. Aides		1	2					
Hon. St. Hall		1		1				
Work-Study	4		3		2	2		
Sch. -in-Sch.						1		
Cult. Enrich.	1		1			2		
Stu. Exchange	2	2	3		2			
Opt. Attend.			2					
Ext. Sch. Yr.								
Totals	17	6	29	5	15	14		
Mean	4.3	1.5	9.7	1.7	3.6	3.5		

TABLE 99

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 200-499 Pupils with Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	2							
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics		1						
Chem. Study	1							
CBA Chem.								
SMSG Math.								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								
Program. Instr.		1						
Teach. Mach.		1						
Lang. Lab	1							
Data Proc.		1						
Telephone Amp.								
Gaming		1						
Flex. Sched.								
Team Teach.	1							
College Crs.								
Non-graded								
Teach. Aides								
Hon. St. Hall								
Work-Study	2							
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange	1							
Opt. Attend.								
Ext. Sch. Year								
Totals	6	5						
Mean	3.0	2.5						

TABLE 101

Comparison of Innovations in Public Accredited Secondary Schools in Cities of 5,000-399,999 with 1500-2499 Pupils with Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of Schools	6							
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics	3	2						
Chem. Study	3	2						
CBA Chem.		1						
SMSG Math		2						
UICSM Math								
ECSP Phys. Sci.		1						
SSSP Phys. Sci.								
Humanities		1						
T. V. Instr.	2	2						
Program. Instr.		1						
Teach. Mach.		2						
Lang. Lab	5							
Data Proc.	4	2						
Telephone Amp.								
Gaming	1							
Flex. Sched.								
Team Teach.	4	2						
College Crs.	2	2						
Non-graded								
Teach. Aides	5							
Hon. St. Hall								
Work-Study								
Sch. -in-Sch.								
Cult. Enrich		2						
Stu. Exchange	4	1						
Opt. Attend.								
Ext. Sch. Yr.								
Totals	33	23						
Mean	5.5	3.8						

TABLE 103

Comparison of Innovations In Public Accredited Secondary Schools In Cities of 400, 000 + With 1500-2499 Pupils With $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School					5			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics					2			
Chem. Study					3			
CBA Chemistry						1		
SMSG Math					3	1		
UICSM Math						1		
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T.V. Instr.					2	1		
Program. Instr.					1			
Teach. Mach.								
Lang. Lab					5			
Data Proc.					3	1		
Telephone Amp.								
Gaming								
Flex. Sched.								
Team. Teach.					2	2		
College Crs.					1	1		
Non-graded								
Teach. Aides								
Hon. St. Hall								
Work-Study					2	1		
Sch.-in-Sch.								
Cult. Enrich.					1			
Stu. Exchange					4			
Opt. Atten.								
Ext. Sch. Yr.								
Total					29	9		
Mean					5.8	1.8		

TABLE 105

Comparison of Innovations In Public Accredited Secondary Schools In Cities of 400,000 + With 1500-2499 Pupils With Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School					6			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC. Physics					1	3		
Chem. Study						1		
CBA Chemistry						1		
SMSG Math								
UICSM Math								
ECSP Phys. Sci.					1			
SSSP Phys. Sci.								
Humanities						1		
T. V. Instr.						1		
Program. Instr.						1		
Teach. Mach.								
Lang. Lab					5			
Data Proc.					2	3		
Telephone Amp.								
Gaming								
Flex. Sched.								
Team. Teach.								
College Crs.						5		
Non-graded					1	1		
Teach. Aides								
Hon. St. Hall								
Work-Study					6			
Sch.-in-Sch.								
Cult. Enrich.						1		
Stu. Exchange						1		
Opt. Atten.								
Ext. Sch. Yr.								
Totals					16	19		
Mean					2.7	3.2		

TABLE 107

Comparison of Innovations in Public Accredited Secondary Schools In Suburban Areas With 200-499 Pupils With $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School	1				1			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics								
Chem. Study								
CBA Chemistry								
SMSG Math		1				1		
UICSM Math						1		
ECSP Phys. Sci.						1		
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								
Program. Instr.						1		
Teach. Mach.								
Lang. Lab	1					1		
Data Proc.								
Telephone Amp.								
Gaming						1		
Flex. Sched.								
Team Teach.								
College Crs.						1		
Non-graded								
Teach. Aides	1							
Hon. St. Hall								
Work-Study	1					1		
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange								
Opt. Atten.								
Ext. Sch. Yr.								
Totals	3	1				8		
Mean	3	1				8		

TABLE 109

Comparison of Innovations In Public Accredited Secondary Schools In Suburban Areas With 1500-2499 Pupils With $350-499 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School			1		5			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics			1		4	1		
Chem. Study			1		1			
CBA Chemistry				1				
SMSG Math					2			
UICSM Math					2			
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities						1		
T.V. Instr.				1				
Program. Instr.				1		1		
Teach. Mach.						1		
Lang. Lab			1		5			
Data Proc.			1		2			
Telephone Amp.				1				
Gaming						1		
Flex. Sched.								
Team Teach.				1	1	3		
College Crs.			1		1			
Non-graded								
Teach. Aides			1					
Hon. St. Hall				1		1		
Work-Study			1		3	1		
Sch.-in-Sch.								
Cult. Enrich.						1		
Stu. Exchange			1		4	1		
Opt. Atten.								
Ext. Sch. Yr.					1			
Totals			8	6	26	12		
Mean			8	6	5.2	2.4		

TABLE 111

Comparison of Innovations In Public Accredited Secondary Schools In Suburban Areas With 200-499 Pupils With $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School	1							
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics								
Chem. Study								
CBA Chemistry								
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities								
T. V. Instr.								
Program. Instr.								
Teach. Mach.								
Lang. Lab	1							
Data Proc.								
Telephone Amp.								
Gaming								
Flex. Sched.								
Team Teach.								
College Crs.								
Non-graded								
Teach. Aides								
Hon. St. Hall	1							
Work-Study								
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange								
Opt. Atten.								
Ext. Sch. Yr.								
Totals	2							
Mean	2							

TABLE 113

Comparison of Innovations In Public Accredited Secondary Schools In Suburban Areas With 1500-2499 Pupils With $500-649 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School					7			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics					4	1		
Chem. Study					3			
CBA Chemistry								
SMSG Math					1			
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities					1	1		
T. V. Instr.					1			
Program. Instr.						1		
Teach. Mach.								
Lang. Lab					7			
Data Proc.					2	1		
Telephone Amp.								
Gaming						1		
Flex. Sched.					1			
Team Teach.					3	2		
College Crs.					2	2		
Non-graded						1		
Teach. Aides					1			
Hon. St. Hall					1	2		
Work-Study					6	1		
Sch.-in-Sch.								
Cult. Enrich.						2		
Stu. Exchange					5			
Opt. Atten.								
Ext. Sch. Yr.								
Totals					38	15		
Mean					5.4	2.1		

TABLE 115

Comparison of Innovations in Public Accredited Secondary Schools In Suburban Areas With 200-499 Pupils With Over $650 Pupil Expenditure for 1966-67 School Year

State	Iowa		Nebraska		Missouri		S. Dakota	
No. of School					2			
Innovation	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use	Full Use	Lim. Use
PSSC Physics					1			
Chem. Study								
CBA Chemistry								
SMSG Math								
UICSM Math								
ECSP Phys. Sci.								
SSSP Phys. Sci.								
Humanities					1	1		
T. V. Instr.								
Program. Instr.						1		
Teach. Mach.								
Lang. Lab						1		
Data Proc.								
Telephone Amp.								
Gaming								
Flex. Sched.								
Team Teach.								
College Crs.								
Non-graded								
Teach. Aides								
Hon. St. Hall								
Work-Study					1			
Sch. -in-Sch.								
Cult. Enrich.								
Stu. Exchange								
Opt. Atten.								
Ext. Sch. Yr.								
Totals					3	3		
Mean					1.5	1.5		

368A-607AF

SCHOOL FOOD SERVICE AND SCHOOL DISTRICT ORGANIZATION

by

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March 11, 1968

The Great Plains School District Organization Project
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TABLE OF CONTENTS

Foreword 1

Problem. 2

Needy Boys and Girls 4

How Needy Children Live. 4

Federal Government Legislation 7

Food Is Basic. 7

Special-Assistance Food Programs 8

Free and Reduced-Price Lunches 10

Breakfast Programs 11

Equality 13

Tender Loving Care 13

Nutrition. 13

Government-Donated Commodities 14

Suggested Organization 15

Recommendations. 15

Summary. 16

FOREWORD

Hungry children at school should receive increased attention from educators. Much has been written about the fact that a hungry child cannot do his best in school. One assistant superintendent in a large city in Iowa said, "There is nothing to be gained from having a hungry child sit down at an expensive teaching machine because he will not learn. He is hungry."

The primary purposes of school district organization are to make possible: (1) the desired quality or excellence of the programs and services; (2) the efficiency of the organization for providing the programs and services; and (3) the economy of operation, or the returns received for the tax dollar invested in education.[1]

In Iowa, we consider school district reorganization to have been successful. Improvements in education have been made, and further improvements will be made. Leadership is needed. Food service programs should be expanded to all schools. The word "expansion" is not identical in meaning with the word "leadership"; hopefully, the two will be synergistic, i. e., their cooperative efforts will result in more benefits than will their individual contributions.

The value of this paper in future years, if any, would result in direct benefits to our nation's school boys and girls, both needy and non-needy. Shouldn't we feed the hungry child before we try to educate him?

Respectfully submitted,

Vern Carpenter
School Lunch Consultant-Auditor
Department of Public Instruction
State of Iowa

March 11, 1968

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[1] This paragraph was written by Ralph D. Purdy, Director, Great Plains School District Organization Project, Lincoln, Nebraska.

POSITION PAPER

SCHOOL FOOD SERVICES--A Pupil-Oriented Service.
(School Lunch Program, School Breakfast Program, midmorning and mid-afternoon snacks.)

PROBLEM

In Iowa's public schools, as is true in most states, so far as the school lunch program is concerned, the HAVES have it and the HAVE-NOTS have not it.

In Iowa an estimated 95,460 pupils attend public schools that have no food service. This is about 15 percent of the total enrollment of 638,000. Most of these schools are located in Iowa's largest cities. Probably 99% are elementary pupils.

Within some of the areas where these schools are located, one would fine large numbers of families receiving public assistance and large concentrations of economically needy pupils. Many of these are Title I, ESE Act target schools, and a number of them have or have had Head Start Programs. Unfortunately, many of these are needy schools that have no food service program--some do not even have a milk program. This is the problem.

This pattern is similar throughout our nation. Nationwide, it is estimated that 9.5 million children attend 39,000 public and private schools that have no lunch program and that from 1,000,000 to 2,000,000 needy children attend these schools.

We believe that a school food service program is an integral part of the educational program and that every child, rich and poor alike, should have the opportunity to eat lunch at school.

A magazine article[1] dated June 10, 1966, shows that in one of Iowa's

[1] Sales Management, The Magazine of Marketing, "Survey of Buying Power," Volume 96, No. 12, June 10, 1966, 304 North Crystal Street, East Stroudsburg, Pennsylvania 18301.

Head Start Programs have been one of the best convincers for needed school lunch or breakfast programs, especially when they have been operated during summer months in school buildings that had no food service during the regular school year. There is something about watching a hungry child eat that is far more convincing than a thousand assurances from others.

NEEDY BOYS AND GIRLS

Recent findings of a committee of businessmen called together by New York Governor Nelson A. Rockefeller to study problems of public welfare indicated that about 8,000,000 Americans are on public assistance. Of that number 2,000,000 are 65 and over--few of them are capable of full-time work. About 500,000 are permanently and totally disabled. About 3,500,000 are needy children, and another 1,000,000 are adults caring for these needy children. As reported in the Saturday Review[1], "These facts pointed to an obvious conclusion: Only a small minority of welfare recipients are in a position to work their way off relief rolls."

This committee also found that the number of needy children continues to increase despite the Pill, and that the increase is primarily in urban areas.

HOW NEEDY CHILDREN LIVE

Often a needy mother and her children crowd into one frame house with other similar families. The rent is high. A fairly recent study by the County Welfare Office in Cedar Rapids, Iowa, of 500 welfare recipients, revealed that, although a family of four was allowed $38.40 per month for house rent, they paid an average of $68.39. The difference of $29.99 came from their total grant--no doubt sometimes from their food budget. Iowa no longer computes separate budget items, all grants are lump sum for all needs.

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[1] Saturday Review, December 9, 1967, Saturday Review, Inc., 380 Madison Ave., New York, N. Y., page 20.

This writer asked the building principal of a needy school what his enrollment was, within a few pupils. Half apologetically he replied, "I have no idea. This morning we lost two or three families. One family of eight. We have them coming and going almost every day, you know." After hesitating a few moments, he added, "But many of them will be back in a month or two after their rent runs out."

This principal should not be misjudged because of his statement. He has the welfare of his pupils at heart and is very sincere in his work. His statement is based on years of experience working in needy schools.

Live for Today. Needy children live for today's benefits, for benefits they can see immediately available. Their past experiences have taught them to do so.

Children within one family bank together to fight all others. They have learned to protect each other.

Some children develop a frustrated feeling during kindergarten and are lost in our school system for the remainder of their school years. This is a sad commentary because education is their best hope for breaking the chain of circumstances that engulfs them.

One city superintendent asks, "Where have we failed in education? We have families in our city who have been on relief for three generations and are still on relief, yet they attended our public schools."

A child's personality changes when he is hungry. It also changes when he is cold.

SPECIAL ASSISTANCE FOOD PROGRAMS

Several building principals in needy schools without food service would like to have a lunch program or a breakfast program or a milk program, whichever they can get, but either their local administrative or school board will not approve. These principals are eager to start food programs, and are of the opinion that they will not experience any difficulty in securing the cooperation of their teachers, because the need is evident.

One daily typical occurence in needy schools is for a number of pupils to come to the principal's or to the nurse's office complaining of being sick at their stomach or of having headaches. Principals report that most of these children are hungry.

Occasionally, in some of these schools, teachers will buy a hungry pupil some food at noon.

Principals of these schools have experienced noon-hour difficulties for a long time. In their words, "the pupil goes home at noon and finds no one at home so he forages for himself, finds very little to eat, then goes downtown into business places, pool halls, gets in trouble, and my phone starts ringing. If I could only have a lunch program, have a closed noon hour and reschedule our classes, then I would have the children here during the noon hour so I could supervise them. It would be far less work for me and of much greater benefit to our students. We would have fewer downtown thefts, fewer problems."

In one Iowa school district, efforts were made for several years to establish a lunch program to no avail. The incident that finally convinced local school officials to change their minds was this: During the noon hour,

can be adjusted to fit needs. We learn what the circumstances are and they design the program to fit the circumstances.

Still, many city school districts have not expanded their lunch program. Those districts in Iowa that are expanding are doing so largely by transporting food from existing kitchens rather than waiting until funds are available to build new kitchens. Some people think that transporting food is less than ideal; nevertheless, this practice is widespread, has been in use for many years, is successful, and gets the job done. As a result, many hungry children eat.

One large city in another state reports that during riots transporting food was less advantageous than having individual kitchens in each school.

FREE AND REDUCED-PRICE LUNCHES

School officials experience difficulties in authorizing free lunches or lunches at reduced prices. Admittedly, this is difficult to administer. Why should the burden of deciding which children are economically needy and entitled to free or reduced-price lunches fall upon school officials?

In needy schools there appear to be coorelations between the price charged for lunches, the number who eat, and the number who eat free. If the price is higher, fewer eat, more ask for free lunches, and more free lunches are served. If the price is substantially lower, more eat, fewer ask for free lunches, and fewer free lunches are served. So far, this has been our experience with both special assistance lunch and breakfast programs.

In special assistance programs, some parents refuse free lunches for their children; some apparently feel that they can dig up the money if the price is low enough. Some will not ask for free lunches while others seem not the least bit hesitant to do so. Apparently, other parents aren't interested whether their child is fed or not.

Another child shoveled snow and earned 50 cents which he promptly gave to his teacher to pay for his breakfasts "so his old man wouldn't steal it and buy beer." And so on.

Cooks enjoy preparing breakfasts in needy schools because these children eat well and complain little about any food served them. Consider this breakfast for example: orange juice, milk, dry cereal, cheese squares, and a souffle cup full of raisins. Some children consumed two containers of orange juice, two half-pints of milk, two boxes of cereal, three squares of cheese, and two servings of raisins. After they had eaten this, a few went through the line for a second serving. For some of these children this breakfast would be about all of the food they would get during the day to eat.

One teacher volunteered information about one of her elementary pupils (a girl) who had been doing poorly in school and who had been referred to the school psychologist for possible transfer to a special education class. This girl had less-than-ideal home conditions. She had lived first with one relative, then another. After eating breakfast for three weeks, she made a marked improvement, she was brighter, more alert, she studied better, and had a different outlook on life.

An AFDC mother took her daughter to a doctor because the child was sickly and pale and hadn't been feeling well. After examining the child, the doctor explained that there was only one thing wrong with the child--the child wasn't getting enough to eat. The doctor then asked the mother if she was having her child eat breakfast at school to which the mother replied that she was not. The mother now brings money to school to pay for her child's breakfasts (for one month) the day after she receives her AFDC check, otherwise "it would get spent".

This is why the National School Lunch Program and the School Breakfast Program is each based on a sound nutritional pattern. After 20 years in existence, the Type A pattern for school lunches has had only one significant change. This recent change was to put more emphasis on iron content in lunches.

We, in food service, have not reached the optimum in food appeal to children. We may never. The price we can set for breakfasts and lunches affects participation which affects income--the price must be kept as low as possible. Yet a low price limits the type and amount of food that can be purchased and served. We CAN NOT serve steaks for 30 cents. But we CAN and DO serve wholesome, nutritionally well-balanced lunches for 30 cents.

GOVERNMENT-DONATED COMMODITIES

Government-donated commodities benefit lunch and breakfast programs, but in the most bounteous year provide only about 20 percent of food used.

At present, the federal government purchases food and distributes it to each state. State agencies distribute it to participating public, private, and parochial schools based on average daily student participation in the lunch program.

An alternative frequently voiced is that the government should not do the purchasing but instead should apportion the money to state agencies and let them apportion it to school districts. Districts would use these funds to purchase food. Some people contend that they could do a better job of buying than the government does. Others think not.

Another argument is that one of the original purposes of the commodity program was to use farm surpluses, but that these surpluses have dwindled. Another contention is that as our population increases our food surpluses will decrease.

In any case, government-donated commodities are essential to school food

* That training and educational requirements be established for food service workers.
* That each state legislature appropriate funds:
    1. for kitchens, lunchrooms, and storerooms, or for equipment to transport food in.
    2. at the rate of at least $2,000,000 a year (in Iowa) until every school had a food service program. In Iowa this would take an estimated six to eight years.
    3. that would be reimbursed to school districts through state department of education school lunch sections.

The political party that would adopt this program as part of their platform would win many votes because the public believes in school feeding. When you watch a hungry child eat you realize that you have attained your goal, and that public money has been well spent.

SUMMARY

* The number of needy children increases each year.
* Reliable surveys show that many children eat either an inadequate breakfast or no breakfast. This includes rich and poor alike.
* We know that for many children the lunch they eat at school is their best balanced meal of the day.
* For some of these children the lunch they eat at school is their only meal of the day.
* We believe that for some children the breakfast they eat at school is their best and only meal of the day.
* We know that many needy schools in our nation's cities are without food service.

IOWA SCHOOL DISTRICT ORGANIZATION

A POSITION PAPER

prepared by

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for

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Since the beginning of the century Iowans have engaged in discussions and spasmodic actions in the reorganization of school districts. Various terms have been applied to these actions. Among them are "consolidation", "merger", "reorganization", and "union". The Iowa Supreme Court has ruled that these terms all imply the same concept.[1]

The early concept was the development of a central school for the newly organized area. Though not thoroughly understood and accepted yet today, the multiple attendance center concept has developed as district reorganization has accelerated and encompassed larger geographic areas.

The basic objectives of district reorganization remained consistent throughout the initial developmental period. The early avowed goals of reorganization were:[2]

1. equality of educational opportunity.
2. equitable distribution of tax load.
3. efficient school districts.

The first recorded instance of objectives or goals being spelled out legislatively was with the legislative enactments of 1945.[3]

> "It is hereby declared to be the policy of the State to encourage...the reorganization of school districts into such units as are necessary, economical and efficient... and which will insure equal opportunity for all children of the state."

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1 Smaha v Simmons. 1953, 245 Iowa 163, 60 N.W. 2nd 100.

2 "The Present Day Concept of a Reorganized School District", Publication 355A-914AF, Iowa State Department of Public Instruction, Des Moines, Iowa, March, 1955.

3 Code of Iowa, Chapter 275, Section, Code 1950.

Departmental goals in the area of district organization have been stated in varied forms in the publications and reports of the department.

A 1955 publication stated the major objectives or goals as:[4]

1. To furnish the best possible educational program for all the children of the area.

2. To do so at the least possible cost.

3. To provide for a fair distribution of these costs among all groups of people.

Another departmental publication of 1958 reported them as:[5]

1. Equal and adequate educational opportunities for all children. Each child is entitled to:

   A. A high school education.
   B. Well-trained teachers.
   C. A modern, well-equipped school.
   D. Good educational equipment.
   E. Opportunities to develop individual aptitudes and abilities.
   F. Learn by using the basic skills.
   G. Take part in recreational and cultural activities.
   H. Have access to basic health services.
   I. Transportation, if too far to walk.
   J. Good training in citizenship.
   K. Good moral environment in school.
   L. Access to school lunch program.
   M. Chance to explore some vocation.

2. Good Schools for all:

   A. Large enough to:

      (1) Provide one teacher per grade in elementary school.

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4 "How to Get Better Iowa Schools", by J. C. Wright, reprint from editorial page of the Des Moines Sunday Register on June 26, 1955.

5 "Your School District", State Department of Public Instruction, Des Moines Iowa, 1958.

(2) Employ a minimum of 10 teachers in high school with full-time teachers in each of the following fields:

English	Home Economics (Vocational)
Mathematics	Trade & Industries (Vocational)
Physical Science	Business or Commercial
Social Science	
Music and Fine Arts	
Physical Education & Health	

B. Adequately staffed.
C. Adequately equipped.
D. Easy to reach.

3. Adequate human and financial resources.

4. To assure greatest return for tax dollars.

The goals of education in Iowa vary considerably today from the initial goals. Though the goals of economy and efficiency still appear in policy statements of the State Board of Public Instruction, the recent emphasis has been on the development of quality education for all students of the state through program requirements.

In a policy statement of November, 1963, the State Board of Public Instruction defined its goals in terms of minimum educational program requirements. They are:[6]

I. Elementary Program Experiences:
   1. Language Arts
   2. Social Studies
   3. Mathematics
   4. Science
   5. Health and Physical Education
   6. Music, Art, and Crafts
   7. Safety, Fire Prevention, and First Aid

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[6] Policy Statement, Future Goals for Public Schools in Iowa, November 14, 1963.

II. Junior High School Program Experiences (7, 8, 9):
1. Language Arts - - - - - - - - - - - - - - - - - - 9 Semesters
2. Science - 6 Semesters
3. Social Studies - - - - - - - - - - - - - - - - - 6 Semesters
4. Mathematics - - - - - - - - - - - - - - - - - - 6 Semesters
5. Physical Education and Health - - - - - - - - 6 Semesters
6. Industrial Arts - - - - - - - - - - - - - - - - 3 Semesters
7. Homemaking - - - - - - - - - - - - - - - - - - 3 Semesters
8. Music - 2 Semesters
9. Art - 2 Semesters

III. High School Program Experiences (9-12):
1. English - 4 Years
2. Business Education, including typewriting - - - - - - - - - - - - - - - - - 4 years
3. Mathematics - - - - - - - - - - - - - - - - - - 4 years
4. Science, including physics and chemistry - - - - - - - - - - - - - - - - - 4 years
5. Social Studies including American history, American government, and either American problems or economics and sociology - - - - - - - - - - - - - - - - 4 years
6. Physical Education - - - - - - - - - - - - - - 4 years
7. Homemaking - - - - - - - - - - - - - - - - - - 3 years
8. Industrial Arts - - - - - - - - - - - - - - - - 3 years
9. One Modern Foreign Language - - - - - - - - - 3 years
10. Music - 2 years
11. Art - 1 year
12. Agricultural Education, Distributive Education, Trade and Industrial Education - - - - 3 or 4 years sequential offering

IV. Provision of services for the following (K-12):
1. Special Education Services:
   a. Psychological services.
   b. Special classes.
   c. Itinerant teachers
   d. Consultation services
2. Guidance Services
3. Library
4. Audio-Visual
5. School Health

Early in the century (1925-1930) there was a proliferation of over 10,000 school districts each operating schools, most of these one-room rural independent districts. As late as 1954 there were still 4,417 school districts in the state. The first major move followed the legislation enacted by the General Assembly in 1945.

Table I indicates the general pattern in the reduction of school districts during the past ten years.

Table I

Number of School Districts in Iowa

	Non H.S. Dists.	H.S. Dists.	Total
1955-56	3,334	808	4,142
1956-57	2,903	788	3,691
1957-58	2,578	745	3,323
1958-59	2,085	694	2,779
1960-61	1,013	562	1,575
1961-62	881	510	1,391
1962-63	762	469	1,231
1963-64	701	463	1,164
1964-65	639	459	1,098
1965-66	598	458	1,056
1966-67 (Expected)	47	455	502

It can readily be seen that the major impetus took place between 1955 and 1960. During this five-year period, 2,564 districts were eliminated. From 1960-1965 the reduction has been slow but consistent.

The 61st General Assembly enacted legislation in 1965 requiring all area of the state be attached to districts maintaining approved high schools by July 1, 1966. This has resulted in reducing by 53% the total number of districts in the state during the 1965-1966 school year.

On July 1, 1966, there was a total of 502 school districts classified as follows:

High School Districts	455
Non-high School Districts	47
TOTAL	502

The 47 non-high school districts are all in the process of reorganizing or merging with existing high school districts or are involved in litigation.

Table II reflects the steady increase in areas of the state included in districts maintaining high schools:

Table II

1951-52	27.7
1952-53	29.6
1953-54	32.7
1954-55	36.5
1955-56	41.9
1956-57	48.9
1957-58	55.6
1958-59	64.8
1959-60	76.0
1960-61	82.9
1961-62	85.8
1962-63	87.4
1963-64	87.2
1964-65	88.7

With only 47 districts not presently in high school districts, the percentage of area included in such districts approximates 99%. As soon as existing litigation is completed, all areas will be in districts maintaining approved high schools.

Table III reflects the variety of organizational structures which exist within the districts:

Table III

Types of Organization in Districts Maintaining Four-Year High Schools in 1965-1966

H.S. Enrollment	No. of Districts	6-6	6-3-3	8-4	6-2-4	Misc.
50- 99	29	9		20		
100-149	85	36		42	7	
150-199	95	37	5	40	13	
200-249	63	15	6	24	16	2
250-299	42	11	5	14	12	
300-349	27	5	2	6	14	
350-399	22	4	7	4	7	
400-499	33	1	5	4	13	
500-599	17	1	7	1	7	1
600-799	27		14	4	9	
800-999	4		2			2
Above 1,000	24		23			1

There appears to be no general pattern in the administrative organization of schools. The schools enrolling fewer students tend to favor the 6-6 and the 8-4 patterns whereas the larger districts appear to favor the 6-3-3 and the 6-2-4 structure.

Table IV reflects the changes that are taking place in the geographic area of districts:

Table IV

Area in Square Miles of High School Districts

Year	Highest	Median	Lowest
1954-55	146.0	20.0	.3
1955-56	165.4	22.6	.3
1956-57	186.9	26.5	.3
1957-58	217.5	31.0	.4
1958-59	402.5	37.6	.4
1959-60	402.5	58.2	.4
1960-61	512.0	74.0	.4
1961-62	512.0	84.0	1.5
1962-63	520.0	93.4	1.4
1963-64	520.0	97.0	1.9
1964-65	520.0	100.0	2.3

In terms of area, the largest district in the state encompasses 520 square miles as compared to the largest district of 146 square miles ten years earlier.

The most significant change has been in the steady size increase as reflected by median figures. The median for all high school districts in Iowa in 1965 was just 100 square miles. This reflects a five-fold increase over the ten-year period.

Five basic types of school organizations are legalized in Iowa today.

1. Township school districts: (274.36, Code of Iowa, 1948)
The initial form of school organization provided in the Iowa Constitution was for the establishment of Township Districts. Legislation enacted after the ratification of the Iowa Constitution permitted the subdivision of Township Districts into subdistricts, which occurred in most instances. Later legislation then permitted the merging of subdistricts into total township organizations or partial township organizations.

2. Rural independent school districts: (274.35, Code of Iowa, 1948).
These districts were formed when the majority of voters in township subdistricts favored independent types of organization. This form of school organization permitted the election of a Board of Directors of three area residents and resulted in the conduct of the numerous rural one-room schools in Iowa. (In 1929 there were 9,302 such districts in operation.)

3. Independent School Districts: (274.24, Code of Iowa, 1948).
These districts were formed in cities, towns, or villages of over one hundred residents. The districts could legally include the city, town or village and such contiguous territory as was authorized by the majority of voters in the contiguous territory.
In addition subdistricts containing a village of seventy-five or more residents were permitted to organize independent school districts.

4. Consolidated school districts: (276, Code of Iowa, 1948).
This type of district was created in any area of not less than sixteen government sections of contiguous territory in one or more counties. The purpose of such organizations was for the conduct of an approved "Common School" rather than the numerous one-room rural schools.

5. Community school districts: (275.27, Code of Iowa, 1960).
All districts created or enlarged under provisions of 275.27, Code of Iowa, 1960 have been community school districts. These are all districts created after May 2, 1957. They are under the jurisdiction of the county system in which the greatest number of electors resided at the time of district formation. All such districts maintain high schools. The majority of all districts in Iowa are presently in this classification.

State Department Philosophy:

The only legal minimum standard to be met in formulating a district in Iowa today is the requirement that at least 300 pupils, kindergarten through twelfth grade, must have been enrolled in public schools in the proposed area the preceding year.

The departmental philosophy has varied considerably from this 300 pupil minimum. From the time of its inception (1/1/54) until 1963, the State Board of Public Instruction had advocated districts with a minimum of 500-600 students. More recent philosophy reflected in State Board of Public Instruction policy statements and speeches delivered by State Superintendent Paul Johnston indicate the desire for districts with a minimum of 100 students per high school grade.[7] Translated into total enrollments, this suggests schools with minimum enrollments of approximately 1500 students. Though these are recommendations, the legal minimum still remains 300 students.

Of the three most commonly considered approaches to reorganization (1. legislative mandate, 2. local initiative, and 3. incentive aids) Iowa has consistently supported the concept of district organization as a matter of local initiative. Only one instance to the contrary could be found in departmental literature reviewed. The 1948 legislation relating to the formation of consolidated school districts stated a "...policy of the State to encourage reorganization by granting state aid."[8] It is interesting to note that subsequent legislatures have never followed through with sufficient appropriations to have this concept produce a discernable impact.

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7 op. cit., pp. 5.
8 275.1, Code of Iowa, 1948.

The most effective means yet employed for encouraging reorganization in Iowa has been the establishment of minimum standards. The 61st General Assembly (1965) legislated rather comprehensive curricular requirements for all schools of the state and directed the State Superintendent of Public Instruction through the State Department of Public Instruction to develop standards for implementing the curricular requirements.[9]

A greater degree of militancy appears to be developing in the executive and legislative branches of Iowa government to create more positive and immediate means of promoting additional school district reorganization. A number of factors are responsible for this changing concept:

1. Demographic changes in the state population reflect steadily declining rural populations and substantial increases in urban populations.

2. The basic labor force of the state is rapidly shifting from an agricultural work force to a skilled and semi-skilled industrial work force.

3. The national concern for more quality considerations has necessitated assessment of existing organizational structures.

4. Increasing costs, reflected for the most part in increasing local property taxes, have created demands for greater economy considerations.

5. A major change is taking place regarding the degree to which state funds should support education. In 1964-65 approximately 11% of local district general funds were derived from state sources. This percentage increased to approximately 13.5% in the 1965-66 school year. The present minimum goal is 40% state support.

6. Legislative reapportionment has had a profound effect in the basic composition of the state legislature. The majority has shifted from farmer representation to urban representation.

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9 Senate File 553, 61st General Assembly of State of Iowa, 1965.

In summary great progress has been made in Iowa during the past ten years in reducing the total number of districts from 4,142 to 5022 Though this has been accomplished, great inequalities continue to be perpetuated.

The major problems facing the state in this area today are:

1. Defining more comprehensively the criteria for desirable school organizations. This should relate to local district, intermediate unit, and area school (vocational-technical and community college) organization in order to promote a unified organizational structure for the state.

2. Development of means to promote active envolvement of professional and lay groups throughout the state in formulation of criteria.

3. Creation of adequate districts within the framework of established criteria.

4. The development of legislation to implement creation of adequate districts.

5. The creation of State Department organization and procedures to provide extensive guidance and follow-up services in newly created districts.