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TO
THE FUND FOR THE ADVANCEMENT OF EDUCATION FORD FOUNDATION

ROCKY MOUNTAIN AREA PROJECT FOR SMALL HIGH SCHOOLS

A Project to Study Possibilities of More Effective Use of Teachers and Improved Teaching Techniques in Small High Schools

From
The State Department of Education
Office of Instructional Services
Denver, Colorado

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WHEREAS the Colorado State Board of Education has been earnestly seeking ways and means to improve the quality of educational programs in small high schools; and

WHEREAS the implicit philosophy of the proposal to the Fund for the Advancement of Education is an endeavor to find ways and means of more effective use of teachers and improved teaching techniques in small high schools; and

WHEREAS it is the Board's intent to assist in successfully developing this project to its fullest degree of promise, through the cooperation of the entire staff of the Department; and

WHEREAS the board will waive any accreditation or other requirements which appear to restrict, deter, or on any way deny the free and unrestrained perusal of methods and techniques which are specifically designed to assist in the development of the aforementioned quality of instruction; and

WHEREAS, the Officers of the Board of Education, in personal conference, have the assurance of the Honorable Stephen L, R, McNichols, Governor of Colorado that the State of Colorado, acting as a tax-free fiscal agency in receiving and dispensing all Foundation monies, will impose no executive office restrictions or take action which will inhibit the use of such project funds for which they were intended; and

WHEREAS the Colorado State Board of Education considers itself morally and, in fact, legally responsible to maintain and, wherever possible, improve established standards of instruction, the State Department of Education is further charged with the responsibility to continue to scrutinize all educational practices with intention of evaluating this project for the purpose of maintaining an essential system of checks and balances;

BE IT THEREFORE RESOLVED that the Colorado State Board of Education, having been apprised of the philosophy, scope, limitations, and intentions of the proposal specifically known as "Rocky Mountain Area Project For Small High Schools. A Project to Study Possibilities of More Effective Use of Teachers and Improved Teaching Techniques in Small High Schools", on this eighth day of July of the year A.D. 1957, hereby officially endorses and backs the operation of such a study in the State of Colorado.

prauen	
	Anna C. Petteys, Chairman
	Allegra Saunders, Vice Chairman
	William W. Gaunt
	Gilbert Dale
	Stuart W. McLaughlin

THE PROPOSAL

Background and Philosophy

Because of terrain, sociological and economic conditions, the State of Colorado has at present a large number of small public high schools. During the school year 1956-57 there are 297 public high schools in operation in Colorado. Of these, approximately 142 enroll 100 or fewer students. It is these small schools which this proposal seeks to assist. Many of the conditions which cause the existence of these small high schools cannot be changed; therefore, many will continue to exist.

The philosophy of this proposal is that there should exist a pattern of organization through which the small high school can achieve a high quality of educational opportunity.

The small high school is criticized for many inadequacies. Chief among these inadequacies are the inability to offer what is considered a sufficient number of courses, and, also, the inability to care sufficiently for the great individual differences existent among classrooms of pupils in which a total range of interests and abilities exist. The small high school usually offers considerably fewer courses that are considered to constitute an adequate high school program. It is simple for a larger school to classify its senior English classes into several classes, adapted to the particular ranges of interests and abilities of the students in the senior year. Usually, the small high school English class will enroll all students in both the junior and senior classes in one group. The only attempts which have been made to solve these two problems are to employ additional teachers or consolidate the small high schools into a larger unit. The intention of this proposal is to demonstrate other solutions to these problems.

It is very important that it be made clear that the Colorado State Department of Education advocates sound school district organization. The existence of the office of the Director of School District Organization as an integral part of the Department is evidence of the importance attached to this function of the Department of Education. However, it should be understood that Colorado will always have some small high schools and that the State Department of Education believes that there should exist a pattern of organization and operation which encourages and assists in the development of high quality in these schools. This pattern of operation should insure quality of learning opportunity, seeking to emphasize the inherent strengths of smallness, and should be an organization along original lines and not just an imitation of the organizational patterns effective for large high schools.

Because of the attempts to broaden the curriculum by adding teachers, we find that the pupil-teacher ratio in a small high school is very low compared to the generally accepted 1 to 25 pupil-teacher ratio. The obvious inferences we draw from this are that the per pupil cost is proportionately higher; that the small high school is less able to compete, salary-wise, for the services of

competent teachers; that the effectiveness of the competent teacher is limited to a small group of students.

The originality of this project lies in its philosophy that there is a distinctly unique pattern of organization needed in small high schools to insure a high quality of educational opportunity which is economical both in man-hours and in dollars.

Problems to be Solved

The problems of creating the needed unique pattern of organization are numerous. This project purposely limits itself to seeking a more effective and efficient use of the teacher's time through different teaching techniques. These teaching techniques will result in (1) a broadening of the curriculum and (2) the taking account of individual differences within a single class in a more effective manner. This more effective and efficient use of the teacher's time in the small high school will achieve these results without overload to the present staff or significant increase in staff or cost.

Here, two logistical problems, those of time and finance, are encountered. In order for a number of school boards and administrators to adopt a new series of methods and techniques, they must first be apprised of the practicability of these techniques. For this reason, data must be gathered, materials must be prepared, and different methods of evaluation may need to be devised to fit the new techniques. Also, teachers, at the beginning at least, must have more than the usual amount of time to plan. A local board cannot support these activities in the early stages of development.

Proposed Solution

Two things are proposed: (1) that teaching techniques which shall be called "multiple class teaching" and "small group techniques" shall be experimented with and perfected by a small group of selected teachers in five pilot small high schools, and (2) that these teachers in these schools be given supervision, service, and coordination from the State Department of Education by a Project Director who is a Consultant in Small School Organization and who would be a member of the Division of Secondary Education, Office of Instructional Services.

It is proposed that the first year approximately five teachers from each of five carefully selected small high schools experiment with the proposed techniques. This should not be interpreted as a rigid limitation of the number of teachers, but only one which is used for basic organization. If more teachers should show interest and readiness, these teachers would be incorporated into the program. However, it would be unrealistic to think that the program would depend on having the total of five teachers in each of five schools. Actually, we wish it to be understood that the project would be attempted only with competent teachers in the schools which have been selected for initial activity. We expect that in the first year of operation it would be more realistic to assume that the experiment would involve fewer than five teachers in some of the five schools listed.

We propose to solve the logistical problems by providing assistance to the local schools in the way of financial and consultative help in order that the teachers may be encouraged and assisted in developing the highest quality of instructional techniques.

Specific Procedure

The selected teachers in the participating schools would experiment with <u>multiple class teaching</u> and <u>small group techniques</u> as each is described below. In each school, no two teachers would be selected from the same subject field. Rather, teachers would be selected from different fields so that the adaptability of the teaching techniques could be tried in various fields.

I. Multiple Class Teaching

The purpose here would be to broaden the high school curriculum and enable the small high school to offer more courses to its students without an increase in teaching personnel or significant increase in cost. In multiple class teaching, the teacher would operate not as a lecturer primarily, but would also function as a coordinator, consultant, and resource person. Specifically, it is felt that in situations where the pupil-teacher ratio is very low, a competent teacher, supplied with proper teaching materials, can efficiently offer learning opportunities in more than one subject in a single classroom at the same time. An actual example existing today in a small high school in Colorado is this: one teacher meets the first hour each day with one student in the subject of Trigonometry; the second hour this teacher has two students in Flane Geometry; the third hour he has four students in Algebra I. Multiple class teaching techniques would enable this teacher to offer instruction to these seven students in one classroom in one hour. The financial advantage to the district and the increase in the effective use of the teacher's time are obvious. This teacher would be free to offer more courses, plan more thoroughly, and in several ways better serve the interests of the total student body. We feel that there are at least three methods of implementing this technique:

A. Supervised Correspondence Courses

In assigning the teacher to offer more than one course at a time in a single classroom, we wish to experiment with the use of supervised correspondence courses. It is felt that correspondence courses can be specially adapted to this use. Among these adaptations would be the provision for use of local resources, for use of the teacher's particular training, experience, and abilities, and for supplying supplementary materials for enriching the learning opportunity concomitant with the basic core of the correspondence courses.

B. Use of Teacher-Prepared Materials

We submit that a well-qualified teacher who has given some thought to offering instruction in this manner can, on his own initiative, generate materials of the worksheet form and of other forms not yet developed.

C. Use of Community Resources

The resources of the community, people, natural and man-made surroundings, would be organized to supplement the instructional program of the school. The small community has the advantage of enabling the student to see easily the total function of the community. It is felt that in such areas as social studies the teacher could often gain more effective use of his time if he planned to use community experts as guest lecturers and as participants in discussions and seminars for the enrichment of the existent curriculum. We believe that the resources of the community would be developed for the mutual benefit of the school and of the community itself.

II. Small Group Techniques

We are considerably interested in that development which is generally called "group dynamics". Simply stated, we feel that a competent teacher, sufficiently supplied with learning materials, and supported by the proper instructional facilities, can offer a greater degree of differentiation within a single class. In the typical small high school class where the full range of abilities and interests exists, we feel that the lecture method is necessarily directed at one particular level of students and tends to overlook the other students in the class. This has resulted in the criticism that teachers teach for the middle group and do not offer adequate educational opportunity to the gifted children and the retarded children in their classes. The criticism is also made that the lecture method must direct itself at the students who are preparing for a particular post high school program which is, in most cases, college, and does not take sufficient account of the interests and futures of the other students.

We submit that through the proper use of his teaching abilities and through functioning as a coordinator and consultant, the high school teacher may account very adequately for the individual differences of his students. We believe that in order to do this, the teacher must develop some special techniques of group operation. To assist in this development, it is further proposed that the participating teachers be brought together for several workshops and seminars, the purpose of which would be to plan, evaluate, and modify the program at the outset and during its operation. To assist in the seminars, professional consultants would be sought from state departments of education, colleges, and other areas.

It would be the intention of the Colorado State Department of Education to begin this project late in the summer of 1957.

Limitations of the Proposal

The need for a complete design of an unique type for small high schools is not entirely met by this project.

The present project proposes to develop and evaluate only two of several methods which, through effective teacher use, might assist in developing

quality small schools, Nevertheless, the development, trial, and adoption of all defensible techniques will be encouraged and local support for the new, sound methods is being necessitated through a plan of weaning from fund support during and after the third year.

No rigid evaluative criteria have been established because it is felt that quality in a small school may not always be measurable with present research methods. Development of tools for measurement will be concurrent with the growth and development of the project. We do not feel that any funds need be allocated to supply the usual "control" element of this project, in that the many small high schools of the state will form a natural control.

Schools Participating in the Initial Phase

For September 1, 1957, beginning a three-year program, five small high schools of quality have been selected. In view of the fact that many administrators have expressed interest in working with the project, it is hoped that by September 1, 1958, more schools may be provided with the assistance to enable them to participate in the next two years of the program. The schools selected are as follows:

- 1. Aspen High School, Aspen, Colorado
- 2. Centennial Union High School, San Luis, Colorado
- 3. Cheyenne Wells County High School, Cheyenne Wells, Colorado
- 4. Kremmling Union High School, Kremmling, Colorado
- 5. Limon High School, Limon, Colorado

The schools were selected for participation on the basis of the following criteria:

- 1. Quality and vigor of leadership
- 2. Apparent vision of faculty
- 3. Initiative and dedicated interest in planning for the project
- 4. Degree of aggressive leadership exerted among schools of the particular area
- 5. Willingness by local boards of education to continue to support project activities after withdrawal of financial assistance from the Fund
- 6. Basic smallness with small possibility of becoming large
- 7. Low possibility of absorption or non-existence through reorganization or consolidation
- 8. Geographical distribution throughout the state

Request for Financial Assistance

The State Department of Education expects that this project will be carried on as a tripartite agreement. In definition of this agreement, the role of each party is herein presented.

I. Resources Provided by Local Districts

The resources and assistance provided by each local district will take many forms, but the most important, yet least tangible of these is the willingness and dedication of the school board, administration, and faculty to implement and perpetuate the proven activities of the project. This lifesustaining quality can be provided best by the local school officials.

Some more measurable resources which will serve to complete the local district's share of the agreement are as follows:

- 1. Supervision and assistance by the local administration. The local administration will be participating without salary remuneration from project funds.
- 2. Teaching materials and supplies. We anticipate a great increase in the use of teacher-prepared, duplicated materials,
- 3. Technological equipment such as projectors, recorders, and machinery.
- 4. Space for conducting the project.5. Space for seminars and workshops. The rural flavor of the project is to be preserved by holding some seminars and workshops alternately in each of the participating schools.
- 6. Local public relations.

II. Resources Provided by the State Department of Education

It is expected that the Colorado State Department of Education will provide organization, time, and inspiration. Again, much of this cannot be measured; however, the resources to which it is able tangibly to commit and dedicate itself are fourfold:

- 1. The services of Dr. Elbie L. Gann as project supervisor and consultant.
- 2. The consultative and supervisory time of all State Department of Education personnel,
- 3. Office space and equipment, including telephone, for the project director and secretary.
- 4. All expenses incurred in publication of project reports and documentary journals.

III. Request for Fund Support

It is requested that funds be allocated for a period of three years, beginning August, 1957, to defray the expenses of carrying out this project.

The request for the first year is smaller than that of the second year because fewer teachers would be involved. The third year request is smallest because of the weaning of schools from financial support.

We feel that the participating teacher must have adequate planning time. For that reason we wish to compensate the schools for freeing the teacher or contracting him for an additional part of the year to the extent necessary for sufficient program preparation. We propose to allocate this money to the school in the actual amount expended for compensating the experimenting teacher, not to exceed the cost of one teacher-hour per day, but to leave to the local school the decision as to exactly how the involved teacher will be contracted.

We request the allocation of funds to compensate the teachers for their time in the periodic seminar sessions, and to employ professional consultants in the subject matter fields to meet with them individually and within these seminars.

In addition, funds are requested to assist in developing any new methods of evaluation, and the expenses involved in salary and travel in applying them.

Finally, while the specific commitment is for five schools, since the Department is committed to assist in improvement of quality in all schools of Colorado, it is hoped that the Department may be permitted to submit a supplementary request along the same lines of purpose and philosophy to make possible the inclusion of additional schools. This would be for the years 1958-59 and 1959-60.

IV. Specific Financial Assistance Requested

The first year budget is presented in terms of ten months.

A. Assistance to State Department for Central Direction

Director's Office		lst yr, Sept. 1-June 30 1957 1958	2d yr. July 1-June 30 1958 1959	3rd yr. July 1-June 3 1959 1960
	Salary for Director	6200,00	7100.00	7400,00
	Salary for secretary	2900.00	3300.00	3500.00
3.	Supplies and Communication	700.00	700.00	700.00
4.	Travel	1500.00	1500.00	1500.00
	Total \$1	1,300,00	\$12,600.00	\$13,100.00

B. Assistance for Local School Project Operation

	Grand	Total	\$27,800.00	\$42,600.00	\$34,100.00
		Total	\$16,500.00	\$30,000.00	\$21,000.00
3.	For Evaluation		500.00	2000.00	4000.00
2.	For Consultation	n	2000,00	3000.00	2000.00
	for planning &		14,000.00	25,000.00	15,000.00
	additional teac	her time			
1.	To Local Distri	ct for			

Total Assistance Requested for Five Schools for a 3-year Period.,..\$104,500.00